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Advancing Oral Health Equity

All 4 Oral Health Blog Collection

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Oral Health Equity For All

All 4 Oral Health Blog Collection

The mouth is the gateway to the rest of the body. Oral health care is essential to promoting positive overall health outcomes. OHNEP's official blog *All 4 Oral Health* includes timely evidence-based posts that focus on oral-systemic health topics and promote innovations in education and practice for building the interprofessional workforce across primary and acute care professions. We encourage you to review and share these blog posts as a resource for promoting oral health integration across primary care settings.

Click on the links below to view these posts at our website ohnep.org.

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Overcoming Challenges in Achieving Oral Health Equity for People with Disabilities

December 12, 2022

In the US, an estimated 3 million children and 61 million adults currently live with one or more physical, intellectual, or developmental disabilities. Every day, people with intellectual and developmental disabilities (IDD) encounter barriers to accessing appropriate health care services. One of the challenges is locating providers who are willing to provide care and accommodate their needs. As a result, many health problems and concerns are left untreated among people with IDD. Oral health is particularly neglected in this population, resulting in many oral health problems that can be prevented with more inclusive and accessible care. People with IDD require a special approach to dental care that dental offices often do not have the capacity to provide.

Children and adults with IDD bear a disproportionate burden of finding affordable care. These problems are exacerbated by socioeconomic and racial/ethnic disparities. Children from low-income families are more likely to have a disability (6.5%) than their more affluent counterparts (3.8%). American Indian and Alaska Native children are reported to have the highest rates of disability (5.9%), followed by children of more than one race (5.2%) and Black children (5.1%). Reflected in these disparities are the socioeconomic status of these groups: American Indian and Alaska Native households are found to have the second lowest median income with many families living in poverty, and Black, Hispanic and Latino households systematically have lower incomes and education levels, and encounter more barriers to finding employment.

A major barrier to oral care among people with IDD is finding an accessible and affordable health care provider. Frequently, families and caretakers do not know what providers or resources are available; online directories and listings are often inaccurate and outdated. Many communities lack providers that accommodate patients with IDD due in part to persistent bias and stigma and low reimbursement rates, and patients have to travel great distances just to find care.

Adults with IDD are more likely to have a low income and lower rates of employment. As a result, these adults are challenged to locate affordable health care; the CDC reports that 1 in 3 adults with disabilities do not have a usual healthcare provider and have an unmet healthcare need in the past year due to high costs. Adults living with disabilities also have higher rates of obesity, heart disease and diabetes than those without disabilities, and an increased risk of oral health problems is significantly associated with these conditions. There are many factors that impact this population's ability to find appropriate care, and oral problems left untreated can lead to more complex oral and systemic health conditions.

Families of children with disabilities struggle to find affordable care as many providers do not accept Medicaid and other federal or state public and/or private insurance plans. While all children have a CHIP dental benefit, Medicaid dental coverage for adults, with

or without IDD, is state-specific. Adult Medicaid dental benefits range from emergency to extensive coverage. Currently, 24 states and the District of Columbia have an extensive adult Medicaid dental benefit, 17 states have a limited adult dental benefit and 10 states only provide emergency coverage.

Health professions programs, including nursing, medical and dental programs, often do not include training to provide care for IDD patients. As a result, oral health care is more likely to be neglected among patients of all ages with special care needs. For children and adults with IDD, it often is difficult to complete independent self-care activities like oral hygiene. Brushing and flossing teeth effectively to maintain a consistent home oral hygiene regimen can be a challenge. It is not surprising that tooth decay and periodontal disease are more common in this patient population. Poor oral health habits like tooth grinding and clenching, pouching food in cheeks and tongue thrusting also can lead to serious oral malformations and delayed tooth eruption. Malocclusion, which includes tooth crowding and over- and underbites, increase risk for periodontal disease, caries and oral trauma.

Successfully maintaining home oral care, not to mention finding accessible dental care, poses a major health equity challenge among patients with IDD and their families. When getting to the dentist presents a significant barrier, primary care providers, including nurses, nurse practitioners, physicians, physician assistants, occupational therapists, and others, can make a value-added contribution to providing oral health education, screening, and oral hygiene coaching for their patients. Familiarity with use of adaptive devices makes oral hygiene self-care coaching more effective.

Improvements in accessible and affordable oral and overall health care for people with IDD is warranted; there are many considerations for care that health professionals need to recognize. A better understanding of developmental and intellectual disabilities starts in dental, medical and nursing education. Faculty, clinicians and organizations can all improve oral health access and decrease oral health disparities among patients with IDD by incorporating oral-systemic health education, training and resources into their pre-licensure curriculum and post-licensure clinical practice.

Dental clinics that specialize in providing care for patients with IDD who are unable to receive treatment in a conventional dental office are cropping up across the US. The NYU Dentistry Oral Health Center for People with Disabilities and the UPenn Care Center for Persons with Disabilities are dental offices that specialize in treating patients with IDD. These Centers also feature special equipment and accommodations for their patients, including multisensory rooms to help patients relax and reduce anxiety, chairs that are adjustable for bariatric and wheelchair needs, and spacious treatment rooms to maximize the comfort of their patients. These practices provide an extraordinary model of care for accommodating the physical, mental and emotional support needs where patients with disabilities are able to comfortably receive affordable and comprehensive dental care.

To build a stronger interprofessional oral health workforce and provide high quality, satisfying, and cost-effective care, accreditation standards and criteria need to hold faculty accountable for integrating model curricula that feature interprofessional didactic curriculum content and clinical experiences that link person-centered oral health and

overall health for children and adults with IDD. Practicing clinicians need to complete professional development courses and/or certificate programs that equip them to make their practice more inclusive for those with disabilities. Clinicians who feel knowledgeable about how to meet the oral and physical needs of specific patient populations, generally feel more comfortable and confident about providing care.

There have been many developments and innovations in recent years to provide people with IDD the necessary resources to take charge of their own health and happiness, but there is still much more to do. The US Department of Health and Human Services (HHS) recently proposed a rule to strengthen nondiscrimination in health care. This rule includes provisions that will accelerate modifications to policies that accommodate people with disabilities, promoting inclusion of disability aids and services. However, while advocacy to improve health care for persons with IDD is growing, legislators, policymakers, regulators, and clinical academic and health systems leaders continue to miss the mark on recognizing the need for and advancing policy changes that promote health equity by making oral health for persons with IDD a curriculum standard and a clinical "best practice". We call on all health system stakeholders – deans, faculty, students, health care professionals and policymakers – to learn more about developmental and intellectual disabilities and do their part to improve access to and quality of oral and overall health care for patients with disabilities.

Oral Health Care Resources for Educators and Providers:

Developmental Disabilities Nurses Association (DDNA)

National League for Nursing (NLN) Advancing Care Excellence for Persons with Disabilities (ACE.D)

Helen: The Official Journal of The American Academy of Developmental Medicine and Dentistry (AADMD)

National Institute of Dental and Craniofacial Research (NIDCR)

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The Brain-Mouth Connection: How Good Oral Health Can Improve Mental Health

May 31, 2022

Mental health plays a significant role in oral health. People struggling with mental health issues such as anxiety and depression may be at higher risk of developing oral health problems like tooth erosion, cavities and gum disease. There are gaps in oral healthcare needs for individuals who struggle with mental health, including overall lack of awareness of the "brain-mouth connection" and the importance of promoting oral health among patients with mental health issues. Findings from evidence-based studies reveal that those with mental health problems are more likely to be affected by poor oral health and underutilize oral health services. Those struggling with mental illness are often affected by the social determinants of health that limit access to regular dental care. Side effects of medications that are used to treat mental health problems, including antipsychotics, antidepressants and mood stabilizers, are associated with a higher risk for xerostomia, tooth decay, oral infections, periodontal disease, oral pain and tooth loss. Dental and medical health care providers can collaborate on best practices for managing and preventing the many oral health problems that are associated with mental health issues.

In the US, 45 million people are living with some form of mental illness that negatively impacts their day-to-day life, including their oral health. Isolation and financial hardships that many experienced as a result of the COVID-19 pandemic deeply affected mental health status across the globe. Closure of dental offices in the first year of the pandemic exacerbated oral health issues and prolonged treatment. Even with dental offices reopening and safety precautions in place, many who experience dental anxiety or anhedonia and lack of motivation related to depression are not likely to schedule a dental cleaning. Many who lost their jobs during the pandemic remain uninsured and unable to afford dental care out of pocket. Additionally, people who struggle with their mental health may feel insecure about their poor oral health due to lack of home oral hygiene and, as a result, are reluctant to see their dentist. Dental care may not be easily accessible for those with mental health issues, but health care professionals in

psychiatric, pharmaceutical and primary care settings have an opportunity to promote the importance of oral health care with their patients.

Mental illness is multifaceted and complicated to manage, and the many forms of mental health issues out there include numerous symptoms and treatments that can lead to increased risk for oral health problems. People with psychiatric disorders are at risk for oral health problems due to side effects of medications and neglect of their oral hygiene. For all mental health conditions, early detection, prevention and treatment of oral health problems is essential to improving patients' overall health and quality of life.

Stress. Any level of stress can have physical effects on the body. Stress affects the immune system, sleep, eating, and personal hygiene. People who are experiencing stress may also grind or clench their teeth (bruxism) periodically during the day and when sleeping, which can cause mouth pain, gum recession and tooth fractures. The COVID-19 pandemic significantly increased incidence of cracked teeth due to stress related to personal, social and financial hardships.

Mood Disorders. Mood disorders, such as bipolar disorder, often cause over-brushing that may damage gums and cause dental abrasions and mucosal or gingival lacerations. Bipolar patients treated with lithium and/or anti-psychotics experience higher rates of xerostomia and stomatitis. Those who are treated with mood stabilizers are at increased risk for gingival hyperplasia and periodontal disease.

Sleep. Lack of sleep can impair immune system functioning which can lead to increased risk of harmful inflammation and infection throughout the body, particularly in the vulnerable oral cavity. Difficulty sleeping is associated with increased risk for periodontitis and tooth decay. Lack of sleep can lead to poor nutritional choices, such as increased intake of coffee and snacking on food high in sugar and carbs throughout the day. Lack of sleep can also be due to stress or bruxism.

