



# Illinois Oral Health Surveillance Brief

Monitoring Oral Health Across the State  
2018 to 2022



*Fall 2023*

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**Oral Health Section**

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## List of Abbreviations

BRFSS – Behavioral Risk Factor Surveillance System  
CDC – Centers for Disease Control and Prevention  
CHIP – Medicaid Children’s Health Insurance Program  
CHW – Community Health Worker  
CMS – U.S. Centers for Medicare & Medicaid Services  
ED – Emergency Department  
EPSDT – Early and Periodic Screening, Diagnostic, and Treatment  
FQHC – Federally Qualified Health Center  
FTE – Full-Time Equivalent  
HFS – Illinois Department of Healthcare and Family Services  
HSHG – Healthy Smiles Healthy Growth  
HPSA – Health Professional Shortage Area  
IDFPR – Illinois Department of Financial and Professional Regulation  
IDPH – Illinois Department of Public Health  
IOHP IV – Illinois Oral Health Plan IV – Eliminating Inequities in Oral Health (2021-2025)  
IOHSS – Illinois Oral Health Surveillance System  
IPHCA – Illinois Primary Health Care Association  
ISCR – Illinois State Cancer Registry  
ISDS – Illinois State Dental Society  
LHD – Local Health Department  
LTC – Long-Term Care  
MCO – Managed Care Organization  
NHIS – National Health Interview Survey  
NSCH – National Survey of Children’s Health  
NM – National Measure  
NTDC – Non-Traumatic Dental Condition  
OHS – Oral Health Section  
PIR – Program Information Report  
PRAMS – Pregnancy Risk Assessment Monitoring System  
T-MSIS – Transformed Medicaid Statistical Information System  
YRBSS – Youth Risk Behavior Surveillance System

*Good oral health status offers a range of advantages that extend well beyond cosmetic considerations and are applicable throughout an individual's life.*



## Introduction

This document seeks to update the preceding [Illinois Oral Health Surveillance Brief \(IOHSB\)](#) by incorporating data from the year 2022 and updating several indicator definitions. The aim is to revisit and to reevaluate oral health trends and insights, providing a comprehensive foundation for guiding public health initiatives in Illinois.

Oral health holds a fundamental position in the domain of overall health, serving as an important element in the preservation and maintenance of overall physical well-being.<sup>1</sup> Good oral health status offers a range of advantages that extend well beyond cosmetic considerations and are applicable throughout an individual's life. These benefits encompass self-confidence, the ability to efficiently carry out masticatory functions, and communication through verbal and non-verbal means.<sup>2</sup>

Because the mouth is an integral part of the human anatomy and the beginning of the digestive system, oral health status is intimately related to the health of the rest of the body. Scientific reports and medical practice have shown that maintaining optimal oral health significantly reduces the risk of various diseases and conditions, including oral cancer, diabetes, cardiovascular diseases, and adverse birth outcomes.<sup>3</sup> Conversely, changes in the mouth often are the first signs of problems elsewhere in the body, such as infectious diseases, immune disorders, nutritional deficiencies, and cancer. These recognitions are grounded in an expanding body of evidence, emphasizing the role of oral health within the broader field of health and the need for concerted public health action.

A listing of common oral diseases includes dental caries and periodontal diseases (both bacterially mediated), and oral cancers (lifestyle and virally mediated). These have local and distal impacts on health status. The Centers for Disease Control and Prevention's (CDC) 2019 Oral Health Surveillance Report provided insights into notable oral health challenges in the United States. The report indicated that more than half of school-aged children and adolescents experienced dental caries during the period from 2011 to 2016.<sup>4</sup> For adults aged 30 and older, the prevalence of gum disease was nearly 40%, highlighting a significant issue within oral health. Concurrently, the report highlighted the annual diagnosis of approximately 45,000 cases of oral cancer, and that nearly 30% of Americans lacked dental insurance<sup>5</sup>, a precursor for dental care access for many.

