

FY 2024 IHS Division of Oral Health Report

July 1, 2024

Multi-Directional Integration of Oral Health, Primary Care, and Mental Health

Timothy L. Ricks, DMD, MPH, FICD, FACD, FPFA

Oral Health Promotion/Disease Prevention Consultant

Division of Oral Health, Office of Clinical and Preventive Services

Nathan P. Mork, DDS, MPH

Oral Health Promotion/Disease Prevention Officer

Division of Oral Health, Office of Clinical and Preventive Services



IHS Division of Oral Health
Multi-Directional Integration (MDI) Initiatives: Past and Present
TABLE OF CONTENTS

	<u>Page</u>
<u>Executive Summary</u>	3
<u>Visual Overview</u>	5
<u>Background</u>	6
- <u>About the IHS Division of Oral Health</u>	6
- <u>Health/Oral Health Disparities among American Indians/Alaska Natives</u>	6
- <u>Multi-Directional Integration Relevancy to IHS, Tribal, and Urban Dental Programs</u>	6
- <u>Evidence Supporting the IHS Multi-Directional Integration Initiatives of 2023 and 2024</u>	7
<u>Methodology</u>	10
- <u>Multi-Directional Integration Projects, 2023-2024</u>	10
- <u>Participating Programs and Technical Advisors, by Project, 2023-2024</u>	10
- <u>Project Scope</u>	12
<u>Results</u>	15
- <u>Integration of Primary Care Screenings in Dental</u>	15
- <u>Integration of Mental Health Screenings in Dental</u>	16
- <u>Integration of Oral Health into Primary Care</u>	16
- <u>Figure 1: Referral/Positivity Rate for Various Projects</u>	16
<u>Attachments</u>	17
- <u>Attachment 1 (Diabetes Screening Protocol)</u>	17
- <u>Attachment 2 (Emergency Department Triage/Treatment Protocol)</u>	18

Executive Summary

American Indians and Alaska Natives (AI/AN) suffer disproportionately from myriad health conditions including cardiovascular disease, diabetes mellitus, chronic liver disease and cirrhosis, influenza and pneumonia, kidney disease, chronic lower respiratory diseases, depression, and oral disease. The IHS Division of Oral Health (DOH) has a long history of collaborating with other health disciplines at the national, Area, and local level. For the past 24 years, DOH has provided seed funding to numerous projects aimed at addressing prevention of oral diseases including dental caries (tooth decay), periodontal (gum) disease, and oral cancer. In 2023, and again in 2024, DOH embarked on a series of funded initiatives for IHS, tribal, and urban dental and medical programs to address some of these health disparities.

All IHS, Tribal, and Urban dental programs were invited – through a series of communications in September 2022 and again in September 2023 via Area Dental Officers, Dental Clinical and Preventive Support Centers, and through the various IHS Dental Listservs – to participate in one of nine different projects: hypertension screenings in the dental office, diabetes screenings in the dental office, depression screenings in the dental office, human papillomavirus vaccination screening and education in the dental office, cognitive screenings in the dental office, childhood (MMR, DTP, HPV, etc.) and adult (pneumococcal, COVID-19, influenza, etc.) immunization screenings in the dental office, sexually transmitted infection education and testing referral by dental providers, oral health screenings and silver diamine fluoride applications in 1-5 year-olds in the medical office, and triaging and treating dental conditions in the emergency department by medical providers. DOH chose these evidence-based projects specifically to address multi-directional integration of oral health, primary care, and behavioral health.

Over the course of two six-month periods in Fiscal Year 2023 and 2024, DOH funded 40 separate projects addressing the nine focus areas. Nine of the 12 IHS Areas were represented in the various projects: Albuquerque, Bemidji, Billings, California, Great Plains, Nashville, Navajo, Oklahoma City, and Portland Areas. DOH held monthly virtual meetings with all of the participating programs, medical and dental, and the participating programs submitted monthly reports to DOH. For projects related to primary care and behavioral health, DOH relied on subject matter experts from other health disciplines housed within the IHS Office of Clinical Preventive Services, of which DOH is a part. In addition, DOH relied on the state dental director of Wisconsin on the emergency department initiative since he had led a similar initiative in that state previously and DOH was attempting to replicate that initiative.

Results from the projects varied. Only one program participated in the immunization screening and HPV screening project, and while that dental clinic referred 25 percent of adolescents and adults to primary care as they had fallen off their immunization schedules, indicating the need for such screenings throughout dental clinics even though only one clinic participated in the project. This project could be replicated in the future, but likely will be more successful if it is led by medical staff with dental staff participating, rather than led by dental departments.

The two integration initiatives related to mental health were widely accepted by the participating dental clinics and patients. Over the six-month reporting period, the five participating programs reported a total of 2,371 depression screenings of adolescents and adults, with 33 scoring a 3 or higher on the PHQ-2 (1.4 percent). Most of these patients were referred to a primary care provider rather than a behavioral health provider for follow-up care, although at least 9 patients reported already being treated by a behavioral health provider and 2 patients refusing a referral. With the cognitive screenings, participating programs conducted a total of 151 Mini-Cog® screenings resulting in 29 referrals to primary care providers for a follow-up evaluation (19.2 percent). Participating programs stated that several patients declined the referral, although the exact number of refusals is unknown. Looking ahead, both of these projects show promise in the dental setting, as the depression screening has been integrated into the IHS Dental Patient Medical History Form (IHS 42-1) and takes less than 30 seconds to administer by any dental staff, while the cognitive screening takes about three minutes and can be administered either by a dentist or dental hygienist most easily.

The Sexually Transmitted Infections (STI) Education and Referral project began with 2021 discussions on how dental programs could be involved in the Ending the HIV Epidemic in the AI/AN population. Later, given the disparities in STIs among the AI/AN population, the project was created in 2023 to highlight how dental providers could educate AI/AN dental patients about STIs and direct them to resources that provide more information and, in some states, free STI testing. Certain STIs have increased dramatically recently. For example, Syphilis infections nationwide have climbed rapidly in recent years, reaching a 70-year high in 2022, according to the CDC, and most noticeably in the AI/AN population. That trend, along with the fact that syphilis and other STIs have oral manifestations, presents an opportunity for IHS, tribal, and urban dental programs to educate patients about STIs and make appropriate referrals to primary care providers.