Anxiety. Many people experience dental anxiety and dental phobias and, as a result, will neglect home oral health care and/or avoid going to the dentist. Additionally, medications that treat generalized anxiety disorders can cause dry mouth (xerostomia) which can lead to tooth decay. People who struggle with anxiety often experience bruxism and temporomandibular joint disorders (TMJ) that cause oral pain.

Obsessive-Compulsive Disorders (OCD). For people with OCD, brushing and flossing can be turned into repetitive, compulsive habits. Over-brushing and flossing can cause enamel erosion and tooth sensitivity.

Depression. People who struggle with depression often neglect various aspects of their self-care. They do not feel motivated to carry out day-to-day hygiene practices and this lack of motivation can contribute to poor food and nutrition choices and poor oral hygiene. Depression is also associated with higher abuse of alcohol, caffeine, and tobacco, which may cause tooth erosion and decay.

Substance Use/Abuse. Use of substances is a common coping mechanism among those struggling with mental health problems, such as depression, anxiety, mood disorders and others. In addition to being a standalone issue, substance abuse is rampant among those struggling with mental illness. Abused substances include those that are prescribed (e.g. opioids), illicit (e.g. cocaine, methamphetamine) and legal (e.g.

alcohol), and all of these contribute to oral health problems such as xerostomia, tooth decay, tooth loss, bruxism, periodontitis and mucosal lacerations.

Trauma. Traumatic experiences can stay with a person for their entire life. Those with significant physical and mental trauma histories may experience dental anxiety and phobias, trauma triggers, when faced with situations that include health professionals working at close proximity to their mouth and using dental instruments in the mouth. People who have experienced trauma are more likely to avoid dental care. Careful consideration and small steps need to be taken in preparing patients for what will happen during their dental visit.

Eating Disorders. Disordered eating behaviors such as vomiting and restricting food can cause oral health problems. Acids from vomiting make patients with eating disorders more susceptible to tooth decay and enamel erosion. Those who under-eat or restrict food may not receive enough iron and/or calcium, as well as have a weakened immune system, which can predispose them to tooth decay and oral infections.

Psychotic Disorders. Schizophrenia spectrum and other psychotic disorders increase risk for serious health problems, like metabolic syndrome, that increases risk for periodontal disease. Individuals who suffer from a psychotic disorder often demonstrate poor motivation related to personal care and hygiene, and often avoid dental and other necessary health care due to delusions, paranoia and/or trauma.

Dental and medical professionals have a unique opportunity to collaborate by educating patients and their caregivers, students and other health care providers about the importance of good oral care in improving health outcomes for those with mental health problems. An interprofessional approach for improving mental health and oral health can include dentists, primary care physicians, nurse practitioners, nurses, psychiatrists, physician assistants, pharmacists, nutritionists, community health workers and social workers, among others. All health professionals have the opportunity to encourage their patients who struggle with mental illness to adopt good home oral care practices like brushing and flossing teeth regularly, along with other home health habits like reducing sugar intake, exercising, smoking cessation, and reducing or eliminating substance use.

When making referrals or recommending care, it is important to think about the barriers that many people experience in accessing both mental health and dental care services. Those without health insurance may not be able to afford regular health care services and check-ups. Dental disease is concentrated among populations with low socioeconomic status, and many people must make difficult financial choices when seeking dental care. It is the role of health professionals to assess, diagnose, manage oral health problems within their scope of practice and refer their patients appropriately. Many patients with mental illness may have a dental benefit through Medicaid and public insurance. However, insurance coverage does not guarantee access to needed services. We call on health professionals everywhere to collaborate and engage with one another across oral health and mental health care settings to effectively improve the mental, oral and overall health and well-being of this population!

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Improving HPV Vaccine Confidence: An Interprofessional Challenge

April 12, 2022

April is Oral Cancer Awareness Month, an opportunity for educators, practitioners and advocates alike to promote awareness of oral and oropharyngeal cancers (OPC) and the importance of regular oral cancer screenings. In the US, human papillomavirus (HPV) is the not only the most common sexually transmitted infection, but it is one of the most difficult viruses to identify and diagnose. Studies have shown that most sexually active people experience a mild to severe HPV infection at some point in their life. The CDC estimates that over 42 million Americans are currently living with HPV and approximately another 13 million become newly infected each year. Approximately 10% of men and 3.6% of women have oral HPV, and other types of HPV transmission are known to be equally widespread in both men and women.

There are 200 types of HPV, 40 of which are sexually transmitted and at least 9 that are linked to cancer. For many people with strong immune systems, the infection clears on its own. Most oral HPV lesions are benign, and may persist or reoccur. However, even with a strong immune system, untreated HPV infection in any part of the body can lead to cancer. Findings from studies that have explored HPV-associated OPC call for improved health literacy around HPV and oral cancer screenings in dental and medical settings to reduce oral cancer rates.

OPC traditionally are thought to be caused primarily by tobacco and alcohol use, but studies show that about 70% of cancers of the oropharynx are linked to HPV. As tobacco use and alcohol abuse have reportedly declined in the US over the past 20 years, rates HPV infection and HPV-associated cancers have steadily increased. A report from the CDC declared that the most common HPV-associated cancer in the United States is oropharyngeal squamous cell carcinoma (SCC), including those cancers on the tongue, tonsils, mouth and throat.

Interprofessional collaboration and management of patients with HPV-related OPC is essential for providing effective whole-person care, including strategies for health promotion, symptom management, and self-management. Medical and dental professionals are well-positioned to assess OPC risk with their patients and emphasize the importance of preventing oral cancer. The good news is that we have an effective HPV vaccine, the only confirmed cancer preventive intervention.

Health professionals – nurses, nurse practitioners, midwives, dental hygienists, physician assistants and more – are well-positioned to partner with families to improve HPV vaccine confidence. The vaccine can be administered to patients as young as 9 years of age, and up to age 45. For those adults who did not receive the vaccine as teenagers, it is not too late. Health professionals need to query adult primary care and dental patients about whether or not they have received the HPV vaccine.

A positive strategy for approaching parents of preteens and adolescents, as well as adults, about the HPV vaccine is to emphasize its value in preventing cancer. Medical and dental teams can contribute to reducing oral cancer rates and the severity of HPV-

associated oral cancer by collaborating to perform oral cancer screenings and include oral health assessments as a “best practice”. Promotion of HPV vaccine administration has great potential to reduce HPV-associated cancers across the US (see *Rising Rates of HPV-Associated Oropharyngeal Cancers*).

A recent article in the Journal of Dental Education challenges health professionals to collaborate in preventing HPV-associated OPC and interprofessionally managing OPC when it occurs. Although vaccine administration is a common and widespread practice in primary care settings, including HPV vaccine health literacy and administration in dental offices would expand the reach of HPV vaccine administration to vulnerable populations. As of March 2022, new CDT code categories include codes for the administration of the HPV vaccine. Providing interprofessional education experiences in dentistry and other health professions at the academic level, including nursing, pharmacy and medical education, has the potential to improve all health care professionals’ knowledge of HPV and oral cancer so that they are well-prepared to provide health literacy and administer the HPV vaccine with confidence.

A critical facet of promoting HPV vaccine administration is building vaccine confidence. All health professionals have the capacity to be community leaders and build public trust in all vaccines, particularly the HPV vaccine. Providing health literacy about the HPV vaccine as a cancer prevention method is the best way to combat misinformation and educate families and communities about the importance of vaccines. Findings from numerous studies reveal that a recommendation from a trusted health care provider is key to parents’ decision to have their children vaccinated. To effectively reduce rates of HPV and HPV-associated cancers, all health care professionals need to be well-versed about HPV and OPC to provide accurate information about the vaccine and emphasize its capacity to prevent cancers with a high mortality rate (see *The Need for the Needle*).

We call on dental and medical professionals to provide patients of all ages with HPV vaccine and OPC information. Interprofessional communication and collaboration is vital to improving health outcomes. Faculty can play an important role by using HPV-associated OPC as a valuable interprofessional clinical exemplar in simulations or clinical experiences. Students across health professions can partner in promoting HPV vaccine confidence to decrease multiple forms of HPV-associated cancer across the US.

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Sweet Salvation: Linking Diabetic Health and Oral Care

February 21, 2022

Diabetes is the 7th leading cause of death in the US, with 1.4 million Americans diagnosed every year. Of the 34 million adults in the US currently living with type 2 diabetes (T2D), 8.5 million are unaware of their condition. Another 88 million adults are prediabetic, and 22% will develop T2D within 5 years if left untreated. Rates of diabetes are highest among American Indians/Alaskan Natives, non-Hispanic blacks and Hispanics, as well as among those from low-income backgrounds. Many people are aware of the risk factors for diabetes – high blood pressure, being overweight, poor diet and family history of diabetes – but few think about the connection between diabetes and oral health.

Diabetes and oral conditions, like periodontal disease, are both inflammation-based, immune-related disorders that share a bi-directional relationship. Poor blood sugar control increases the risk for gum problems, while periodontal disease may cause blood sugar to rise. The body's natural inflammatory response to bacteria and plaque in the mouth atttacks the gum tissue and supporting tooth structures, increasing risk for periodontal disease and other severe oral health problems like tooth loss.

But, many people with diabetes do not know that they are at high risk for these oral health problems. People who are at risk for diabetes or who are diabetic may experience more difficulty in keeping their mouth healthy and preventing serious oral health problems. Additionally, people who are unaware of their diabetes or who have poorly controlled diabetes are at three times the risk of developing periodontal disease, leading to severe oral infection.

In addition to oral health problems, there are other well-known complications of diabetes, including nerve damage, blindness, kidney failure, and heart disease. Preventive oral health interventions are essential to decreasing risk for these debilitating complications that greatly reduce quality of life and overall health and well-being of those with diabetes.

A key component of diabetes care is oral care. Regular dental visits, along with good oral hygiene, are particularly important in preventing and treating periodontal disease and preventing severe oral problems common in people with diabetes such as tooth decay and tooth loss. Research findings reveal that diabetic patients with treated periodontal disease maintain better glycemic control. Good oral care, like toothbrushing twice per day and flossing once per day, and regular dental cleanings are essential to reducing risk for diabetes-related complications.

Unfortunately, many individuals with diabetes often experience barriers in accessing regular dental care. Medicaid and other low-cost insurance plans do not cover dental care, leaving patients to pay for costly out-of-pocket dental care. Those that cannot afford it, often forgo dental check-ups, so that oral problems remain untreated and can become more severe over time.