Additionally, in the most recent State of Oral Health Equity in America survey (2023), several disparities impacting oral health were exposed.<sup>6</sup> For instance, the survey revealed that 52% of Black adults reported tooth loss due to decay or gum disease, with lower income playing a significant role in shaping negative perceptions of oral health. The survey also identified shifts in dental coverage, with more than 6 million adults losing coverage and 14 million adults potentially losing coverage due to Medicaid redetermination.<sup>6</sup>

In January 2023, IDPH OHS published a surveillance brief summarizing oral health indicators in Illinois from 2018 to 2021.<sup>7</sup> Key findings included a consistent prevalence of untreated dental caries in third-grade children at 22.0% in 2018-2019, and a decrease in adults reporting tooth loss from 27.9% in 2018 to 24.6% in 2020. Additionally, hospital admissions due to non-traumatic dental conditions (NTDC) decreased from 5,221 to 3,364 during 2018-2021. However, there were negative trends, such as a moderate decline in Medicaid-insured children visiting oral health professionals, reduced utilization of oral health services by Medicaid-enrolled children under 6 years of age, and disparities in access to oral health services.<sup>7</sup> Some of these findings can be attributed to the COVID-19 public health emergency. However, these findings underscore areas of opportunity for improving oral health and emphasize the importance of ongoing surveillance in understanding and addressing these challenges.

By incorporating data from the year 2022 and updating several indicator definitions, this annual document revisits, refreshes, and reevaluates oral health trends and insights, providing a comprehensive foundation for guiding public health initiatives in Illinois. It is an update to the preceding IOHSB.<sup>8</sup>

The data presented in the below table are statewide. Select county-level oral health measures are published in the Illinois Public Health Community Map (<http://www.healthcarereportcard.illinois.gov/map>). The community map offers a range of measures that include oral health data as well as asthma, behavioral health, cardiovascular disease, diabetes, emergency department visits, HIV/AIDS, injury, maternal and child health, preventable hospitalizations, readmissions, and social and environmental factors.



## Purpose and Objectives

This document serves as a readily accessible and up-to-date repository of oral health data, with a primary aim to inform, to inspire, and to mobilize new leaders in the effort to improve oral health conditions in Illinois. The Illinois Oral Health Surveillance System (IOHSS) is a plan that strives to foster collaboration with health care professionals, community organizations, policymakers, and the broader public. This collaborative effort provides updated data sets, in the form of a brief (IOHSB) of key indicators, and trends to collectively address oral health system challenges throughout the state.

### Purpose

**Maintain a continuous and comprehensive understanding of oral health in Illinois:** IOHSS collects, monitors, and analyses data to ensure an updated and robust understanding of oral health statewide. This includes tracking oral health trends, identifying areas of concern, and assessing the impact of interventions. This effort strives to provide current, useful, actionable data needed to monitor the goals and strategies outlined in the [Illinois Oral Health Plan IV: Eliminating Inequities in Oral Health \(2021-2025\)](#). The major goals of the oral health plan are:

- **Goal 1:** Improve oral health status and self-care practices by addressing social determinants of health promotion.
- **Goal 2:** Align infrastructure and workforce to promote timely and equitable access to oral health care.
- **Goal 3:** Integrate and expand health promotion, primary prevention, and assurance of appropriate care.

**Utilize data effectively to document oral health disparities and uncover their root causes:** IOHSS is committed to leveraging the data to document oral health disparities among various populations. This information is vital for crafting targeted interventions and policies aimed at reducing oral health inequalities and enhancing the overall well-being of communities.