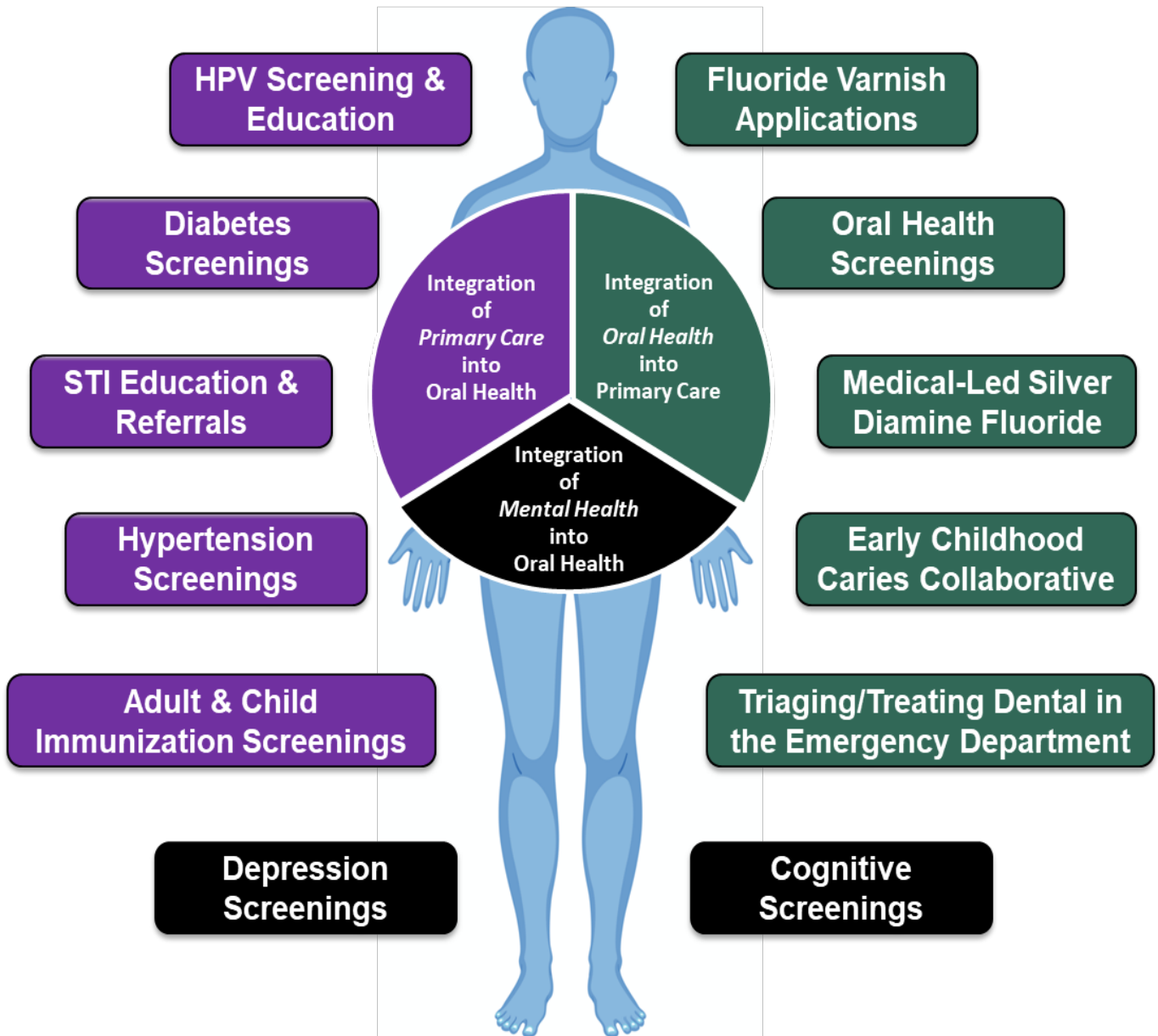
Two other primary care screenings performed in dental clinics had varying success. In the hypertension screening project, programs were given flexibility to set the parameters for referral to a medical provider after consultation with their co-located medical program director. Programs were advised to not refer patients who registered at the low end of systolic and diastolic hypertension to their medical clinics as to avoid inundating the medical clinics with patients. Each of the participating programs set different parameters for when to refer patients to medical providers: 170/100, 150/90, 180/100, 160/100, and 160/105. At the conclusion of the six months, programs reported 1,203 adults received a hypertension screening at the comprehensive dental examination or other appointment. Of these, 82 or 6.8 percent exhibited hypertensive readings that warranted a referral to a medical provider based on local clinic parameters and were subsequently referred. Hypertension screenings should be a routine part of the dental visit, especially at the annual dental examination or prior to any surgical procedure.

Diabetes screenings in a dental setting are more complicated. Over the six month period, a total of 521 patients were screened for diabetes (either directly by the dental clinic or by the medical lab as ordered by a dental provider), with a total of 7 referred to the medical department for follow-up consultation (1.3 percent). However, this screening does not show much promise in the future in dental programs, at least using the glucometer as fasting glucose is ideal for the glucometer diabetes screening, and dental staff often instruct patients to always eat before dental appointments due to the possibility they not be able to eat afterwards for a while if an anesthetic block is administered. The other barrier reported by our participating sites was that point-of-care glycated hemoglobin testing in IHS, tribal, and urban clinics is often not allowed in dental programs but instead is performed by the clinic's medical laboratory. Given these barriers, diabetes screening in IHS, tribal, and urban dental clinics will need to be coordinated through the medical laboratory and medical director.

The two projects designed to integrate oral health into the medical clinic also had varying degrees of success. The Triaging and Treating Dental Conditions in the Emergency Department (ED) initiative, which was designed to promote opioid and antibiotic steward as well as to replicate the Wisconsin Dental Pain Protocol, resulted in 52 emergency department staff receiving didactic training on oral health and 41 receiving hands-on training on anesthetic block administration. However, given multiple shifts and several of the participating emergency departments utilizing predominantly contract medical providers, the challenge in moving forward with this initiative will be to ensure training of new ED staff. The other project, the Medical-Led Silver Diamine Fluoride (SDF) initiative, which was conducted in 2023 and again in 2024 in six separate sites, had limited success due to a lack of engagement by medical providers. In 2023, a total of 98 children were screened by medical providers in the four clinics participating in that six-month period, with SDF indicated in 32 children and applied in 17 children (53.1 percent). Primary care providers (PCPs) reported time being the biggest barrier to implementing this project, as an oral health screening and SDF application cuts several minutes into what is often a very short PCP appointment.

Overall, the multi-directional integration of oral health, primary care, and mental health shows significant promise in IHS, tribal and urban dental and medical programs. Dental and medical staffs' knowledge of overall health and relationship to oral health, as well as the benefit of generally close working relationships on a daily basis in the co-located ambulatory and hospital programs, serve as a foundation for future multi-directional integration initiatives as should serve as a model for non-IHS programs as well.

Visual Overview



Background

About the IHS Division of Oral Health

The purpose of the IHS Division of Oral Health (DOH) is to raise the oral health status of the AI/AN population to the highest possible level through the provision of quality preventive and treatment services, at both community and clinic sites. The IHS provides dental services across 414 dental programs located in 37 states, with approximately one-third of these programs directly administered by the IHS and two-thirds administered by Tribes or tribal organizations with support from the IHS.