Primary care nurses, nurse practitioners, midwives, physicians, physician assistants, pharmacists, and other health care professionals are well-positioned to promote oral health literacy that helps patients who are pre-diabetic or diabetic integrate consistent oral hygiene habits as a part of their daily self-care routine. Providers need to ask about oral health issues as part of the health history and look for symptoms and signs of oral disease by using the HEENOT approach that includes an intra- and extra-oral exam. Common oral complaints that may be reported to clinicians include bleeding and/or pain during brushing and flossing, tooth sensitivity, bad breath or a bad taste in the mouth that won't go away, loose teeth, and pain when chewing. In the oral exam, providers may see red or swollen gums and gum recession, and the patient may have a history of periodontal abscesses. Any oral health issues need to be documented in the electronic health record (EHR), and providers need to make a dental referral if the patient does not already have a dental home.

Collaboration among primary and dental care team members is essential in caring for patients with diabetes. Motivational interviewing can be used to promote healthy lifestyle changes, such as establishing a nutritional diet and exercise plan, and engaging patients in managing their oral and overall health. Vaccine education and administration (e.g. COVID, flu, pneumonia, shingles) is imperative to protecting overall health and prevent these serious illnesses in patients with diabetes. Primary and dental care professionals can communicate with one another in providing their patients with person-centered care.

The connections between diabetes and oral health are *not* new and have been established for many years! There is a wealth of evidence-based research and resources for health professionals and patients about the oral-systemic health of those living with diabetes. Faculty and educators need to incorporate oral health into their curricula with nursing and other health professions students to promote oral health integration in clinical practice. Whether in the dental chair, a primary care office, or an acute care setting, remember the connections between oral health and diabetes. We challenge all clinicians, dental and medical, who care for patients with diabetes to engage them in taking charge of their diabetic oral and overall health!

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The Need for the Needle: Building Vaccine Confidence

October 27, 2021

Building *vaccine confidence* is a success challenge for health professionals and community leaders. As trusted professionals, they have the opportunity to influence groups that are more likely to be hesitant to receive vaccines. Building trust about vaccine safety is essential to improving vaccination rates and improving global public health. Nurses, nurse practitioners, midwives, dentists, pharmacists, physicians and physician assistants are among the many health professionals that are well-positioned to foster vaccine confidence in their patients using health literacy to correct misinformation and educate families and communities about the value of vaccines. The COVID-19 and human papillomavirus (HPV) vaccines illustrate the importance of promoting vaccine confidence.

The COVID-19 pandemic has brought to light the impact of vaccine hesitancy and the reasons many people are reluctant to receive any and all vaccines. *Vaccine hesitancy* refers to those who refuse vaccines despite evidence about safety and availability of vaccines. The *We Can Do This* campaign launched by the Biden administration aims to dispel myths and misinformation about the COVID-19 vaccine to encourage communities across the US to get vaccinated. Public health campaigns help combat misinformation, thereby improving health literacy and building confidence in individuals to get themselves and their families vaccinated to protect them from potentially fatal infections like COVID-19. Initiatives like the *We Can Do This* campaign include efforts to spread information and positive messaging about the COVID-19 vaccine through a network of trusted messengers in communities and health care settings, as well as through television ads and across social media platforms.

The momentum behind promoting the COVID-19 vaccine provides an advocacy framework for the HPV vaccine. HPV is responsible for over 34,000 cancer diagnoses every year in the US. Like the COVID vaccine, hesitancy around the HPV vaccine is due to many misconceptions about its safety and social implications. Gardasil 9, the HPV vaccine, has been around for over 15 years; research findings support its safety and effectiveness in preventing HPV and reducing risk for oral cancer. Gardasil 9 prevents 90% of HPV-associated oral, cervical, anal and penile cancers. In 2020, the FDA approved Gardasil 9 as an HPV vaccine for prevention of oropharyngeal and head and neck cancers, making it the only cancer prevention vaccine. The Gardasil 9 vaccine is approved for administration to children as young as age 9 and adults up to age 45. Despite scientific evidence about its effectiveness, only about half of US teens are fully vaccinated. Widespread parental misinformation about its side effects and the erroneous belief that this vaccine promotes sexual behavior among youth contribute to vaccine hesitancy.

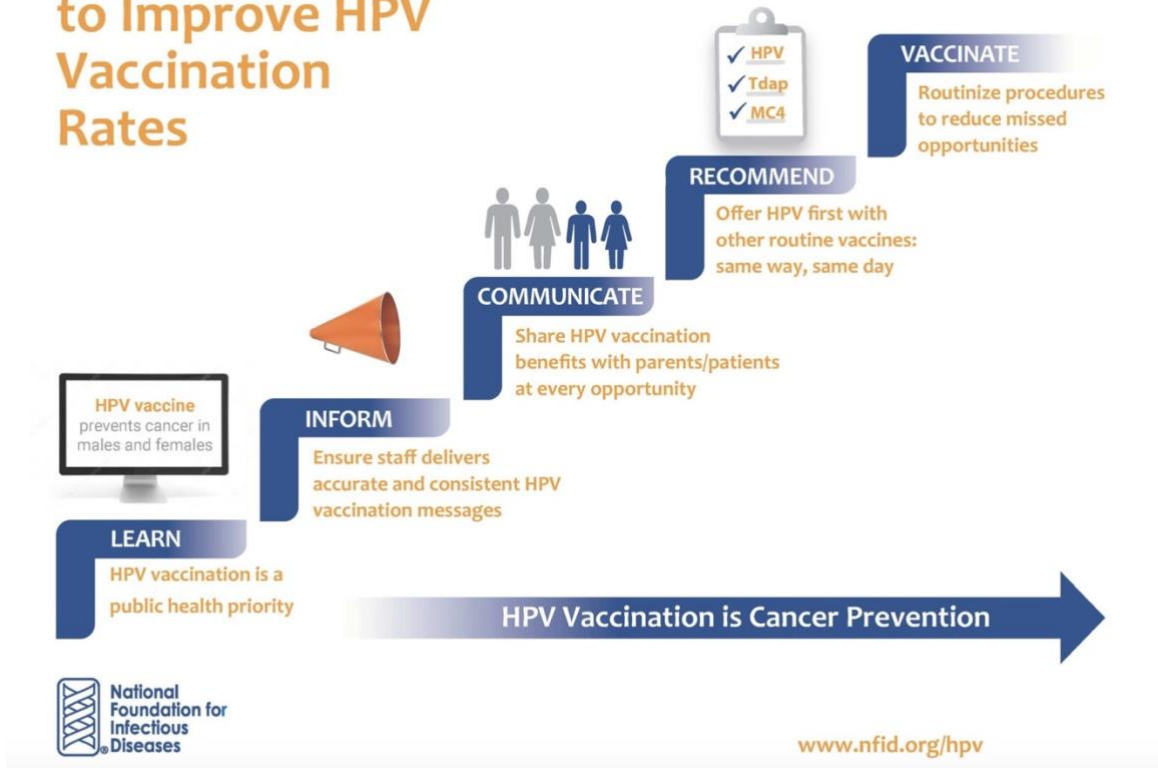
Findings from several studies of vaccine hesitancy and parents' attitudes about the HPV vaccine show that a recommendation from a trusted healthcare provider is the strongest predictor of parents' decision to have their child receive the vaccine. A recent study from *Pediatrics* examined HPV vaccine hesitancy among parents using data from the 2021-2018 National Immunization Survey (NIS). Their findings revealed that vaccine

hesitancy had increased from 2012-2018 for parents of young girls and boys, and this was largely due to concerns about the safety of the vaccine. A similar study from *Lancet,* based on NIS data, found that 58% of parents had no intent on having their children vaccinated, citing safety concerns and lack of a provider recommendation as reasons for not having their children vaccinated or completing the HPV vaccine dosage series.

A standard of care for all health care professionals is to provide anticipatory guidance to improve health literacy about vaccines. There is a growing national movement to expand the dental profession's role in vaccine advocacy and administration. Dental teams have many opportunities to provide information about HPV and the safety of the HPV vaccine to parents of their young patients. Along with HPV vaccine education and recommendation for young patients, dentists perform oral cancer screenings on their adult patients. Early detection of oral HPV infection and cancer has great potential to reduce the spread of HPV as well as the onset of severe HPV-related oral cancers.

Although oral cancer screenings have long been designated to the dental team, medical teams including trusted primary care providers, physicians, physician assistants, pharmacists, nurses, nurse practitioners and community health workers (CHW), need to be knowledgeable about HPV and its oral-systemic links. Management of HPV necessitates interprofessional collaboration across the entire health care team to best address the needs of patients of all ages. Reducing HPV infection and cancer rates requires dental and medical professionals to become well-versed about the importance of the HPV vaccine and provide HPV and oral cancer education resources to their patients and communities. Enhancing the role of all clinicians in providing HPV health literacy beyond the pediatrician's office is imperative to combating vaccine hesitancy and building vaccine confidence.

Despite documented progress and success of numerous 20th century life-saving vaccines in eradicating public health crises, vaccine hesitancy has rapidly infiltrated communities worldwide. The explosion of social media and communication technology have provided a platform for spreading misinformation about both the COVID-19 and HPV vaccines, having a negative impact on vaccine confidence. Vaccine hesitancy is a global population health equity problem that demands health professionals provide health literacy and vaccine recommendations to their patients that instill vaccine confidence and trust in health care system. The CDC has numerous resources for clinical teams to use for building HPV vaccine confidence in patients and communities. The following diagram provides a model for steps that clinical teams can take to improve confidence in the HPV and other vaccines.



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OHNEP
Oral Health Nursing Education and Practice

The Race to Health Equity: Oral Health Disparities Persist Among Racial & Ethnic Minorities

February 23, 2021

Health service access, affordability, and use varies for all Americans. Promotion of health equity across the health care landscape requires elimination of disparities in access to care, as these disparities impact individuals' abilities to receive affordable, comprehensive and quality care. Regular primary care visits and preventive care are under-utilized by racial/ethnic minority groups, due to a long history of discrimination. Racial inequity throughout the health care system is well-documented in the literature, and research shows how racial/ethnic minority groups are impacted by multiple social determinants of health. Despite being integral to promoting overall health outcomes, oral health is a frequently forgotten component of overall health. Due to access barriers, such as lack of dental insurance or low socioeconomic status, there are significant oral health disparities among U.S. racial/ethnic minority populations.