### Objectives

1. **Communication of findings:** The primary objective of the brief is to communicate the findings to individuals and to groups responsible for programmatic and policy decisions, as well as the public.
2. **Data utilization for public health measures:** The brief's goal is to meet the objective that collected data are utilized to inform and to evaluate public health measures designed to prevent and to control oral diseases and conditions.
3. **Establish core measures/indicators:** An essential objective of the brief is to identify a core set of measures and indicators that can serve as benchmarks for assessing Illinois' progress in achieving good oral health.<sup>9</sup>

**\*Note:** The frequency of reporting certain indicators has transitioned from two-year outputs to single-year outputs. This is beneficial as it provides a more precise annual trend analysis. Therefore, when comparing data from the prior IOHSB with this updated version, exercise caution as there may be differences due to this methodological change as well as updates to the indicator definition. The adjustment aims to offer a more accurate representation of select oral health indicator data on a yearly basis for enhanced trend analysis.



Indicators are grouped into four primary domains:

- **Domain 1:** Oral Health Outcomes
- **Domain 2:** Access to Care
- **Domain 3:** Intervention Strategies
- **Domain 4:** Infrastructure and Workforce

The tables below include additional details related to each indicator to include the target population, indicator name, indicator definition, data sources, and indicator results, by year (when data is available).

\*Where available, indicators contain an additional value on their most recent reporting year depicting the National Measure (NM) for that indicator.



Illinois Oral Health Surveillance Brief - 2022 Data Update

Domain 1	Target Population	Indicator	Indicator Definition	Data Source (Reporting Date Range)	2018	2019	2020	2021	2022	
Oral Health Outcomes	Head Start children	Caries experience (decay)	Proportion of children diagnosed as needing dental treatment during the program year at end of enrollment.	Illinois Head Start Program Information Report (PIR) (Annual)	10.0%	10.5%		6.7%	6.7%	
		Untreated tooth decay	Proportion of children with "unmet need."	Illinois Head Start PIR (Annual)	4.8%	5.4%		3.9%	4.7%	
	Third-grade children	Caries experience (decay)	Proportion of children with either treated or untreated cavities.	Illinois Healthy Smiles Healthy Growth (HSHG) (Every 5 years)	41.6%					
		Untreated tooth decay	Proportion of children with untreated cavities.	Illinois HSHG (Every 5 years)	22.2%					
		Sealant prevalence	Proportion of children with at least one dental sealant present on a permanent molar.	Illinois HSHG (Every 5 years)	53.0%					
	1-17 years children	Parent's self-report of child's oral health	Parent's self-report of child's oral health as "excellent or very good"	Proportion of parents who ranked their child's overall oral health as "excellent or very good," "good," or "fair or poor."	National Survey of Children's Health – Illinois only (NSCH) (Annual)	76.7%	77.9%		76.2% NM: 76.7%	
			Parent's self-report of child's oral health as "good"		(NSCH) – Illinois only (Annual)	19.7%	19.4%		20.0% NM: 17.6%	
			Parent's self-report of child's oral health as "fair or poor"		(NSCH) – Illinois only (Annual)	3.6%	2.7%		3.8% NM: 5.7%	
		Oral health problems in the last year	Proportion of children who have had oral health problems, such as toothaches, bleeding gums, decayed teeth, or cavities in the past 12 months.	(NSCH) – Illinois only (Annual)	13.6%	13.7%		11.9% NM: 14.3%		
	18-64 years adults	Any tooth loss	Proportion of adults who have had one or more permanent teeth removed.	Illinois Behavioral Risk Factor Surveillance System (BRFSS) (Biennial)	27.9%		24.6%		27.6%	
	65+ years adults	Six+ teeth lost	Proportion of adults who have six or more permanent teeth removed.	Illinois BRFSS (Biennial)	8.5%		6.6%			
		Complete tooth loss	Proportion of adults reporting the loss of all teeth.	Illinois BRFSS (Biennial)	11.3%		14.9%		8.7% NM: 11.8%	

NM: National Measure.