Health/Oral Health Disparities among American Indians/Alaska Natives

American Indians and Alaska Natives (AI/AN) suffer disproportionately from numerous health conditions: cardiovascular disease, diabetes mellitus, chronic liver disease and cirrhosis, influenza and pneumonia, kidney disease, chronic lower respiratory diseases, and depression. The most significant disparities between the AI/AN population and the U.S. general population are with alcohol-induced morbidity (6.6 risk ratio or RR), chronic liver disease and cirrhosis (4.6 RR), diabetes mellitus (3.2 RR), accidents/unintentional injuries (2.5 RR), assault/homicide (2.1 RR), and influenza/pneumonia (1.8 RR). (Indian Health Disparities Fact Sheet, 2019)

When compared to other racial or ethnic groups, AI/AN children 2-5 years old have more than double the number of decayed teeth and overall dental caries experience as the next highest ethnic group, U.S. Hispanics, and more than three times that of U.S. white children. In the 6-9 year-old age group, 8 out of 10 AI/AN children have a history of dental caries compared with only 45 percent of the general U.S. population, and almost half of AI/AN children have untreated tooth decay compared to just 17 percent of the general U.S. population in this age group. In the 13-15 year-old age group, three out of four AI/AN dental clinic patients have a history of tooth decay, compared to half of 13-15 year-olds in the general U.S. population, and almost three times as many 13-15 year-old AI/AN youth have untreated decay compared to the general U.S. population. In adults, the disparity in dental disease is equally as pronounced. Fifty-six percent of AI/AN adults 35-49 years have untreated decay compared to just 26 percent of the general U.S. population, and across all other age groups studied (50-64 years, 65-74 years, and 75 and older), AI/AN adults have more than double the prevalence of untreated tooth decay as the general U.S. population. In addition, the rate of severe periodontal disease in AI/AN adults is double that of the general U.S. population. ([IHS Oral Healthy Survey Data Briefs](#))

Multi-Directional Integration Relevancy to IHS, Tribal, and Urban Dental Programs

Across the U.S., 109 million people see a medical provider but not a dental provider each year (AHRQ Statistical Brief #544)? In the IHS, access to dental care rate has hovered around 20 percent since 2020, meaning that only 20 percent of all AI/AN patients that access any point of the IHS healthcare system are accessing dental care. Oral health professionals need other healthcare professionals to help screen for dental disease and refer patients to IHS and tribal clinics for follow-up care. Primary care providers can also employ preventive services such as applying fluoride varnish or silver diamine fluoride in young children to arrest caries until the child can get a dental appointment.

The need, however, is multi-directional because there are also 29.5 million Americans that see a dental provider each year but not a medical provider (AHRQ Statistical Brief #544). Many AI/AN patients may have undiagnosed chronic conditions such as hypertension, diabetes, depression, and cognitive decline, and these patients may have their first touch point in IHS and tribal dental programs. Consequently, oral health professionals have an obligation to review patients' overall health and screen for potential chronic conditions in the dental clinic.

Evidence Supporting the IHS Multi-Directional Integration Initiatives of 2023 and 2024

Hypertension Screenings in the Dental Setting

Hypertension has a direct impact on oral health and it is bi-directional; periodontitis is associated with hypertension and dental patients are often apprehensive and present to the dental office with anxiety and hypertension. It is estimated that there are at least 10 million people in the U.S. with undiagnosed hypertension. While in dental training, most U.S. dental schools require that blood pressure be taken at every examination and surgical appointment, but recent reports show that less than half of oral health professionals routinely take blood pressure. However, the U.S. Preventive Services Task Force (USPSTF) recommends screening for hypertension in adults.

Population	Recommendation
Adults 18 years or older without known hypertension	The USPSTF recommends screening for hypertension in adults 18 years or older with office blood pressure measurement (OBPM). The USPSTF recommends obtaining blood pressure measurements outside of the clinical setting for diagnostic confirmation before starting treatment.

Diabetes Screenings in the Dental Setting

Diabetes mellitus has a direct effect on oral health as uncontrolled diabetes often leads to the “6th complication” of diabetes, periodontal disease. This relationship is also bi-directional in that successful periodontal therapy has been shown to improve glycemic control. The USPSTF recommends screening for prediabetes and diabetes in adults as follows:

Population	Recommendation
Asymptomatic adults aged 35 to 70 years who have overweight or obesity, or aged 45 for others.	The USPSTF recommends screening for prediabetes and type 2 diabetes in adults aged 35 to 70 years who have overweight or obesity. Clinicians should offer or refer patients with prediabetes to effective preventive interventions.

Depression Screenings in a Dental Setting

Few dental offices have a direct referral network connection with behavioral health, but in 2016, the IHS changed that by implementing depression screenings in the dental setting. Twelve programs participated, increasing depression-related referrals to primary care or behavioral health providers by 1200 percent. Depression has an indirect effect on oral health: adults with depression report poorer oral health and are less likely to seek care for their oral health problems. In addition, patients with depression have higher levels of dental caries and a higher prevalence of chronic pain in the face and jaw. The USPSTF recommends depression screenings for both adults and adolescents.

Population	Recommendation
General adult population, including pregnant and postpartum women	The USPSTF recommends screening for depression in the general adult population, including pregnant and postpartum women. Screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up.
Adolescents aged 12 to 18 years	The USPSTF recommends screening for major depressive disorder (MDD) in adolescents aged 12 to 18 years.

HPV Vaccination Screening and Education in the Dental Setting

Human Papilloma Virus (HPV) causes more oropharyngeal cancers than any other type of cancer, including cervical cancer, with 14,400 cases/year (CDC). Oral cavity cancer is predominantly caused by tobacco and alcohol use. Oropharyngeal cancer, another subset of neck and head cancer, includes human papillomavirus (HPV) as an important risk factor. The incidence and mortality rate of oral cancer has been decreasing in the United States presumably because of reduced tobacco and alcohol use. However, HPV-related oropharyngeal cancer is increasing in incidence. Oropharyngeal cancer includes lesions of the tonsil, oropharynx, and base of the tongue. The epidemiology of HPV-related oropharyngeal cancer is evolving and could have important implications for identifying high-risk populations that might benefit from screening. Currently, there is not a clinical HPV oral cancer screening tool available. There is, however, the ability of oral health professionals to screen children, adolescents, and adults as to whether they have received the HPV vaccination.

Cognitive Screenings in the Dental Setting

Estimates vary, but experts report more than seven million people ages 65 or older had dementia in 2020, and by 2030 this could be more than nine million people in the U.S. Once patients begin to have cognitive decline – whereby they have an increased inability to communicate and advocate for their pathway to wellbeing – it affects their oral hygiene, their compliance with treatment, and compliance with attending healthcare appointments. The purpose of this initiative was to teach providers how to recognize cognitive impairment in a dental setting. In 2023, five IHS and tribal programs began performing cognitive screenings in the dental office using a screening tool called the Mini-Cog®. Not all patients are screened; only those with signs of cognitive decline are screened. The Alzheimer’s Association makes the following recommendation regarding screening:

Population	Recommendation
Older adults	Individuals with memory concerns or other cognitive complaints should be evaluated for cognitive impairment. Non-memory triggers include personality change, depression, and deterioration of chronic disease without explanation, and falls or balance issues.

Immunization Screenings in the Dental Setting

Vaccination is a safe and effective way of protecting people against harmful diseases. However, there are some alarming statistics. 55 percent of adults do not get the annual influenza vaccination, and influenza causes up to 710,000 hospitalizations and up to 52,000 deaths each year in the U.S. 31 percent of adults over 65 years of age have never received the pneumococcal vaccination, and pneumococcal pneumonia results in 150,000 hospitalizations each year, and 1 in 20 who get this type of pneumonia die. 19 percent of people in the U.S. still have not been vaccinated against the COVID-19 virus. 19 percent of children under 24 months of age have not received 4 doses of DTP/DT/DTaP, and 9 percent of children under 24 months of age have not been vaccinated against measles, mumps, and rubella. On November 17, 2022, the IHS Chief Medical Officer announced the IHS E3 Vaccine Strategy, “directing all federal direct care sites and encouraging all tribal and urban Indian organizations facilities to increase vaccine coverage and protect against vaccine preventable illnesses in tribal communities.”