Studies have found that people from racial/ethnic minority groups are less likely to have health insurance than their White counterparts. Implementation of the Affordable Care Act (ACA) in 2010 led to significant gains in health coverage over the past decade, yet substantial discrepancies remain for racial/ethnic minorities. As of 2018, 12% of Black adults, 19% of Hispanic adults, and 22% of American Indian and Alaskan Natives are uninsured, compared to only 8% of White adults. Individuals belonging to a racial/ethnic minority group are less likely to seek medical help and preventive care for serious chronic health problems – heart disease, diabetes, and cancer, to name a few – and are more likely to have poor health outcomes and higher mortality rates. The high costs of health care, combined with an extensive history of racial stereotyping, coupled with experiences that have built mistrust, prevent racial/ethnic minority individuals from achieving better health outcomes within their communities.

Dental care is not included as an essential benefit in many commercial health plans. The ACA does include oral health as an essential benefit for children only, not for adults and older adults. The CHIP program covers dental care in all 50 states for children insured by Medicaid, but only 35 states have an adult Medicaid dental benefit. According to the ADA Health Policy Institute, the most common reason for delaying or not pursuing dental care is cost as many individuals and families cannot afford out-of-pocket care costs. Moreover, there are a limited number of dental practices that will accept Medicaid-insured patients, making access and availability a crucial issue. Finally, a high proportion of racial/ethnic minority individuals live in communities without fluoridated water and schools that have fluoride varnish and sealants programs, which are shown to be highly effective in preventing oral health problems.

Prominent health inequities persist in oral health care within racial/ethnic minority groups, which are also associated with lower socioeconomic status and high rates of poverty. In the US, people are unable to afford regular preventive dental care, and many vulnerable communities lack access to transportation to appointments or lack fluoridated water. As a result, we see oral health disparities across the lifespan among

racial/ethnic groups. In U.S. children aged 2-5, 33% of Mexican American and 28% of Black children have had cavities in their primary teeth, compared to 18% of White children. Black and Mexican American U.S. adults are twice as likely to have untreated caries than their White counterparts, and older non-Hispanic Black and Mexican American adults have 2 to 3 times the rate of untreated cavities as older White adults. Periodontal disease is most common among Black and Mexican American adults; a study using data from the 2009-2014 National Health and Nutrition Examination Survey and found that the highest rates of moderate-severe periodontitis were in Black (42%) and Mexican American (46.4%) adults, while white adults had the lowest rate at 31%. Oral cancer, which affects about 54,000 Americans every year, shows a 41% survival rate for Black men, more than 20% lower than White men.

Despite strong evidence that oral care and overall care are connected, dental care continues to be treated as a silo component of health care, separate from other health care professions. Interprofessional health education may be the answer to solving this dilemma! Think about how we can expand current interprofessional initiatives that bring dental, nursing, medical and other health professions together for classroom, simulation, and “live” clinical experiences to learn from, with, and about each other while learning about oral health and its links to overall health, as well as the related social determinants of health. Think about the oral health contributions that can be made by clinicians in primary care settings; think about the contributions the dental team can make to improving overall health. This perspective is particularly important when providing primary care or dental care for racially and culturally diverse patients especially those with disabilities, without dental insurance, or difficulty accessing affordable dental care.

Expanding a diverse health professions workforce is crucial to promoting oral health and primary care utilization among racial/ethnic minority Americans. Presently, approximately 20% of the nursing workforce (RNs, NPs, and MWs), 20% of physicians,10% of dentists are from racial/ethnic minority backgrounds. Practitioners from racial/ethnic minority backgrounds are best equipped to work in those communities that align with their background, as they can lend their own experiences to providing culturally-competent care and improve trust of health professions among racial/ethnic minority groups. Decades of racial bias and discrimination in health care settings, and resulting mistrust, are major factors contributing to low health care utilization and poor health outcomes in racial/ethnic minority populations. Increasing the number of racially/culturally diverse health care professions students and clinicians can contribute greatly to expanding health care access and satisfying health care experiences for individuals and families from underserved communities and improve health care perceptions and trust among Americans from racial/ethnic minority communities.

The COVID-19 pandemic has underscored the physical, financial and sociopolitical barriers that disadvantaged populations face in accessing regular oral care and treatment. COVID-19 has exacerbated the impact of the social determinants of health; financial strain, transportation limitations and general distrust of the health care system have prevented many Americans from visiting their dentists. Oral care education, practice and policy initiatives need to incorporate the social determinants of health in understanding how to best treat vulnerable patients. Racial/ethnic minority identity often

overlaps with several social determinants that impact health outcomes, namely low socioeconomic status. Oral health curricula, simulation and clinical experiences should incorporate social determinants of health in patient interactions by addressing economic disadvantages, insurance complications, experiences of discrimination and environmental barriers to care among vulnerable populations. Interprofessional education experiences are crucial to promoting quality integrated health care that speaks to a wide spectrum of care interventions for racial/ethnic minority patients. Oral health literacy products that address common oral-systemic complications can be disseminated to minority and disadvantaged communities to improve oral health and overall health outcomes. The responsibility falls on health care teams that include oral care professionals to engage with their communities and encourage health care utilization to reduce oral health and overall health disparities and to build a better health future for racial/ethnic minority Americans across the lifespan.

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OHNEP
Oral Health Nursing Education and Practice

Good Eating: Linking Oral Health and Nutrition in Older Adults

December 22, 2020

Older adults often struggle with maintaining proper nutrition, which can lead to many adverse health outcomes. Chronic health problems contribute to changes in appetite, taste and smell, which contribute to decreased food intake and lack of motivation to cook and prepare food. Trouble chewing related to ill-fitting dentures and loose or missing teeth, as well as oral pain from tooth decay, abscesses or xerostomia, also make it difficult to enjoy eating. The COVID-19 pandemic has exacerbated many of the challenges older adults already face including, but not limited to: food shopping, enjoying meals with friends, or have food preparation help from a home aide, who may be at risk for spreading the virus. It is clear to see that for older adults, nutrition, oral health and COVID-19 are inextricably linked!

The important relationship between oral health and nutrition for older adults is minimized in our health culture, but a healthy mouth and teeth are vital to the idea that nutrition contributes to a healthy body. The majority of adults 65 and older have one or more chronic conditions, many of which have an oral-systemic connection. There is a great need for more awareness about the links between inflammation, infection and the chronic conditions that have related to oral health problems that can affect a person's nutritional status and overall health. Chronic conditions, including diabetes, cancer, heart disease and depression, impact older adults' ability to maintain both proper oral hygiene and nutrition. Older adults are at risk for oral infections related to tooth decay, gum disease and tooth loss, all of which make chewing and swallowing difficult. Poor oral hygiene is a prominent and harmful barrier to getting adequate nutrition.

There are many physiological and metabolic changes in aging that put older adults at risk for nutrient deficiencies. Day-to-day activity and energy needs decline significantly, along with muscle mass, senses and overall ability to absorb nutrients. These declines can be associated with a total lack of appetite, along with inspiration to cook and eat healthful food. Behavioral and mental health issues are often neglected in health care across the lifespan, especially the connections between behavioral, oral and nutritional health. Older adults are particularly susceptible to feelings of hopelessness and loneliness due to losing their partners, friends and family in old age. The grief or loss that this group experiences related to illness and death of friends and family is often related to or can lead to depression, addiction and substance abuse. As a result, the symptoms that older adults experience impact their ability and motivation to shop for food and eat alone or in the company of others as these activities become less interesting. Similarly, oral health issues like tooth loss or poor dentition can greatly affect older adults' self-esteem, making them reluctant to socialize due to their appearance. Social support from family, friends and the community are greatly important in improving older adults' quality of life, and positive mental health is a hugely important factor in promoting positive health outcomes in this age group.

When thinking about nutrition and oral health with this age group, the social determinants of health (SDOH) need to be considered. Age-related changes associated with oral health impede ability to eat and drink. Those older adults who experience economic disadvantages, lack of insurance, and are in racial/ethnic minority communities are shown to have the most oral health complications. Those older individuals with disabilities or who are homebound or institutionalized are also at increased risk for poor oral health, especially in the midst of a global pandemic where access to care is limited for this age group. Food insecurity is common among older adults in the US: approximately 5 million adults over 60 rely on SNAP benefits, and households with older adults have only $125 per month for their food budget. Food insecurity, being on a fixed income, and other related social and environmental factors are often overlooked in the health care system. Due to the COVID-19 pandemic, vital food delivery service programs have been halted and older adults may no longer receiving regular hot meals. With a limited budget and necessary social distancing precautions, access to healthy food is greatly restricted for this age group. Without the motivation and financing to buy, cook and eat healthy foods, older adults' poor nutrition can lead to serious physical health complications.

Promoting accessible, affordable and available oral health care is a responsibility that falls on the entire health care system. This age group has complex care needs that benefit from an interprofessional team of health care professionals to effectively address nutritional, oral health and overall health issues. Connecting students and clinicians across the health professions to provide effective whole-person care is a must, yet dentists and nutritionists are often left out of this team! Interactive classroom, simulation, case study, and live clinical experiences provide opportunities for interprofessional teams of students and clinicians who collaborate to develop management plans that address the spectrum of physical, behavioral, dental, nutritional, and social support interventions needed by this complex patient population. Oral health and nutrition education can also be integrated by faculty using web-based curricula integration tools that weave nutrition, oral health and overall health and interprofessional competencies. These types of experiences prepare students to promote interprofessional teamwork and care in clinical practice, providing comprehensive whole-person care to their patients. Health professions educators, students, and clinicians are equally responsible for promoting another important intervention, health literacy, to educate patients and providers alike about the links between oral health, nutrition, and overall health. Oral health and nutrition are inseparable key components of older adults' health and play a vital role in influencing their ability to eat and get the nutrients they need to thrive.

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OHNEP
Oral Health Nursing Education and Practice

It's Back to School for Everyone: Promoting Children's Oral Health in a Pandemic

August 31, 2020

Thanks to the COVID-19 pandemic, students have missed out on in-person learning since early spring when the virus shut down pre-K to PhD programs in academic institutions across the globe. Faculty were left scrambling to find ways to connect with their students while isolated in their homes. Administrators were challenged to stayed up to date with ever-changing information about the coronavirus and how to provide essential education to rapidly growing young minds. Parents were tasked with guiding their children through a new system of online learning by setting up their young children with the technology and materials they might otherwise have access to in their school.