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Domain 1	Target Population	Indicator	Indicator Definition	Data Source (Reporting Date Range)	2018	2019	2020	2021	2022	
	Long-term care (LTC) residents	Six+ teeth lost	Proportion of residents reporting the loss of six or more permanent teeth.	LTC Survey <sup>a</sup>						
		Complete tooth loss	Proportion of residents reporting the loss of all teeth.	LTC Survey <sup>a</sup>						
All ages	Incidence and mortality from cancers of the oral cavity and pharynx	Cancer of the oral cavity and pharynx incidence	Age-adjusted <sup>b</sup> incidence rate (per 100,000) of oral cavity and pharynx cancer.	Illinois State Cancer Registry (ISCR) (Annual)	11.9	12.3	11.8 NM: 11.0			
		Cancer of the oral cavity and pharynx mortality	Age-adjusted <sup>b</sup> mortality rate (per 100,000) of oral cavity and pharynx cancer.	ISCR (Annual)	2.7	2.5	2.6 NM: 3.0			
	Emergency department (ED) visits for NTDC	Children up to the age of 18	Area-level rate of individuals who use ED visits for NTDC (per 10,000).	IDPH Public Health Community Map (Three-year average)	42.5 (2017-2019)		36.6 (2018-2020)			
		Adults 19 to 64		IDPH Public Health Community Map (Three-year average)	92.0 (2017-2019)		84.2 (2018-2020)			
		65+ adults		IDPH Public Health Community Map (Three-year average)	30.6 (2017-2019)		29.8 (2018-2020)			
	Hospital admissions for NTDC (resulting from ED visit).		Number of hospital admissions for NTDC and UB04 Condition Codes P7 indicating direct admission from ED.	IDPH Hospital Discharge Data (All payers) (Annual)	5,221	4,982	3,901	3,364	5353 <sup>c</sup>	
	Hospital admissions for NTDC (resulting from ED visit).		Number of hospital admissions for NTDC and UB04 Condition Codes P7 indicating direct admission from ED.	IDPH Hospital Discharge Data (Medicaid only) (Annual)	434	378	304	224	339 <sup>c</sup>	

NM: National Measure.

<sup>a</sup>Note: Although important, there are currently no plans for LTC survey data collection.

<sup>b</sup>Note: Age-adjusted to the 2000 U.S. standard million population.

<sup>c</sup>Note: Used 2022 updated ASTDD NTDC diagnosis codes.

Illinois Oral Health Surveillance Brief - 2022 Data Update

Domain 2	Target Population	Indicator		Indicator Definition	Data Source (Reporting Date Range)	2018	2019	2020	2021	2022
Access to Care	Medicaid Children's Health Insurance Program (CHIP) <sup>d</sup>	Dental visit	Non-dentist provider	Proportion of Medicaid-enrolled children under 6 years of age who received oral health services provided by a non-dentist.	Illinois Department of Healthcare and Family Services (HFS) (Annual)	4.2%	4.6%	2.3%	2.3%	2.9%
			Dental provider	Proportion of Medicaid enrolled children under 6 years of age who received any dental services.	Illinois HFS (Annual)	29.5%	28.8%	20.7%	24.4%	27.8%
		Dental visit (1-20 years of age)		Proportion of Medicaid enrolled children 1-20 years of age who saw a dentist or other oral health care provider for any kind of dental or oral health care during the past 12 months.	Illinois HFS (Annual)	47.1%	45.5%	36.6%	35.6%	40.5%
		Preventive dental visit (1-20 years of age)		Proportion of Medicaid enrolled children 1-20 years of age who received at least one prevention or periodontal service.	Illinois HFS (Annual)	44.0%	42.6%	33.4%	32.9%	47.7%
	1-17 years	Dental visit		Proportion of children who saw a dentist or other oral health care provider for any kind of dental or oral health care during the preceding 12 months.	NSCH – Illinois only (Annual)	79.7%	85.3%		72.1% NM: 72.6%	
		Preventive dental visit		Proportion of children and young adults who received at least one prevention or periodontal service.	NSCH – Illinois only (Annual)	76.6%	80.0%		73.3%	78.5% NM: 78.6%
	18 years of age or older	Dental care delayed due to cost		In the past 12 months, the proportion of adults who needed dental care but did not get it because they could not afford it.	National Health Interview Survey (NHIS) – Illinois only (Annual)	11.3%	16.2%	14.1%		14.6%
	Adults with diabetes	Dental visit		Proportion of persons with a diabetes diagnosis who reported visiting a dentist or dental clinic within the past year.	Illinois BRFSS (Biennial)	60.2%		61.9%		62.0%
	Pregnant persons	Dental visit		Proportion of pregnant Medicaid members who received at least one preventive or periodontal service in the 365 days before delivery.	Illinois HFS (Annual)		12.0%	9.1%	8.0%	17.9%
				Proportion of expectant mothers who reported they had their teeth cleaned by a dentist or dental hygienist in the preceding 12 months.	Pregnancy Risk Assessment Monitoring System (PRAMS) (Annual)	42.8%	48.1%	40.8%	45.7%	