Sexually Transmitted Infection (STI) Brief Education and Referral by Dental Providers

Sexually Transmitted Infections (STIs) disproportionately affect the AI/AN population. The rate of reported chlamydia cases among AI/AN in the United States as 3.7 times the rate among Whites. The rate of reported gonorrhea cases among AI/AN (329.5 cases per 100,000 population) was 4.6 times the rate among Whites. The rate of reported primary and secondary syphilis cases among AI/AN was 2.6 times the rate among Whites. From 2014 to 2018, the rate of reported congenital syphilis increased 500% among AI/ANs. The rate of HIV diagnoses in the United States among adult and adolescent AI/AN males was greater (16.2 per 100,000) than the rate for White males (9.6 per 100,000), while the rate among AI/AN females was greater (3.0 per 100,000) than for White females (1.7 per 100,000). Most importantly, most STIs have oral manifestations and may show signs in the oral cavity before any other location.

Silver Diamine Fluoride Applications by Medical Providers

Early Childhood Caries (ECC) – the presence of any decayed, missing, or filled teeth in a child under six years of age – can cause significant problems early in life such as pain, infection, delayed speech development, extensive rehabilitation, and even self-esteem issues. Even though we have made improvements over the past decade, over half of 1-5 year-old AI/AN children still suffers from ECC. In 2022, the IHS Division of Oral Health conducted a project to encourage medical providers to conduct oral health screenings and apply silver diamine fluoride (SDF) to arrest/stop dental caries so that a child could receive follow-up restorative care, if appropriate, in an I/T/U dental program. The American Academy of Family Physicians makes the following recommendation that relates to this project:

Population	Recommendation
Children 1-5 years of age	AAFP recommends physician education in oral health screening and management and the health effects of poor oral hygiene.

Triaging and Treating Dental Conditions in the Emergency Department by Medical Providers

There are an estimated two million dental visits each year in emergency departments (EDs) around the country, with a higher proportion of those living in poverty accessing the ED on a regular basis. In 2023, five IHS and tribal hospital emergency departments (ED) participated in the first round of a project whereby dental programs worked with ED medical provider to teach how to better triage and treat patients presenting with dental problems in the ED. This project, which was modeled after the Wisconsin Dental Pain Protocol Project, promoted both opioid and antibiotic stewardship. The dental programs also taught the ED providers how to administer long-acting anesthetic blocks with hands-on demonstration and practice. This project was replicated in 2024.

Methodology

Multi-Directional Integration Projects, 2023-2024

All IHS, Tribal, and Urban dental programs were invited – through a series of communications in September 2022 and again in September 2023 via Area Dental Officers, Dental Clinical and Preventive Support Centers, and through the various IHS Dental Listservs – to participate in one of nine different projects:

- 1) Hypertension screenings in the dental office
- 2) Diabetes screenings in the dental office
- 3) Depression screenings in the dental office
- 4) HPV vaccination screening and education in the dental office
- 5) Cognitive screenings in the dental office
- 6) Childhood (MMR, DTP, HPV, etc.) and adult (pneumococcal, COVID-19, influenza, etc.) immunization screenings in the dental office
- 7) Sexually transmitted infection education and testing referral by dental providers
- 8) Oral health screenings and silver diamine fluoride applications in 1-5 year-olds in the medical office
- 9) Triaging and treating dental conditions in the emergency department by medical providers

Participating Programs, by Project, 2023-2024

The Division of Oral Health received a total of 40 different applications in FY 2023 and FY 2024 for these projects, with most of the programs receiving a small amount of funding (less than \$5,000 each) to help offset provider time in conducting screenings or to purchase necessary supplies to implement the projects. All program applicants were allowed to participate in these projects, and included a mixture of IHS direct, Tribal, and Urban dental programs:

Project Name	Program Name	IHS Area	IHS, Tribal, or Urban
<i>Hypertension Screenings by Dental Providers (2024)</i>	Acoma-Canoncito-Laguna (ACL) Service Unit	Albuquerque	IHS
	Consolidated Tribal Health	California	Tribal
	Jemez Comprehensive Tribal Health	Albuquerque	Tribal
	Lassen Indian Health Center	California	Tribal
	Passamaquoddy Health Center	Nashville	Tribal
	Taos-Picuris Service Unit	Albuquerque	IHS
<i>Diabetes Screenings in Dental Settings (2024)</i>	Bad River Tribal Health Center	Bemidji	Tribal
	Chinle Service Unit	Navajo	IHS
	Jemez Comprehensive Tribal Health	Albuquerque	Tribal
	Passamaquoddy Health Center	Nashville	Tribal
	Taos-Picuris Service Unit	Albuquerque	IHS
<i>Depression Screenings in the Dental Office (2024)</i>	Crow Service Unit	Billings	IHS
	Indian Health Council	California	Tribal
	Kickapoo Tribal Health Center	Oklahoma City	Tribal
	Lassen Indian Health Center	California	Tribal
	White Earth Service Unit	Bemidji	IHS
<i>HPV Vaccination Screening (2024)</i>	Acoma-Canoncito-Laguna (ACL) Service Unit	Albuquerque	IHS
<i>Childhood & Adult Immunization Screenings by Dentists (2024)</i>	Acoma-Canoncito-Laguna (ACL) Service Unit	Albuquerque	IHS
<i>STI Education and Referral in</i>	Oklahoma City Indian Dental Clinic (OKCIC)	Oklahoma City	Urban

<i>Dental Programs (2023)</i>	Santa Fe Service Unit	Albuquerque	IHS
Project Name	Program Name	IHS Area	IHS, Tribal, or Urban
<i>Cognitive Screenings in the Dental Office (2023-2024)</i>	Acoma-Canoncito-Laguna (ACL) Service Unit	Albuquerque	IHS
	Consolidated Tribal Health	California	Tribal
	Crow Service Unit	Billings	IHS
	Indian Health Council	California	Tribal
	Jicarilla Service Unit (2023 only)	Albuquerque	IHS
	Kickapoo Tribal Health Center	Oklahoma City	Tribal
	Western Oregon (Chemawa) Service Unit	Portland	IHS
<i>SDF Applications by Medical Providers (2023-2024)</i>	Gallup Indian Medical Center (2023)	Navajo	IHS
	Jicarilla Service Unit (2023 only)	Albuquerque	IHS
	Kayenta Service Unit	Navajo	IHS
	Maniilaq Health Center	Alaska	Tribal
	Meskwaki Tribal Health Center	Great Plains	Tribal
	Pine Ridge Hospital (2024)	Great Plains	IHS
<i>Triaging and Treating Dental Conditions in the Emergency Department (2023-2024)</i>	Cass Lake Hospital (2023)	Bemidji	IHS
	Chinle Comprehensive Health Care (2024)	Navajo	IHS
	Gallup Indian Medical Center (2023)	Navajo	IHS
	Lawton Indian Hospital (2023)	Oklahoma City	IHS
	Pine Ridge Hospital (2024)	Great Plains	IHS
	Red Lake Hospital (2023)	Bemidji	IHS/Tribal
	Woodrow Wilson Keeble Memorial (2023-24)	Great Plains	IHS

As these projects were established, subject matter experts were contacted to help assist in providing guidance during the projects or to provide resources. Technical advisors for the projects included:

Project Name	Subject Matter Experts	SME Location
<i>Hypertension Screenings</i>	Dr. Johanna Bahe Dr. Shavonna White CAPT (Ret.) Tina Tah	IHS Office of Clinical & Preventive Services Division of Nursing Services & Public Health Nursing Program
<i>Diabetes Screenings in</i>	Carmen Licavoli Hardin Dr. Darin Prescott	IHS Office of Clinical & Preventive Services Division of Diabetes Treatment & Prevention
<i>Depression Screenings</i>	Barbara Roland	IHS Office of Clinical & Preventive Services Division of Behavioral Health Mental Health Branch
<i>HPV Vaccination Screening</i>	CAPT (Ret.) Tina Tah	IHS Office of Clinical & Preventive Services Division of Nursing Services Public Health Nursing Program
<i>Cognitive Screenings in the Dental Office</i>	Dr. Jolie Crowder	IHS Office of Clinical & Preventive Services
	Valerie Jones Dr. Bruce Finke	Division of Clinical and Community Services IHS Chief Clinical Consultant in Pediatrics
	Edie Yau	Alzheimer's Association
<i>Childhood and Adult Immunization Screenings</i>	CAPT (Ret.) Tina Tah	IHS Office of Clinical & Preventive Services Division of Nursing Services Public Health Nursing Program
<i>STI Education and Referral in Dental Program</i>	Rick Haverkate	IHS Office of Clinical & Preventive Services Division of Clinical and Community Services

		HIV/STI Branch
Project Name	Subject Matter Experts	SME Location
<i>SDF Applications by Medical Providers</i>	Dr. Thomas Faber	IHS Office of Clinical & Preventive Services Division of Clinical and Community Services IHS Chief Clinical Consultant in Pediatrics
<i>Triaging and Treating Dental Conditions in the ED</i>	Dr. Paul Charleston Dr. Emily Bartlett	IHS Office of Clinical & Preventive Services Division of Clinical and Community Services IHS Chief Clinical Consultants in Emergency Medicine
	Dr. Russell Dunkel	State Dental Director, Wisconsin

Project Scope

1. Hypertension screenings in the dental office

Participating programs were asked to screen all patients ages 18 and over for hypertension at least at the dental examination appointment. The screening could be done either manually by blood pressure cuff and stethoscope or automatically with a blood pressure monitor. Any member of the dental staff – dentist, therapist, hygienist, or assistant – could perform the screening, provided that they had either received formal training in dental school or informal training by a medical or dental provider in the facility. Patients with existing hypertension were also screened and asked about whether they had taken their anti-hypertensive medication prior to the dental appointment.

Programs were given flexibility to set the parameters for referral to a medical provider after consultation with their co-located medical program director. Programs were advised to not refer patients who registered at the low end of systolic and diastolic hypertension to their medical clinics as to avoid inundating the medical clinics with patients. Each of the participating programs set different parameters for when to refer patients to medical providers: 170/100, 150/90, 180/100, 160/100, and 160/105.

Each of the programs met with the overall project coordinators and subject matter experts once monthly via a Zoom meeting, and in this meeting they reported the number of patients screened in the preceding month and the number referred.

2. Diabetes screenings in the dental office

Participating programs were initially asked to screen all patients with a glucometer in the dental clinic and to refer those with significantly high levels to medical counterparts for a follow-up evaluation. However, after consulting with the subject matter experts from the Division of Diabetes Treatment and Prevention (DDTP), programs were asked to follow the existing DDTP protocol provided to participating clinics (Attachment 1). This protocol required either using a glucometer to conduct a fasting blood glucose screening or a non-fasting point-of-care glycated hemoglobin (HbA1c) screening.

Each of the programs met with the overall project coordinators and subject matter experts once monthly via a Zoom meeting, and in this meeting they reported the number of patients screened in the preceding month and the number referred.

3. Depression screenings in the dental office

In 2016 and 2017, the Division of Oral Health conducted the first depression screening initiative with 12 pilot sites across the IHS. As a result of that initiative, a new clinical guideline was established and published in the IHS Oral Health Program Guide and the key component of the screening, the Patient Health Questionnaire-2 (PHQ-2), was added to the standardized IHS Dental Patient Medical History Form. The purpose of this second edition of the depression screening initiative was to raise awareness yet again of the importance of conducting depression screenings in a dental setting using the PHQ-2. Patients scoring a 3 or higher on the PHQ-2 were to be referred to

either a primary care provider or a behavioral health provider for a follow-up evaluation.

Each of the participating programs met with the overall project coordinators and subject matter experts once monthly via a Zoom meeting, and in this meeting they reported the number of patients screened in the preceding month and the number referred.

4. HPV vaccination screening and education in the dental office

In 2017, beginning at the IHS Dental Updates Conference, the Division of Oral Health began promoting to IHS, Tribal, and Urban dental programs about educating patients on HPV vaccination and referring interested patients to their co-located medical programs. With the 2024 initiative, DOH wanted to document how many patients were asked about HPV vaccination status and how many were referred, with an emphasis on educating adolescents.

The one participating program met with the overall project coordinators and subject matter experts once monthly via a Zoom meeting, and in this meeting they reported the number of patients screened in the preceding month and the number referred.

5. Cognitive screenings in the dental office

In 2023, participating programs were introduced to the Mini-Cog®, a short, 3-minute cognitive assessment tool (<https://www.mini-cog.com>). The five participating programs were provided training and given links to a training video specific to a dentist administering the test to a patient. This program continued in 2024 with additional participating programs, and the subject matter experts provided guidance on each of the meetings. Programs were asked to only screen those patients where something seemed “off” – poor compliance, poor oral hygiene, poor understanding of treatment plans, all with no other explanation – and to not base the screening solely on age. In this way, only a small number of patients would be screened and only a small number would likely require referral.

Each of the programs met with the overall project coordinators and subject matter experts once monthly via a Zoom meeting, and in this meeting they reported the number of patients screened in the preceding month and the number referred to a primary care provider for follow-up.

6. Childhood (MMR, DTP, HPV, etc.) and adult (pneumococcal, COVID-19, influenza, etc.) immunization screenings in the dental office

This project was created to encourage dental staff to comply with the IHS Chief Medical Officer’s E3 Vaccination Strategy: “Every patient, Every visit, Every time.” The lone participating program was given links to the CDC’s childhood and adult immunization schedules and encouraged to print these and have them chairside to ask patients, parents, and caregivers about whether they were up to date on recommended vaccinations. In addition, the clinic was encouraged to also print the health summary face sheet prior to patient visits so that they could see which immunizations were due for the patient. Since the one participating program also enlisted in the HPV vaccination project, the report they submitted was combined to include all three types of vaccinations.

The one participating program met with the overall project coordinators and subject matter experts once monthly via a Zoom meeting, and in this meeting they reported the number of patients screened in the preceding month and the number referred.

7. Sexually transmitted infection education and testing referral by dental providers

This project began with 2021 discussions on how dental programs could be involved in the Ending the HIV Epidemic in the AI/AN population. Later, given the disparities in STIs among the population, the project was created in 2023 to highlight how dental providers could educate AI/AN dental patients about STIs and direct them to resources that provide more information and, in some states, free STI testing. A brochure and short dentist-to-patient talking point was developed by the Northwest Portland Area Indian Health Board in collaboration with DOH, and this was used by the two participating programs.