As schools across the US launch a new academic year, we see a variety of learning modalities – socially distant and masked in-person classroom learning, at-home virtual lessons, or a complex combination of the two. Administrators, faculty and parents alike have been working tirelessly to develop effective curricula that takes into account many limitations that come with keeping everyone safe and healthy.

How can we as health professionals provide guidance and support to schools and families about keeping their loved ones safe as we begin the new school year? We can make an important contribution to keeping children healthy, from birth through adulthood, by encouraging them to take care of their mouths.

The mouth is the gateway to the rest of the body, and it is especially important to take care of teeth, tongue and gums. A recent study in the UK examined the connection between oral health and COVID-19 infection. The study found a significant association between high bacterial load in the oral cavity and severe COVID-19 infections. Good oral hygiene plays an important role in keeping teeth and gums healthy, and preventing harmful oral bacterial infections including tooth decay and periodontal disease.

Oral health is linked to overall health at all ages. Children should be encouraged to take charge of their oral health from a young age. Parents need to guide their children's oral hygiene activities until they are able to do so on their own, just as they would with learning to tie their shoes. It is important for children to maintain a good oral hygiene routine day and night, and a regular brushing routine, along with healthy nutrition, is essential to promote their health now and as they move into young adulthood. You can learn more about oral health care at home from our previous blog Oral Health Home Habits for Healthy and Happy Smiles.

Efforts to reduce the transmission of germs among younger students are especially important given the current climate. Teachers and parents are at the forefront of enforcing healthy habits and classroom policies for minimizing the spread of illness. Wearing a mask, sanitizing hands, maintaining social distance and asking children to not touch their face are simple public health strategies that decrease risk of spreading and contracting COVID-19. The graphic below illustrates methods for minimizing the spread of germs at snack and lunch times.

Dear Parents

(of elementary school aged kids)

When your kids come to school we will have to help them open LOTS of the things you pack for lunch.

PLEASE HAVE THEM PRACTICE OPENING THINGS BY THEMSELVES.

These are EASIER to open. If I help them open it, I won't be putting my hands on parts that will go in their mouth.

These are HARDER to open. If you send these PLEASE have them PRACTICE opening it. If I help them open it, I will be putting my hands on parts that will go in their mouth.

If your kiddo can open everything in their lunch, it means less time waiting with their hand up, more time eating and less germs!! (even though we are washing our hands and disinfecting)

Source: http://www.teachergoals.org

It truly takes a village to ensure our children are equipped with the physical, mental and emotional tools they need to thrive in a pandemic environment. The past six months have tested the power of families, educators and communities to rapidly adjust our daily routines in the face of a glowering pandemic. Educators and parents alike continue to do what they do best: provide a supportive and engaging learning environment for our children, whether at school or at home. We must overcome the logistical, social and financial challenges to promote the oral and overall health and well-being of our children as we strive to resolve the COVID-19 pandemic.

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OHNEP
Oral Health Nursing Education and Practice

Oral Health Home Habits for Healthy and Happy Smiles

April 1, 2020

In a matter of weeks, our world has been turned upside down due to the present coronavirus (COVID-19) pandemic. The Centers for Disease Control and Prevention (CDC) and other national and global health organizations are promoting hygiene practices to prevent transmission of the virus. Schools, universities, and colleges have moved to remote instruction; non-essential employees are working from home to implement social distancing practices so people can better protect themselves and their loved ones and prevent the spread of COVID-19. Health care professionals across the globe are working tirelessly and fearlessly to treat the hundreds of thousands of patients with this life threatening infection. With over 800,000 reported cases and counting, it is all hands on deck for health care workers as hospitals overflow and medical supplies remain scarce worldwide.

Given such sudden and drastic changes to our everyday routine, it is common for folks to neglect basic daily health practices. As you know, oral health shares many links to other health problems, especially chronic conditions. Diabetes, cardiovascular disease, kidney disease, respiratory conditions like pneumonia and conditions where people are immunocompromised, like those with cancer, organ transplants, and auto-immune diseases, are among those for whom daily oral hygiene is especially important to prevent oral disease. If you or a loved one experiences an oral health issue that requires immediate attention, the ADA recommends contacting your dentist instead of going to the ER, as hospitals and frontline health professionals are overwhelmed with caring for patients affected by COVID-19.

OHNEP always has and will continue to advocate for all health professionals to integrate oral health in their primary, acute, home, or long term care setting or practice to reduce the burden of oral disease on overall health. So to keep your message simple; please remind your patients to:

Brush…

- Brush teeth, tongue and gums with a clean, soft-bristled toothbrush
- Replace toothbrushes every three to four months
- Use fluoride toothpastes to help prevent against tooth decay

Floss…

- Floss at least once per day
- Floss all teeth, and all spaces
- Consider investing in a power air or water flosser if you are unable to visit your dentist for a regularly scheduled cleaning

Rinse…

- Rinse mouth to prevent harmful build-up of plaque and tartar
- Rinse with warm water after meals
- Rinse with antibacterial mouthwash

Right now, many of us feel isolated and powerless with the looming uncertainty of what implications the current pandemic will have for our world. One health practice that each of us can be in charge of is our oral hygiene! If there is anything that we can be in control of in such an out-of-control world, it is our own health. Before we can support others, we need to look after ourselves, and practicing good oral hygiene is one simple and effective way to practice self-care every day.

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Intimate Partner Violence Shocks the Head and Mind

March 10, 2020

Intimate Partner Violence (IPV) is defined as any physical and sexual violence, stalking, or psychological harm by a current or former partner. The CDC identifies IPV as a "serious, preventable public health problem" that affects millions of people in the U.S. every year and can result in many negative health consequences including anxiety, substance abuse, and traumatic brain injury. Recent statistics show that about 1 in 4 women and 1 in 10 men have experienced some form of IPV in their lifetime, many of whom report experiences before the age of 18. IPV affects both men and women at any age and can result in lifelong emotional, physical and fiscal trauma to survivors and their families, not to mention the lasting oral health consequences that can severely impact overall health and quality of life.

According to a report from the Health Resources and Services Administration (HRSA), approximately 75% of injuries from IPV occur around the head, neck and mouth. This can result in serious injuries to the mouth and teeth. Ongoing physical abuse from a partner such as slapping or hitting across the face can lead to serious head trauma and brain injury, including broken jaw, facial and mouth lacerations, loosening of teeth and traumatic evulsion of teeth. Primary care physicians, nurse practitioners, midwives, nurses, physician assistants, dentists and dental hygienists are a few of many clinicians who are well-positioned to identify signs of IPV and take initial action to address abuse. But clinicians and staff may not be aware of what to look for in patients or what questions to include in screening protocol.

Examples of Clinical Signs of IPV

Obvious

- Broken teeth
- Fractured jaw
- Cuts
- Facial bruising
- Bite marks
- Bruises on neck
- Wrist, arm or ankle strains
- Patches of missing hair

Subtle

- Headaches
- Depression
- Fatigue
- Lack of eye contact
- ER trips for vague reasons

- Self-inflicted cuts
- Hidden cuts
- Passive interaction
- Eating disorders

The findings of recent studies demonstrate a need for IPV competencies to be integrated in oral health care and increased self-efficacy among all health professions in IPV screening. IPV screenings and know-how are especially important in primary care practice, urgent care and ER settings that are frequented by men and women who have sustained injuries from physical abuse. Several studies report that many health professionals, particularly dentists and dental assistants, do not receive education or training in identifying and approaching IPV in their offices. As such, continuing education in identifying signs of abuse is warranted. These findings also reveal some reluctance among oral health professionals to screen due to lack of expertise in detecting IPV. They recommend promoting adoption of IPV screenings in dental offices. Mandatory reporting of abuse is required in many states, but practitioners may not be equipped with adequate resources to report abuse as well as refer their patients to safe services if they are in imminent danger.

HRSA's *Strategy to Address Intimate Partner Violence* includes four Priorities for addressing and raising awareness of IPV in clinical settings. This initiative aims to increase IPV knowledge within the health care workforce and increase access to IPV-informed health services, with the ultimate goal of earlier intervention and prevention of IPV. In addition to the primary care workforce, HRSA purports that practitioners and office staff also are perfectly poised to recognize both obvious and subtle indicators of IPV and should be aware of screening questions and methods that can be used with patients to assess their safety.

Sample Screening Questions

- "Since your last visit, I see that you have two broken teeth. How did that happen?"
- "I notice you have a bruise on your jaw. How did that happen?"
- "You seem upset/distracted today. Is there anything you would like to talk about with me?"
- "You mentioned that things have been stressful at home. Can you tell me more about what has been going on?"

HRSA also describes several trauma-informed practices that can be adopted by health professionals and staff to make their clinic a safe space, as well as "activating" clinic environments to promote IPV education and practices.

Trauma-Informed Practices for Health Professionals

- Schedule longer appointments to get a patient acclimated to procedures in mouth
- Provide a consultation room in the dental offices to further engage with patient

- Identify a “quiet room” in the dental office where procedures can be done
- Ask assessment questions using an open-ended and non-judgmental manner that encourage patient disclosure
- Allocate a portion of the visit to just involve your patient, excluding visitors
- Provide interpreters for your patients
- Offer patients immediate and private access to an advocate in person or over the phone
- Develop a list of referral resources at the ready for patients that need immediate attention
- Familiarize yourself with the IPV reporting requirements in your state
- LISTEN to your patients
- Evaluate your attitudes and beliefs about IPV
- Decide that you aren’t here to diagnose or treat IPV, but to create an opportunity for patients to share these and other experiences that may impact their overall health

There is a compelling need to integrate IPV competencies into oral health clinical education and practice! This clinical issue exemplifies the importance of interprofessional education and practice that includes collaboration between and among clinicians from different professions to effectively address IPV as a population health problem. It is the responsibility of health care professionals to ensure that their clinical setting has safe spaces and that productive, thoughtful conversations about IPV and related trauma topics can take place. IPV is one of many national public health concerns that can have irrevocable effects on oral health and overall health. Studies demonstrate that practitioners need to make progress in acquiring the competencies and resources necessary to identify signs of IPV and address them in clinical practice settings.