NM: National Measure.

<sup>d</sup>Note: It is a requirement for states to provide Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefits to children who are part of Medicaid. The Centers for Medicare & Medicaid Services (CMS) advises against comparing FFY 2020 data to data from previous fiscal years. This recommendation is based on significant service delivery changes attributable to the COVID-19 public health emergency and the introduction of Transformed Medicaid Statistical Information System (T-MSIS) as a data source in 19 states.

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Domain 3	Target Population	Indicator	Indicator Definition	Data Source (Reporting Date Range)	2018	2019	2020	2021	2022
Intervention Strategies	All ages	Community water fluoridation	Proportion of Illinois residents who received optimally fluoridated water.	CDC My Water's Fluoride (Annual)	98.2%	98.4%	98.4%	98.4%	98.2%
	Adolescents (13-17 years)	HPV vaccination uptake	UPDATED Definition: Proportion of up-to-date HPV vaccination series in eligible adolescents.	CDC Teen Vax View (Annual)	53.4%	54.9%	63.1%	62.2%	65.7% NM: 62.6%
		Cigarette smoking and electronic vapor product usage	Proportion of adolescents who indicated having currently smoked cigarettes on at least one day during the 30 days before the survey.	High School Youth Risk Behavior Surveillance System (YRBS) (Biennial)		4.7%		2.5% NM: 3.8%	
			Proportion of adolescents who indicated having currently used electronic vapor products on at least one day during the 30 days before the survey.	High School YRBSS (Biennial)		19.9%		16.7% NM: 8.0%	

NM: National Measure.

Illinois Oral Health Surveillance Brief - 2022 Data Update

Domain 4	Target Population	Indicator	Indicator Definition	Data Source (Reporting Date Range)	2018	2019	2020	2021	2022	
Workforce and Infrastructure	Oral health workforce	Number of active licensed oral health professionals	UPDATED Definition: Number of licensed dentists who have an active Illinois license with an Illinois address.	Illinois Department of Financial and Professional Regulation (IDFPR) (Annual)	8,795 <sup>e</sup>	9,253	9,571	9,662	9,048	
			UPDATED Definition: Number of licensed dental hygienists who have an active Illinois license with an Illinois address.	(IDFPR) (Annual)	7,337 <sup>e</sup>	7,720	8,030	7,965	7,598	
		Number of active licensed specialists in dentistry <sup>f</sup>	UPDATED Definition: Number of licensed specialists who have an active Illinois license with an Illinois address.	(IDFPR) (Annual)	1,356 <sup>e</sup>	1,451	1,499	1,522	1,471	
		Number of providers who actively participate in Medicaid	Number of dentists who participate in the Medicaid program by submitting at least one claim/per year.	Illinois HFS (Annual)		2,766	2,677	2,544	2,229	
		Number of providers who actively participate in Medicaid	Number of dentists who participate in the Medicaid program by submitting more than 50 claims/per year.	Illinois HFS (Annual)		2,032	1,886	1,784	1,195	
		Number of licensed oral surgeons who are enrolled and participate in Medicaid	Number of oral surgeons who are enrolled and participate in the Medicaid program.	Illinois HFS (Annual)				134	150	
		Proportion of general dentists who care for children under 3 years of age	Proportion of surveyed general dentists who indicated they care for children under 3 years of age.	Oral Health Workforce Survey (2022)				66.6% (235 of 353 responses)		
	Providers shortage areas and communities	Number of safety net dental clinics	Number of free, non-profit, federally qualified health centers (FQHCs), local health departments (LHDs), and look-alike sites with comprehensive oral health services.	IDPH Program Resource Map, Illinois State Dental Society (ISDS), Illinois Primary Health Care Association (IPHCA)	In process of determining a consistent and regular source of data.					
		Dental Health Professional Shortage Area (HPSA)	Number of full-time equivalent (FTE) dental providers practicing in Dental HPSA.	IDPH Center for Rural Health (2018-2019)		233.1 FTE	208.0 FTE	263.0 FTE	245.0 FTE	
			Number of FTE dental providers needed to remove Dental HPSA designation.	IDPH Center for Rural Health (2018-2019)		405.6 FTE	381.0 FTE	465.0 FTE	503.0 FTE	