Unlike the other initiatives, this project had no specific reporting format and was carried out by the two programs in 2023. Upon conclusion of the program, qualitative feedback was received from the dental directors of the two programs.

8. *Oral health screenings and silver diamine fluoride applications in 1-5 year-olds in the medical office*

As a result of the 2012-2014 IHS DOH Silver Ion Antimicrobial Demonstration Project, in 2017 the Division of Oral Health developed a silver ion antimicrobial clinical guideline, later renamed the silver diamine fluoride (SDF) clinical guideline, for inclusion in the IHS Oral Health Program Guide. While many IHS, Tribal, and Urban dental programs had subsequently implemented SDF since the guideline was published, the need existed to increase oral health screenings and SDF applications due to the low proportion of 1-5 year-old AI/AN children accessing dental care within the IHS system. Thus, the Division of Oral Health created this project to encourage medical providers to conduct oral health screenings and apply SDF to those children seen in the medical clinic who presented with untreated/active dental caries. The medical programs were further asked to refer those children to the dental program through a “warm handoff” if possible. The Division of Oral Health provided training videos that were developed in 2019 by Dr. Jeremy Horst, along with the written guideline.

Each of the programs met with the overall project coordinators once monthly via a Zoom meeting, and in this meeting they reported the number of patients screened in the preceding month, the number receiving SDF, and the number referred to the co-located dental clinic for follow-up.

9. *Triaging and treating dental conditions in the emergency department by medical providers*

This program, modeled after the Wisconsin Dental Pain Protocol Program developed by Dr. Russell Dunkel, used dental departments to help train emergency department (ED) staff on triaging and treating dental conditions. A triaging and treatment algorithm, which provided guidance on analgesics and antibiotics, was modified for use in the IHS from one developed by Wisconsin (Attachment 2). Similarly, a Power Point presentation shared by Dr. Dunkel was modified for IHS and Tribal ED staff (available at www.ihs.gov/doh under “Initiatives”). Each of the participating dental programs purchased a special manikin designed for anesthetic block injections, and they also purchased or supplied from their inventory other dental-specific supplies for the hospital ED including dry socket paste, anesthesia, syringes, needles, gauze. Each dental program was asked to provide didactic training using the Power Point to their ED staff, followed up by hands-on training on anesthetic blocks. Due to most IHS and Tribal EDs being open full-time, multiple training sessions were required to teach ED staff on different shifts.

Each of the programs (medical and dental representatives) met with the overall project coordinators once monthly via a Zoom meeting, and in this meeting they reported whether didactic training or hands-on training was provided, and at the end of the six-month project period the dental representatives were asked to compile a summary of the number trained. Due to the short project period, an evaluation of the effect of this training on overall antibiotic or opioid prescriptions was not planned.

Results

Integration of Primary Care Screenings into Dental Settings

1. *Hypertension Screenings by Dental Providers*

Over the course of the six month project period, 1,203 adults received a hypertension screening at the comprehensive dental examination or other appointment. Of these, 82 or 6.8 percent exhibited hypertensive readings that warranted a referral to a medical provider based on local clinic parameters and were subsequently referred.

2. *Immunization (including HPV) Screenings in Dental Settings*

Over the course of the six month project period, the lone program participating reported a total of 22 childhood immunization screenings resulting in 3 referrals (13.6 percent), 14 adolescent HPV screenings resulting in 8 referrals (57.1 percent), and 12 adult immunization screenings resulting in 1 referral (8.3percent). Combined, a total of 48 patients were screened resulting in 12 referrals (25.0percent).

3. *Diabetes Screenings by Dental Providers*

The five participating sites faced various difficulties in the implementation of this project. In two programs, the medical laboratory wanted to be the source of administering the HbA1c screening. In two programs there was also a delay in procuring the glucometers. Finally, after consultation with the subject matter experts, sites were told to not conduct non-fasting diabetes screenings with a glucometer as the information would not be useful, and given that most dental patients are told to eat prior to a dental appointment, as well as the laboratory requirements for HbA1c, conducting a meaningful diabetes screening in the dental clinic ended up being a significant barrier. Nevertheless, the participating clinics used the diabetes screening as an opportunity to teach patients about the relationship between diabetes and periodontal disease. Over the six month period, a total of 521 patients were screened for diabetes (either directly by the dental clinic or by the medical lab as ordered by a dental provider), with a total of 7 referred to the medical department for follow-up consultation (1.3 percent).

4. *STI Education and Referral by Dentists (2023)*

As discussed in the methodology section, a quantitative result wasn't requested from the two participating programs, but this is the feedback they provided to the Division of Oral Health:

"It turned out to be a very simple request! Happy to have participated! I think this would be a great thing for other dental programs to do. Perhaps if dentists are reluctant to take chair time to communicate with their patients, then another approach would be to contact the CHR or Public Health Nurses. I've been asking the patients to help us "spread the word" on self-tests and share the QR code, and it seems to work. Makes it seem less like we're telling the patient that THEY have STI."

"We have been handing them out during exams and haven't faced any issues other than some looks of embarrassment from our teens. That's to be expected, though. We've also been putting the fliers in our lobby, bathrooms, and in our public health department. I think this is something that should absolutely be part of our norm in Dental clinics throughout IHS. It may seem awkward at first, but seems to fit in really well during head/neck exams and oral cancer screenings."

A complete report of this project is also available on the IHS Dental Portal (www.ihs.gov/doh) under the "Initiatives" tab.

Integration of Mental Health Screenings into Dental Settings

5. *Depression Screenings in Dental Settings*

Over the six-month reporting period, the five participating programs reported a total of 2,371 depression screenings of adolescents and adults, with 33 scoring a 3 or higher on the PHQ-2 (1.4 percent). Most of these patients were referred to a primary care provider rather than a mental health provider for follow-up care, although at least 9 patients reported already being treated by a behavioral health provider and 2 patients refusing a referral.

6. *Implementation of a Cognitive Assessment in a Dental Setting*

The project was conducted from January to June 2023 and then again from January to June 2024. Combined, the participating programs conducted a total of 151 Mini-Cog® screenings resulting in 29 referrals to primary care providers for a follow-up evaluation (19.2 percent). Participating programs stated that several patients declined the referral, although the exact number of refusals is unknown.