Resources for Patients and Practitioners

National Domestic Violence Hotline
thehotline.org
1-800-799-SAFE (1-800-799-7233)
Provides information on identifying domestic abuse, 24-hour helpline and online live chat for immediate support and referrals

Safe Horizon
safehorizon.org
1-800-621-HOPE (1-800-621-4673)
Advocacy organization with 24-hour helpline and online live chat, including resources for safety and support

National Coalition Against Domestic Violence (NCADV)
ncadv.org
Provides resources for domestic violence victims and their families to find immediate aid and plan for a safe future

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Why You Should Take a Powder on Brushing with Charcoal

January 7, 2020

Charcoal has become a widely recognized active ingredient over the past couple of years, finding its way onto our restaurant menus and into our makeup bags. Spend any amount of time online and you will find ads from “health gurus” and social media influencers sporting messy black smiles to promote the health benefits of brushing with charcoal. Beauty product manufacturers, celebrities and social media platforms are highly influential in promoting activated charcoal to not only brighten teeth, but also ingest as part of a cleansing “detox” regimen. Although charcoal appears to be a “proven” cure-all for our teeth and bodies, there is insufficient evidence that using charcoal products provide any significant health benefits. With new health and beauty crazes on the rise, health professionals and researchers are now responsible for keeping checks and balances on whether these fads are helpful or hurtful.

Activated charcoal is known for its ability to bind to organic matter, and producers of charcoal toothpaste claim that it is able to bind to plaque and other bacteria in the mouth to effectively clean teeth and remove staining. Many manufacturers claim that activated charcoal is a natural product that has been used for centuries to cleanse the body inside and out. With roots in ancient Greece, charcoal and ash composites were reportedly used to clean teeth and freshen breath. Charcoal is also well known for its detoxifying effects; activated charcoal can prevent poisonous substances and chemicals from being absorbed into the bloodstream, and thus is now sold as a “detox” additive for food and drinks. These are unfounded claims with no scientific evidence backing them up. There also are many other reasons to be wary of using charcoal tooth whitening products beyond the unknown.

Many medical experts agree that although charcoal toothpastes may be effective in removing stains, there is no evidence of any significant whitening effects. In fact, long-term use of charcoal products on teeth can wear down tooth enamel due to their abrasive nature and further expose dentin in teeth making them look yellower than whiter. Prolonged use can also irritate gums and increase tooth sensitivity. Most charcoal toothpastes also do not contain fluoride, which is proven to keep teeth and gums healthy and protect against decay.

A recent article from the *British Dental Journal* provides an in-depth review of current knowledge surrounding charcoal toothpastes and powders, and how the risks of using such products could outweigh the benefits. The authors argue that there is very little evidence supporting manufacturers’ claims that charcoal can whiten teeth and improve oral health. Rather, there is sufficient evidence that charcoal dentifrices may ultimately cause more harm than good. In addition to charcoal toothpastes not containing fluoride, potentially abrading dentin, irritating gums and increasing tooth sensitivity, the authors cite another potential risk of charcoal as a carcinogen. It is possible that long-term use of charcoal products could have dire outcomes. Overall, there is simply not enough evidence to support that charcoal promotes oral health and hygiene, as the proposed risks appear to offset the wildly under-researched “benefits”.

Activated charcoal products are promoted as handy tooth-whitening tools among other over-the-counter tooth whitening gels and films. Although these regimens are considered safe, consumers should at the very least be aware of potential risks and common side effects of tooth whitening. Both tooth whitening and bleaching products contain chemicals that lighten tooth color. As might be expected from using chemicals, increased tooth sensitivity and gum irritation are common and often to a mild degree. More serious side effects, particularly from repeated or prolonged use of whitening regimens, include enamel softening, tooth roughness, and demineralization, along with increased susceptibility to dehydration. It is important to point out that white teeth are not necessarily a sign of healthy teeth; maintaining good oral hygiene by brushing twice daily for two minutes with a fluoride toothpaste, daily flossing, and regular dental check-ups is ultimately the best way to guarantee a healthy and happy smile.

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Motivational Interviewing: A Step in the Right Direction to Better Interprofessional Oral Care

August 6, 2019

Motivational interviewing (MI) is an evidence-based counseling style that promotes healthy lifestyle changes and behavior patterns. It is used to help patients resolve issues with self-doubt and challenge negative thinking. For example, Nurse Practitioners, Registered Nurses, and Physician Assistants use motivational interviewing with patients with diabetes to engage them in goal setting about making lifestyle changes related to diet, exercise, and weight loss. These lifestyle changes are recognized as health enhancing behaviors that contribute to preventing or delaying the onset of Type 2 Diabetes and improving glycemic control for those who have this chronic condition.

Many dentists encounter patients who have little to no oral health education due to lack of access or guidance. Dentists want to make the most of their time with patients, especially with first-timers and those with dental anxiety. Much anxiety around visiting the dentist and other doctors comes from not knowing what to expect at the office, or self-doubt about personal health. Telehealth and virtual dentistry have the ability to increase health literacy in disadvantaged or hard-to-reach populations; conducting motivational interviewing with patients about their health is a very important part of this process.

A research team at the University at Buffalo recently received a $438,000 grant from the National Institutes of Health (NIH) to develop an online MI intervention for dentists to use with patients. This study aims to demonstrate the effectiveness of MI in improving oral health behaviors as well as develop an effective and low-cost program. A previous study had great success in improving oral health among those struggling with alcohol abuse using MI; this current study will develop a similar program delivered to dental patients electronically.

Evidence-based research is growing around the success of using MI to improve oral health as an alternative to current education strategies. A study conducted in 2017 utilized MI to improve oral health in adolescents. They compared standard health education to an MI intervention and MI combined with risk assessment. Both MI interventions showed improved oral health behaviors, including less snacking and more frequent tooth brushing, among participating teens.

A similar 2018 study compared the effects of a conventional education program with a program that included MI with teens with orthodontics. The results showed that the MI program had significant immediate and long-term outcomes on oral hygiene among participants, as well as greater plaque reduction and gingival care than the conventional education group. MI may be the missing piece to improving oral health care and education in the dental setting.

The use of telehealth technology is growing in dental care. Dentists are utilizing telehealth services to address several health care delivery needs, namely improving access to care for urgent dental issues to reduce emergency room spending nationwide. Dental clinics across the U.S. have reported success in using virtual health applications with patients to answer questions and provide guidance with oral problems requiring immediate care. Telehealth also has the capacity to connect all health care professionals involved in patients' health care teams and to better promote the importance of oral hygiene in patients' overall health. In this vein, telehealth technologies have the potential to include providing MI to patients who have fears or doubts about visiting the dentist, whether for dental procedures or a regular check-up.

We know that motivational interviewing is a valuable tool used to engage patients in improving both physical and mental health. Telehealth and virtual dentistry have the potential to improve access to care in underserved areas, as well as provide easy and consistent access to health literacy tools and programs. The ability to receive immediate care and assistance from a dentist has great potential to reduce the instance of emergency dental care and further reduce nationwide spending on dental care. These unique approaches to providing dental care are exciting as they show promise in improving oral health care access and literacy along with reducing dental care costs. It is encouraging that multiple health professions are adopting the use of technology to advance health promotion through use of motivational interviewing. A growing body of evidence supports use of these practices as their own to contribute to the growing demand for health care strategies that make a real difference in the lives of people in urban, suburban, and rural communities.

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Prescribing Savvy Can Make a Dent in the Opioid Crisis

April 15, 2019

The current opioid epidemic in the U.S. is heartbreaking. Recent statistics tell a harrowing story of opioid addiction. In 2016, 11 million Americans reported abusing prescription opioids, with an estimated 1,000 people being treated for opioid misuse every day. The opioid overdose death rate is even more shocking; in 2016, nearly 64,000 people died from opioid overdoses, and over 40% of these deaths involved a prescription opioid. A recent report from DrBicuspid shows that people are more likely to die from an accidental overdose than from a car crash as of 2016. This puts opioid overdoses in second place on the list of causes of unintentional and preventable death – suicide is number one.

Opioids are prescribed for a number of complaints, namely post-surgery relief and chronic illnesses. Recent research shows that dentists are responsible for 12% of opioid prescriptions, and two-thirds of these prescriptions are for oral surgery. It is also important to consider what happens beyond the prescription – unused opioids from dental procedures cause approximately 1,500 deaths each year. Many health organizations are calling on physicians, nurse practitioners, physician assistants, dentists and oral surgeons to evaluate pain management more closely and take on a more conservative approach to prescribing potentially harmful and addictive pain relief medications.

Opioid addiction is a major public health concern in the U.S. that has garnered an overwhelming amount of attention from government organizations, media outlets and healthcare agencies. As a result, there has been an influx of research studies examining the overall impact of opioid use and abuse, including reports on prescribing practices and the increase of addiction among teens.

For example, a recent study found that teens given prescription painkillers after dental procedures were 10 times more likely to be diagnosed with opioid abuse than teens who had not received a prescription. Another report found that between 2010 and 2015, the number of dental opioid prescriptions for adolescents per year had increased dramatically from 99.7 per 1000 patients to 165.9 per 1000 patients. Even after prescriptions run out, addicted teens may find ways to buy prescription or illegal opioids elsewhere, leading to overdose and even death. These growing numbers of opioid prescriptions and adolescents' evident vulnerability to addiction demonstrate how dentists need to seek alternatives to opioid painkillers for dental procedures.

Health professionals and organizations are actively promoting the use of Tylenol and Advil as a pain management alternative that proves to be just as effective as opioids. Reducing the number of prescriptions for routine dental procedures can greatly reduce the risk and instance of opioid addiction and abuse, further reducing the amount very preventable opioid-related deaths.

Dentists and other health professionals can play a significant role in curbing high rates of opioid addiction and overdose by limiting opioid prescriptions, especially for younger patients, and using alternative pain management regimens. Many health professionals

agree that acetaminophen and ibuprofen are equally effective in managing pain as opioids, and do not come with the risk of addiction. Dentists can also limit the amount of opioids they prescribe. The CDC recommends prescribing three days worth of medications at fewer than 50 morphine milligram equivalents per day. This prevents patients, their family or friends from misusing leftover pills – any leftover pills should be returned to the pharmacy or disposed of properly, either by returning them to the pharmacy or mixing them with water and an unpalatable substance (cat litter, used coffee grounds, etc.) before being thrown away.