<sup>e</sup>Note: Value reflects partial year data from January 1 to November 30, 2018.

<sup>f</sup>Note: Specialty spans oral and maxillofacial surgery, orthodontics, prosthodontics, and endodontics.

<sup>g</sup>Note: LTC Facilities survey data collection will start in 2024.

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Community clinical linkages	Number of community health workers trained in oral health concepts	Number of community health workers trained in oral health concepts using IDPH “Oral Health 101” curriculum.	IDPH Workforce Activities Report (Annual)			89	102	120
	Number of non-oral health licensed professionals completing “Smiles for Life” curriculum	Number of non-oral health licensed professionals completing at least one module of “Smiles for Life” oral health curriculum.	Illinois Smiles for Life Oral Health (Annual)		536	530	342	388
Training	Number of LTC staff who complete “oral health” training	Number of LTC staff trained in oral health.	LTC Training Program <sup>§</sup>					
	Number of LTC facilities whose staff complete “oral health” training	Number of LTC facilities trained in oral health.	LTC Training Program <sup>§</sup>					

<sup>e</sup>Note: Value reflects partial year data from January 1 to November 30, 2018.

<sup>f</sup>Note: Specialty spans oral and maxillofacial surgery, orthodontics, prosthodontics, and endodontics.

<sup>§</sup>Note: LTC Facilities survey data collection will start in 2024.



## Illinois Oral Health Surveillance Findings - 2022 Data Update

### Domain 1: Oral Health Outcomes

- **Illinois Head Start Program Information Report:** From 2018-2022, the proportion of Head Start children diagnosed as needing dental treatment by the end of the program enrollment year decreased from 10.0% to 6.7%. The percentage of children with an “unmet need” for dental treatment in 2022 remained relatively unchanged at 4.7%.
- **Behavioral Risk Factor Surveillance System:** Between 2018 and 2022, the percentage of adults who reported having one or more permanent teeth removed remained relatively stable; 27.9% in 2018 and 27.6% in 2022. The percentage for this indicator in 2020 was 24.6%. For seniors, the percentage who reported they experienced the removal of six or more permanent teeth decreased from 8.5% to 6.6% from 2018 to 2020. Finally, the percentage of seniors reporting the loss of all teeth declined in 2022 to 8.7% from a high of 14.9% in 2020.
- **Illinois Department of Public Health Hospital Discharge Data:** Between 2018 and 2021, there was a decline in the number of hospital admissions for non-traumatic dental conditions (NTDC) and codes indicating direct admission from the emergency department (ED). The count decreased steadily from 5,221 in 2018 to 3,364 in 2021. In the intermediary years, 2019 and 2020, the measures were 4,982 and 3,901, respectively. The 2022 value was 5353 and was determined using updated NTDC diagnostic codes.