Integration of Oral Health into Primary/Emergency Care

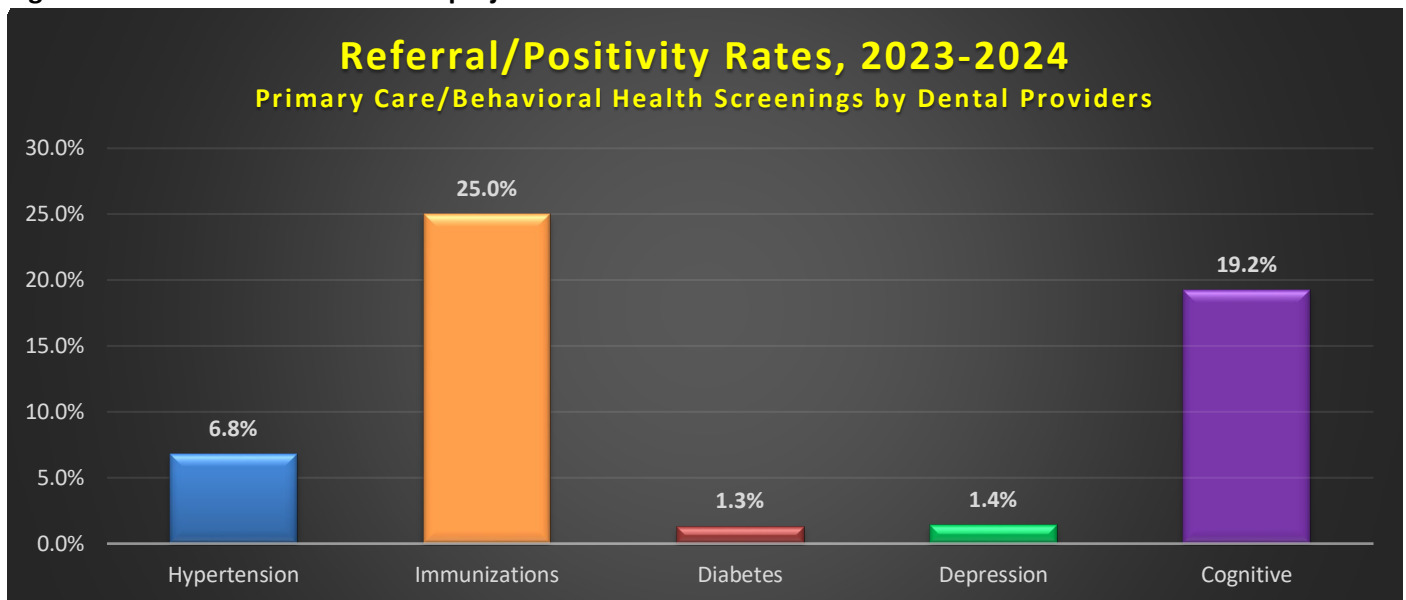
7. *Triaging and Treating Dental Conditions in the Emergency Department*

As mentioned in Methodology, a modified triaging/treatment algorithm (Attachment 2) was developed for this project and, in conjunction with a slide presentation, was provided to the dental programs of the seven participating hospitals with emergency departments (EDs). This project was conducted in 2023 and again in 2024, with 52 ED staff receiving training through the Power Point and 41 ED staff receiving hands-on training. While the project period has ended, training at these seven sites will continue to be conducted as there continues to be staff turnover.

8. *Medical-Led Silver Diamine Fluoride*

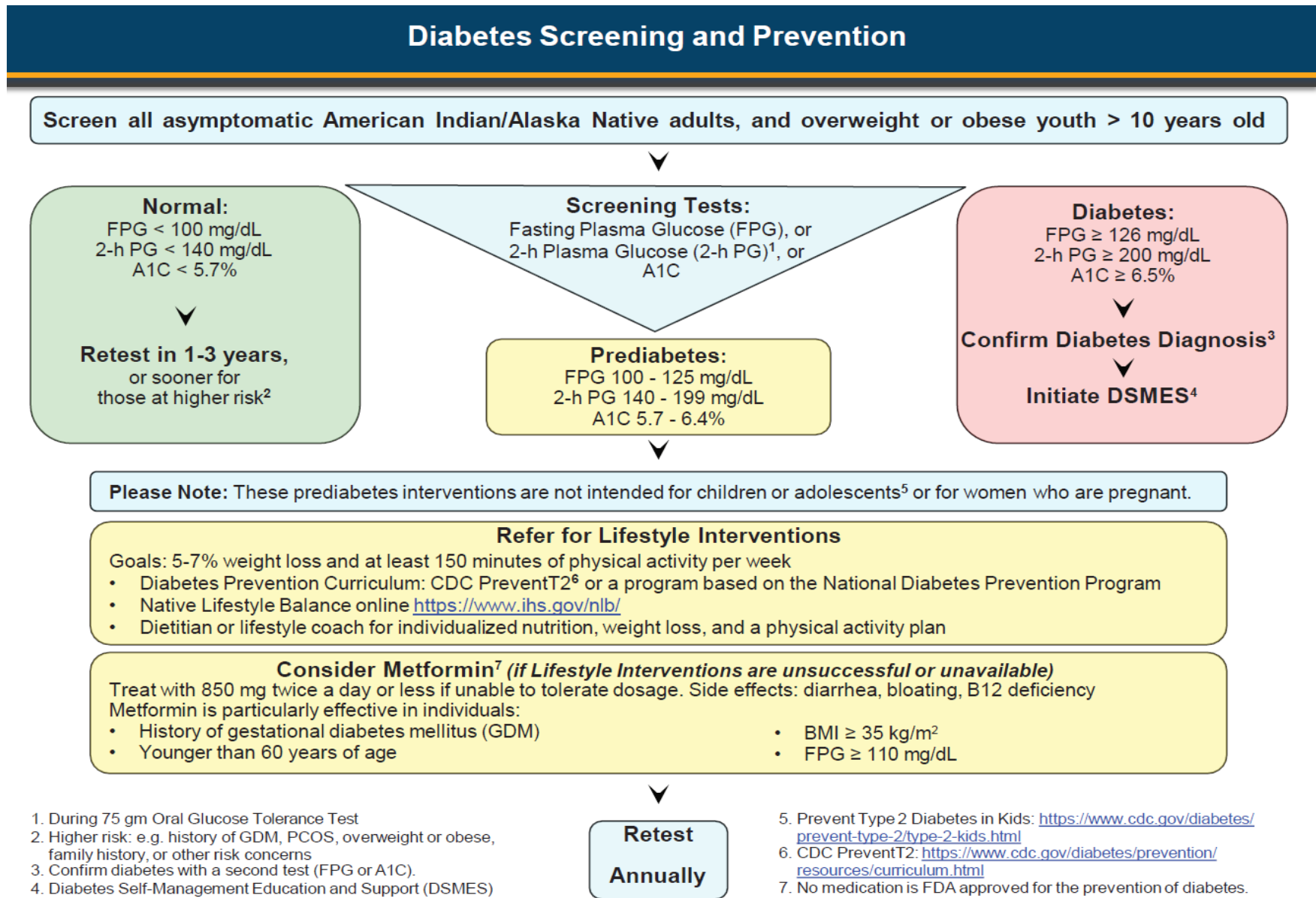
This project, conducted in 2023 and again in 2024 in six separate sites, had limited success due to a lack of engagement by medical providers. In 2023, a total of 98 children were screened by medical providers in the four clinics participating in that six-month period, with SDF indicated in 32 children and applied in 17 children (53.1 percent). A full report from 2023 is available on the IHS Dental Portal (www.ihs.gov) under the “Initiatives” section.