While opioid overdoses have increased significantly over the past several years, a recent study revealed that between 2012 and 2017, new prescriptions for opioids, meaning those that receive an opioid prescription for the first time, dropped by half, along with a significant decrease in the number of physicians prescribing first-time opioids. Although the numbers had decreased, the dose and length of prescriptions remained in excess of the CDC recommendations. This represents an overall lack of attention to patients who receive opioids for short-term care, such as post-op pain management – similar to what dentists would prescribe after such procedures as wisdom teeth removal.

New prescriptions by dentists and other health professionals need to be the larger focus of the current opioid epidemic, since these prescriptions readily available for misuse, and lead to abuse if leftover medications are kept in the household and taken by others after the patient no longer needs them. Policies around opioid prescriptions, namely for teens and first-time users, need to be strengthened; awareness around non-opioid pain management needs to be investigated and promoted. Dentists and other health professionals are in a prime position to help reduce this national crisis by more closely evaluating patient needs and pain management tools that are potentially less harmful.

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Vaping: The Smoking Gun of Poor Oral Health in Teens

February 21, 2019

February is National Children's Dental Health Month, a great opportunity to promote the importance of children's dental resources and raise awareness about good oral health practices for tiny teeth. Although pediatric dental health often focuses on younger children, oral health education and resources for teens are often overlooked because this group, on the cusp of adulthood, is expected to maintain good oral health care developed in early childhood. However, with adolescence comes many personal health and social changes that parents and practitioners alike should be aware of in assessing teen oral health risk behaviors.

A major public health concern across the U.S. is the high rate of teens who smoke electronic cigarettes. Originally marketed for those looking to quit smoking tobacco, nicotine vaporizers and e-cigarettes are replacing traditional cigarettes. As a result, teens are largely misinformed about the oral and overall health risks of vaping, which is now viewed as an overall "healthier" alternative to smoking tobacco by teens and the general public. This group is widely influenced by myths and advertising for e-cigs and vapes, and there is a need for greater awareness and education on the health risks of vaping in this group.

There are a variety of factors that contribute to poor oral health in teens, and many oral health risk factors are directly linked to complications with overall health. The American Dental Association (ADA) discusses the oral health risks of smoking and ingesting tobacco products, including gum disease and oral cancer, but they neglect to include the oral health risks of smoking e-cigarettes and non-tobacco products.3 Many anti-smoking campaigns and smoking education for teens focus on tobacco-related health problems, but the recent surge of non-tobacco smoking products and the health risks associated with nicotine and other chemicals makes a compelling case for addressing these issues.

According to the National Institute on Drug Abuse (NIDA), the vaping epidemic affects teens as early as 8th grade and throughout high school. Various reports show that junior and senior high school students are twice as likely to use e-cigarettes as traditional cigarettes, yet roughly a third of these teens will start smoking tobacco products within 6 months. Although e-cigs and vaporizers are indeed tobacco-free, this does not mean that the effects of nicotine are any less brutal. It is still a highly addictive chemical that is known to cause cancer and increase risk for a range of health problems, namely heart disease and cancer of the lungs, pancreas, gastrointestinal system and breasts.3 Nicotine and other chemicals in vapes and e-cigs are especially bad for teeth and gums; frequent vaping means high amounts of nicotine in your bloodstream that reduces blood flow and saliva production and can increase muscle tension, particularly in teeth and gums. All of this can lead to painful gum disease and tooth decay, not to mention teeth grinding and persistent bad breath.

Due to early marketing of e-cigarettes as an option for those looking to quit smoking tobacco, many people falsely view e-cigs as a healthier alternative to cigarettes. This

leads to drastic misinformation absorbed by teens that is proven to be just as poisonous as vaping. High school students are especially vulnerable to these mixed messages, with 30-50% of them exposed to ads for vaping and e-cigs through all forms of advertising including retail, internet, TV and magazine ads. This pervasive promotion of the products demonstrates an urgent need for oral health literacy tools to educate adolescent youth about the severe negative impact that these products can have on oral and overall health.

Adolescence is known to be a tumultuous period in a person's life. Expectations to perform well in school and extracurricular activities are high, along with impending pressure about life after high school and making important decisions about the future. During this time, teens are learning how to balance multiple responsibilities while also staying happy and healthy. Many teens seek out ways to combat these new stressors and, unfortunately, smoking is and always has been promoted as a great stress reliever. Smoking e-cigarettes is often seen as a safer alternative to smoking and/or ingesting tobacco products, but there are many serious oral health problems that can result from long-term and frequent vaping. In 2018, the Food and Drug Administration (FDA) revised its current anti-smoking campaign *The Real Cost* to include the destructive effects of e-cigarettes and to raise awareness about the epidemic of vaping in schools.5 Continuing to market e-cigarettes as a "safer" alternative will cause irreparable harm to today's teens and future adolescents, making the need for oral health education regarding e-cigarettes especially important. As health professionals, we need to act now to educate our teens about the perils of e-cigarettes and vaping!

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Blueberries May Be “Juiced” What the Dentist Ordered

January 28, 2019

New year, new you! The first few months of any new year are a time for evaluating your lifestyle choices and making positive changes to improve health and happiness. Improving your overall health often includes changes to diet, exercise and routine. Recent studies show that fruit extracts from blueberries and other fruits contain nutrients that may lower the risk of tooth decay, plaque and gum disease. Many scientific studies have examined the health benefits of berries and other fruits, but new research specifically focuses on the oral health benefits of certain nutrients and compounds in fruit extracts that help protect teeth and gums. This year, to fight both candy cravings and cavities, keep in mind how blueberries can help *prune-vent* tooth decay.

Dark colored berries, namely blueberries and cranberries, have many health benefits beyond oral health; they are the best natural source of antioxidants and fiber, and help protect us from many serious illnesses including cancer and heart disease. These berries also contain polyphenols, which are natural compounds that fight bacteria in the mouth and protect teeth from decay. Chief Executive of the Oral Health Foundation, Dr. Nigel Carter, suggests utilizing these natural extracts in oral health care products, such as toothpaste and mouthwash, or adding them to water and drinks as they are flavorless and dissolve in water.

Although berries evidently have many health benefits and should certainly not be taken for *pome-granted*, they are often high in sugar and acid and should not be consumed in large quantities. Dr. Carter advises that although fruits contain natural sugar as opposed to unhealthy added sugar, consistently eating more than the daily recommended amount can lead to oral and overall health problems. Despite concerns, consuming *raisin-able*portions of these power-packed fruits is the key to keeping a happy and healthy smile.

Studies have examined the effects of fruit extracts on bacteria and the potential protective functions of nutrients and compounds in fruits. One study conducted in the UK tested the effects of blueberry, cranberry and strawberry extracts on *Streptococcus mutans* (*S. mutans*) bacteria, a bacteria that contributes to dental caries. The researchers found that cranberry and blueberry extracts were most successful in compromising the activity and expression of *S. mutans* bacteria; strawberry extracts did not deter the bacteria in any way. A similar study focused on the effects of polyphenols found in blueberries on periodontitis, and found that these specific polyphenols had significant antibacterial and anti-inflammatory effects on the active components of periodontitis. These studies support the potential for berry extracts and polyphenols to protect against tooth decay, and further support recommendations to incorporate these extracts into dental products to fight dental disease.

Obviously many health benefits can come from adding more blueberries and cranberries to your new diet, but it is important to do so in moderation. The World Health Organization (WHO) provides guidelines on sugar intake for both adults and children for medical professionals to utilize. For adults, the daily recommended amount

of sugar is no more than 25 grams of sugar a day, or about 6 teaspoons. This makes up about 5% of the average adult's daily calorie intake. A recent article examined the use of these guidelines in dental practice and provided suggestions on how dental professionals can provide nutrition and diet advice that includes the importance of limiting both natural and "free" added sugars. Although the authors maintain that it is important to encourage patients to eat fresh fruit and avoid free sugars, they also acknowledge that excessive amounts of fruit should be avoided and that current guidelines provided by WHO should be followed.

This year, why not add good oral health practices to your new year's resolutions? Healthy eating is an important component of oral health and overall health at any age. Mindful eating can, in the long run, help prevent oral diseases along with visiting the dentist twice a year and brushing and flossing two times a day. An abundance of recent research supports that consuming blueberries, cranberries and other dark berries high in polyphenols pack a *punch* in the fight against tooth decay and other oral health complications. But before you chow down on a dry pint of blueberries, keep in mind that consuming high amounts of sugar can negate these positive effects by increasing risk of caries. In *plum*, adding more berries to your diet is a tasty and *fruitful* way to keep your mouth happy and promote good lifelong oral health practices. *Orange* you glad you took the time to read this?

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Innovations in Whole Person Care: Health Literacy Across the Lifespan

November 13, 2018

The American Academy of Pediatric Dentistry (AAPD) recommends that children have a dental home by their first birthday to prevent negative oral health outcomes. However, according to a recent report from the AAPD, a whopping 74% of American parents do not take their child to the dentist until much later. They report that 29% of the remaining 26% of parents who do take their child before age 1 are more likely to be from the millennial generation than any other generation of parents. This reflects further data about general oral health knowledge and literacy in the U.S.

The AAPD reports that while almost 100% of parents say oral health is an important in their household, 31% of them feel stomach aches, earaches headaches and sore throats are more concerning ailments than toothaches. Poor oral health connects to all sorts of general health issues, including diabetes, cancer, heart problems, among others. As we moved into the new millennium almost 20 years ago, scientists and researchers made various predictions about the future of health literacy and communication. Many concerns focused on internet access and new information technology. Now, in 2018, we have an opportunity to reflect on how health information is disseminated to various populations, and how health professionals and researchers can best address the remaining gaps in health literacy and knowledge.

Research from the early 2000s reveals concerns and goals for moving forward with improving health literacy. Reports showed that efforts to advance health literacy are consistently grounded in the relationships among education levels and overall population literacy and health status in the U.S., U.K. and beyond. Limited access to education is also often related to poor social development and health outcomes; areas with high literacy and education have significantly better outcomes in these areas.