### Domain 2: Access to Care

Many of the access to care measures decreased due to the COVID-19 health emergency and cannot be trended to data from previous years.

- **Illinois Department of Healthcare and Family Services:** Data from 2018-2022, indicate a decrease in the proportion of Medicaid-enrolled children under 6 years of age receiving oral health services from non-dentist providers, dropping from 4.2% to 2.9%. For the years 2019, 2020, and 2021, the value for this measure was 4.6%, 2.3%, and 2.3%, respectively. In the same timeframe, the percentage of children under the age of 6 years receiving any dental service from an oral health provider also decreased, going from 29.5% to 27.8%. Additionally, the percentage of children aged 1-20 who received dental or oral health care from a dentist or other provider within the past 12 months declined from 47.1% to 40.5%.

The measures for this indicator in 2019, 2020, and 2021 were 45.5%, 36.6%, and 35.6%, respectively, marking a decreasing trend over time. However, the proportion of children aged 1-20 who received at least one prevention or periodontal service increased from 44.0% to 47.7% from 2018-2022, with measurements of 42.6%, 33.4%, and 32.9% in 2019, 2020, and 2021.

While the data for this indicator showed an inconsistent pattern during the observed timeframe, ultimately the indicator augmented by 2022. Finally, the proportion of pregnant Medicaid members who received at least one prevention or periodontal service in the 365 days before delivery increased from 12.0% to 17.9% from 2019 to 2022. Access to care data for this group had the lowest values of 9.1% in 2020 and 8.0% in 2021.



- **National Survey of Children's Health:** With this update, the Illinois data from this source was available by single calendar years. The 2021 data show a decline in the percentage of children who visited a dentist or other oral health care provider when compared to 2019 data for any type of dental visit, when the access was highest. The 2022 data show an increase in access as the proportion of children and young adults who received at least one prevention or periodontal service increased from 76.6% to 78.5%.
- **National Health Interview Survey:** During 2018-2022, the proportion of adults who reported they were unable to access needed dental care due to affordability constraints increased from 11.3% to 14.6%. In 2019 and 2020, these percentages were 16.2% and 14.1%.
- **Behavioral Risk Factor Surveillance System:** From 2018-2022, there was an increase in the percentage of individuals who reported being diagnosed with diabetes and also reported visiting a dentist or dental clinic, rising slightly from 60.2% to 62.0%.
- **Pregnancy Risk Assessment Monitoring System:** Corrected data were inputted for 2018 and 2020 that show a decrease in the percentage of expectant mothers who reported receiving teeth cleaning by a dentist or dental hygienist, declining from 42.8% to 40.8%. In 2019, this proportion was higher at 48.1%.

### Domain 3: Intervention Strategies

- **CDC My Water's Fluoride:** From 2018 and 2022, the proportion of Illinois residents with access to optimally fluoridated water remained stable at 98.2%. Similarly, in 2019, 2020, and 2021, this figure was consistently recorded at 98.4%.
- **CDC Teen Vax View:** An updated indicator and annual data were inputted into the IOHSB. The updated indicator describes the percentage of Illinois adolescents with up-to-date HPV vaccination series instead of the percentage of adolescents with three doses of the HPV vaccination as indicated in the previous iteration of the IOHSB. During 2018 and 2022, the percentage of adolescents with up-to-date HPV vaccination series increased steadily from 53.4% to 65.7%. Specifically, in the years 2019, 2020, and 2021, this measure was 54.9%, 63.1%, and 62.2%, respectively.
- **High School Youth Risk Behavior Surveillance System (YRBSS):** Between 2019-2021, there was a decline in the percentage of adolescents who reported currently smoking cigarettes on at least one day during the 30 days before the survey, with the rate decreasing from 4.7% to 2.5%. Similarly, the percentage of adolescents who reported currently using electronic vapor products on at least one day during the 30 days before the survey also decreased from 19.9% in 2019 to 16.7% in 2021.