Figure 1: Referral rates for selected projects



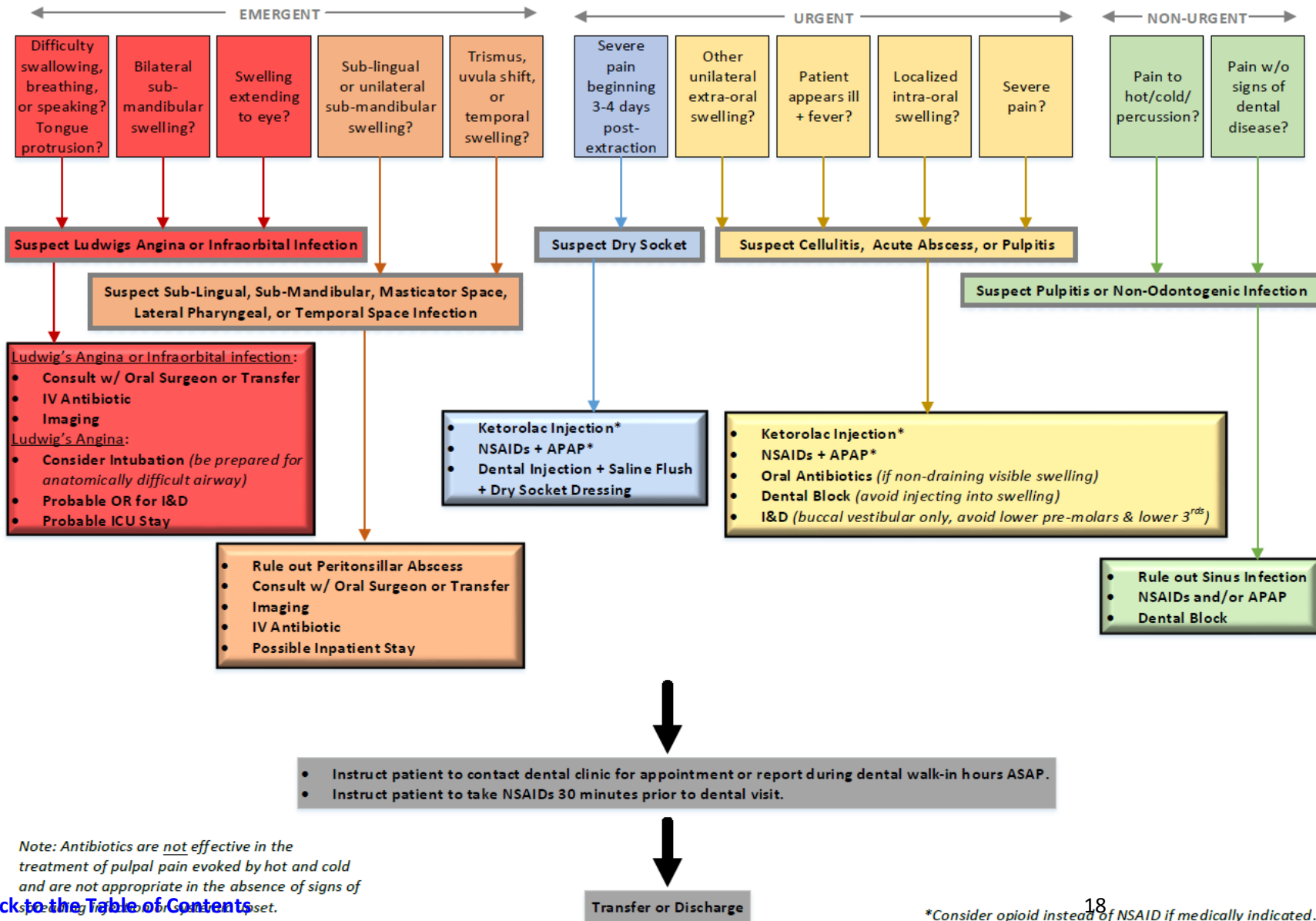
Attachments

Attachment 1: Diabetes Screening Flowchart



Attachment 2: Emergency Department Dental Triage and Treatment Algorithm

Indian Health Service Acute Dental Pain ED Protocols (for non-trauma tooth-related pain)



All recommendations are subject to provider modification based on variations in clinical case presentation and local protocols for pain control and treatment of infections. These recommendations for acute dental pain control and management of dental infections are based on existing dental evidence, CDC, and OSAP guidance. Providers should prescribe based on their assessment of patient health history and clinical circumstance, as well as availability of medications on formulary. Providers must be mindful of contraindications and daily dosing maximums based on weight and co-morbidities.

It is strongly recommended that providers receive training on injection technique prior to utilizing local anesthetic injections. See “Management of Dental Pain in the Emergency Room for ED and UCC Personnel” training link below. The time stamps offer targeted information and guidance for review. Other recommended resources: “Handbook of Local Anesthesia” (Stanley Malamed) and “Lexicomp Drug Information Handbook for Dentistry”.

Link: www.youtube.com/watch?v=spwoD4x79Tw

Time Stamps:

- | | |
|---|--|
| I. Opioid Prescribing and Its Impact (2:52) | V. Delivering Local Anesthetic Demonstration (29:05) |
| II. Local Anesthetic and Use of Vasoconstrictors (7:32) | VI. Types of Analgesia (46:08) |
| III. Anesthetics for Dental Pain (14:52) | VII. Dental Infection and Antibiotic Selection (1:02:28) |
| IV. Anesthesia Injection Techniques (25:35) | |

Pain Control Guidance:

First Line Pain Therapy

- o 6 x Day Dosing = 400mg Ibuprofen + 650mg Acetaminophen
- o 4 x Day Dosing = 600-800mg Ibuprofen + 650-1,000mg Acetaminophen

**Can substitute Naproxen, Etodolac, or Mobic for Ibuprofen
→ Consider 15mg Ketorolac injection for patients with significant pain*

If additional pain control is needed for severe pain w/ clinical signs of infection, consider Hydrocodone + Acetaminophen 5/325mg, but Acetaminophen in the first line pain therapy must be reduced to 325mg dose. Only prescribe enough opioids to get patient out of pain until they can get into their dentist or for antibiotics to take effect (48 hours), whichever is the lesser.

Local Anesthetic Guidance:

- o Pregnant Women: 2% Lidocaine (w/ 1:100,000 Epinephrine). Expect 60 mins. of pulpal anesthesia.
- o For I&D Procedures: 2% Mepivacaine (w/ 1:20,000 Neo-Cobefrin). Expect 60 mins. of pulpal anesthesia.
- o Long Lasting Anesthetic: 0.5% Bupivacaine (w/ 1:200,000 Epinephrine). Expect 90 mins. (infiltration) or 360 mins. (block) of pulpal anesthesia.

Dental Infection Management:

Mild Infection

- o Amoxicillin 500mg – TID
- o Penicillin VK 500mg – QID
- o Cephalexin 500mg – QID
- o Azithromax 250mg – 2 tabs first day, then 1 tab until gone

Moderate – Severe Infection, when patient does not have access to dental w/in 3 days

- o Add Metronidazole 500mg – TID
- o Amoxicillin 500mg + Clavulanate 125mg – TID

Dry Sockets

- o Bupivacaine injection, irrigate socket with sterile saline, place Eugenol impregnated sterile, dissolvable foam. Rx NSAID + Acetaminophen (no antibiotics or opioids).

*Antibiotics not indicated unless swelling w/ pain
*Rx antibiotics for 5 days w/ discontinuation after 48 hours of complete resolution of symptoms.
*Severe infections may require IV antibiotics.

Mild Infections = localized intra-oral swelling that can be palpated/visualized (*non-draining*) AND pain AND no systemic involvement (*e.g. fever, malaise*)
Moderate - Severe Infections = extra-oral and/or diffuse intraoral swelling AND pain
Dry Socket = significant pain that begins 3-4 days post-extraction (*no fever*)