Early publications supporting the need for improved health literacy cite policy issues with consistently defining “health literacy” as a barrier. Policies to improve education and policies to improve health literacy were seldom linked. This intersection needed to be addressed to best understand how to improve low health literacy and provide accessible health and healthcare knowledge.

Components of health literacy education include reading and comprehension skills as well as utilizing technology and being discerning consumers of online information. Researchers also identified an “inverse relationship between increasing age and health literacy” which is problematic as older adults are more likely to have chronic health conditions that increase the risk for poor oral health that is often overlooked. Poor oral health is linked to a variety of other health complications at any age, which is why interprofessional practice and care, including oral health competencies and patient education, is so important. These predictions from almost twenty years ago are still very relevant today.

Current research on oral health literacy demonstrates the need to address issues that lie at the intersection of oral health, overall health, education and policy. One way to close health and education gaps is by providing and promoting oral health education that is accurate, easy to understand and, ideally, free. A health literacy partnership between the Oral Health Nursing Education and Practice (OHNEP) program and the American College of Physicians (ACP) developed evidence-based Oral Health Fact sheets for use in primary care settings. Written at the 6th grade reading level, these handouts provide an overview of common oral health problems and key treatment and practices for good oral health. These handouts describe the common oral health problems linked with diabetes, HPV and aging. You can find them in both English and Spanish here. These resources are an example of health literacy products to increase informative and easily accessible oral health knowledge and self-care that can be distributed to patients by MDs, NPs, RNs, and PAs at patient visits or online through patient portals.

Nurse practitioners, pediatric care practitioners, midwives, physicians and physicians assistants are among non-dental health care practitioners that should be able to screen for and identify oral health issues across the lifespan and make recommendations and referrals. Along with improving oral health literacy among patients, interprofessional education should become a standard in health professions curricula. Curricula that have multiple interprofessional experiences that weave oral health into course content as well as simulation and “live” clinical experiences, allow future professionals to be better informed about the connections between oral health and overall health.

Primary care providers should be able to provide basic information and education to individuals affected by oral-systemic health issues to further promote widespread literacy. Recent literature in this area suggests that to make significant change in oral health literacy, all health professions need to incorporate oral health in their histories and physical exams, risk assessments, and management plans including dental referrals. Despite growing oral health efforts in advocacy and education through programs such as OHNEP, it remains challenging to find and to implement integrated medical-dental practices. The past 20 years have brought on new challenges in oral health and overall health literacy; health professions should be taking advantage of new technologies and research findings to change and advance health literacy policy, education and practice.

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Rising Rates of HPV-Associated Oropharyngeal Cancers: A Challenge For Interprofessional Education and Practice

September 18, 2018

It is predicted that over the next twenty years, oropharyngeal cancers will make up the majority of head and neck cancers, and HPV-associated oropharyngeal cancers are believed to become the most prevalent HPV-associated cancer in the U.S. by 2020. A recent report from the CDC declared that the most common HPV-associated cancer in the United States is oropharyngeal squamous cell carcinoma (SCC), including those cancers on the tongue, tonsils, mouth and throat. As rates in HPV-associated cervical cancer have decreased, oropharyngeal SCC rates have increased among both men and women. According to the CDC, HPV is believed to cause 70% of oropharyngeal cancers. Although it can take years for cancer to develop due to HPV infection, recent studies have begun to examine if HPV alone causes oropharyngeal cancers or if the interaction with other harmful behaviors, such as smoking and alcohol, are to blame.

The high prevalence of HPV among sexually active adults has become common knowledge in recent years; an estimated 10% of men and 3.6% of women have oral HPV, and other types of HPV transmission are known to be equally widespread in both men and women. Despite the popularity of HPV, both as a sexually transmitted disease and highlight of family dinner conversations, education and awareness of the long-term impacts of HPV remain mostly unknown to the general public. Studies have examined the perceptions, knowledge and awareness of HPV and oropharyngeal cancers among practitioners from various backgrounds; dentists, nurses, practitioners physicians, midwives and physicians assistants are among those most likely to be responsible for identifying signs and symptoms of oral HPV and cancers. It thus becomes the responsibility of healthcare professionals from all backgrounds to disseminate the importance of HPV causes and prevention, and further improve interprofessional practice and competencies within the realm of public health.

HPV is the most common sexually transmitted virus in the U.S. yet it is one of the most difficult viruses to identify and diagnose despite mass interest in preventing the disease and related cancers. There are approximately 200 different strains of HPV, and at least 9 are responsible for causing cancers worldwide. In the U.S., 90% of HPV-related oropharyngeal cancers are caused by the HPV-16 strain. Recent studies that have explored the association between HPV and oropharyngeal cancers call for increased awareness about proper oral health care and about signs of oral HPV.

Sun and colleagues describe “cultural and social hurdles” related to general attitudes about HPV that impair practitioners’ ability to identify signs of HPV infection and oral cancer. Another study by Kechner and colleagues surveyed general practitioners about their awareness and knowledge of HPV and associated oropharyngeal cancers, and found that while their awareness was high they were less likely to recognized signs of HPV and related cancers. A similar study was conducted with oral health professionals

and they found that while many were aware of HPV and oral health, few educated their patients about HPV, vaccinations and oral health links.

The results and conclusions drawn from these studies collectively provide further implications for the need to build interprofessional practice and oral health competencies in treatment and prevention of HPV and oropharyngeal cancers. They also represent a severe disconnect between oral health and HPV awareness that puts their patients at great risk for HPV-associated cancers and complications.

Interprofessional education and practice has great potential in improving patient-centered care and broader population health. Recent studies and reports around the impact of HPV and its connection with widespread oropharyngeal cancers demand greater attention on just how invasive this disease can be for those infected, as well as demands that healthcare practitioners collaborate with one another on bringing awareness to HPV signs and symptoms. Providing interprofessional education at the academic level can bring together physicians, nurses, dentists and midwives to learn to communicate with one another about their knowledge and concerns related to oral HPV and cancers, as well as connect on proper examination of the head, neck and oral cavity. These providers and many others have the resources to screen and educate patients about HPV and provide more information about prevention, including safe-sex practices and advocating for administering the Gardasil vaccine before becoming sexually active until age 26.

Not only is it the responsibility of patients, namely sexually active adults, to be informed about HPV transmission, but it is the responsibility of clinicians to address the risk factors related to HPV and direct patients through the proper channels in treating and identifying any oropharyngeal complications. Interprofessional care has the unique ability to connect doctors in a way that support patients from all backgrounds and with varying access to healthcare. Education and awareness about HPV has the potential to be as pervasive and insidious as the virus itself, and the ever-growing instances of oral HPV infections and oropharyngeal cancers can be greatly diminished with the inclusion of interprofessional communication in everyday healthcare practice.

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Eating, Chatting and Laughing: Oral Health Improves Social Support and Quality of Life of Older Adults

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Concerns are growing about how poor oral health of older adults, aged 65 and older, negatively impacts physical and mental health as well as overall quality of life. According to the CDC, 1 in 5 adults is reported to have untreated tooth decay or have lost all of their teeth, while 2 in 3 adults have gum disease. Tooth loss can further affect nutritional health and ability to enjoy most foods. Gum disease, including gingivitis and periodontitis incur infection, increased tooth and gum pain, and tooth loss associated with reluctance to smile and issues with speech.

The CDC also cites various systemic factors that increase risk for poor oral health among seniors including one or more chronic conditions such as diabetes, cardiovascular disease, or cancer. Chronic mobility disorders such as arthritis, Parkinson's disease, stroke, and dementia contribute to limitations in self-care including oral hygiene. Social factors including, but not limited to: loss of dental insurance related to retirement, no Medicare dental benefit, isolation due to loss of spouse and/or peer group, depression, disability or institutionalization are also barriers to seeking dental care or carrying out effective oral hygiene. National data on oral health also shows significant disparities among older adults by race/ethnicity and income. It is estimated that one third of older adults living in poverty have untreated decay and 36% are endentulous; this is four times the rates for older adults with annual household incomes at or above $47,000. The vast array of factors that affect oral, physical, and social well-being can dramatically affect the quality of life (QOL) of this population.

Isolation and loneliness are of particular concern related to older adults' QOL. Studies on aging and social support networks describe loneliness as both a cause and a consequence of negative overall health; loss of connections over time reduces the social network of older adults which further increases the likelihood of depressive symptoms, cognitive decline, inadequate nutrition, and poor self-care, including oral hygiene. In addition to the stressors of sustaining social support in older age, many older adults struggle with maintaining oral health, that is, obtaining preventive and/or restorative dental care and performing oral hygiene. This situation comes with its own set of problems that impact this group's willingness to socialize with others and maintain a sort of independence that promotes self-confidence. This notable relationship between insufficient dental care and loneliness represents a need for further exploration and understanding about how good oral health can improve older adults' overall QOL and well-being.

One recent study assessed differences in self-reports of oral health and QOL among seniors with varying fraility, including those with remaining teeth and/or dentures and those who were edentulous. Seniors with remaining teeth reported better QOL than those who were edentulous, supporting a connection between good oral health care and overall positive QOL. Another study by Rouxel and colleagues, described the link between oral health and loneliness and sought to define oral health-related QOL. Their

findings support the notion that those with oral health issues, such as dental disease and tooth loss, are more likely to report feeling lonely and reluctant to socialize. Future research could continue to explore oral health-related QOL as a means of combating loneliness and improving social well-being.

Maintaining good oral hygiene practice and self-care is a surprisingly important part of socializing and enjoying life. Our favorite social activities – dining out, laughing with friends, engaging in rich conversation – all necessitate being confident in ones' appearance and being comfortable with smiling and engaging with others. Older adults that struggle with tooth loss, mouth pain and oral diseases struggle to enjoy tasteful and nutritional food or may be reluctant to engage with others because they lack self-confidence in their appearance.

In addressing oral health as an essential component of overall health, particularly for older adults, there needs to be greater awareness about the negative impact poor oral health practices and care can have on physical, mental and social health. Recent studies postulate implications for changing healthcare and education policies by proposing integration of oral health into all aspects of health care, as well as providing community-based programming and education for seniors on good oral health and preventing dental disease. Oral health is present and pertinent over the entire life span and rooted in many aspects of day-to-day health and functioning. Although the promotion of access to care and importance of oral health for older adults is often neglected in education, practice, research and policy, there appears to be growing interest in attending to best practices for improving this population's quality of life and understanding how to successfully address their needs.

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