### Domain 4: Workforce and Infrastructure

- **Illinois Department of Financial and Professional Regulation:** From 2019-2022, there was a varying increase in the count of actively licensed professionals within the oral health field. The reason for this increase in year 2020 and 2021 and then a decrease is not understood. Specifically, the number of dentists with an active Illinois license increased to a high in 2021 to 9,662 before decreasing to 9,048. Similarly, the count of dental hygienists who have an active Illinois license also experienced a changing trajectory, ultimately increasing to 8030 by 2020 before decreasing to 7,598 in 2022. The number of actively licensed specialists in dentistry also demonstrated a peak in 2021 to 1,522 and decreasing to 1471 by 2022. Specialists include providers with advanced training and certification in oral and maxillofacial surgery, orthodontics, prosthodontics, and endodontics.

- The number of actively licensed specialists in dentistry also demonstrated a slight growth, advancing from 1,451 to 1,471 between 2019 and 2022. Specialists include providers with advanced training and certification in oral and maxillofacial surgery, orthodontics, prosthodontics, and endodontics.
- **Illinois Department of Healthcare and Family Services:** Between 2019-2022, the number of dentists participating in the Medicaid program, indicated by submitting at least one claim per year, decreased substantially from 2,766 to 2,229. In 2020 and 2021, this figure was 2,677 and 2,544, which further described the declining trend for this indicator. Likewise, the count of dentists submitting more than 50 claims per year also declined, going from 2,032 in 2019 to 1,195 in 2022, with 1,886 in 2020 and 1,784 in 2021. In addition, there was an increase in the number of oral surgeons enrolled and participating in the Medicaid program, growing from 134 to 150 between 2021 and 2022.
- **Oral Health Workforce Survey:** In 2021-2022, 66.6% of general dentists who completed the IDPH Oral Health Workforce Survey (OHWS) reported providing care for children under 3 years of age. It's important to note that this data was collected using a convenience sampling method and represents only a partial workforce response and should not be considered as representative of the broader general dentist population.
- **Illinois Department of Public Health Center for Rural Health:** From 2019-2022, the number of full-time equivalent (FTE) dental providers in health professional shortage areas (HPSA) increased from 233.1 FTEs to 245.0 FTEs. On the other hand, the number of FTEs required to eliminate the dental HPSA designation during 2019-2022 also increased from 405.6 FTEs to 503.0 FTEs.
- **Illinois Department of Public Health Workforce Activities Report:** From 2020 and 2022, the count of community health workers (CHWs) trained in oral health concepts through the IDPH "Oral Health 101" curriculum rose from 89 to 120. The measure for this indicator in 2021 stood at 102. However, since tracking for this measure began in 2020, the total number has been increasing and is 311 CHWs who have completed the oral health training.
- **Illinois Smiles for Life Oral Health:** Between 2019-2022, the count of non-oral health licensed professionals who completed at least one module of the "Smiles for Life" oral health curriculum declined from 536 to 388. The total number of non-oral health licensed professionals in Illinois who completed at least one module between 2019 and 2022 is 1,796.

## Conclusion and Recommendations

The 2023 IOHSB offers a 2022 data update and an analysis of oral health outcomes, access to health care services, intervention strategies, and the status of the oral health workforce and infrastructure in the state. The key observations and findings derived from the data are as follows:

### Domain 1: Oral Health Outcomes

#### Improving Trends

- The percentage of children in Head Start requiring dental treatment declined from 10.0% in 2018 to 6.7% in 2022.
- Dental outcomes for seniors exhibited some improvements that included fewer seniors reporting partial or complete loss of teeth.

#### Other

- Emergency department visits for non-traumatic dental conditions (NTDC) demonstrated variations across different age groups and a decrease in direct admission from the ED for persons who came in with NTDC. However, this may have been a COVID-19 pandemic effect as many deferred healthcare services during this healthcare emergency. Please note that 2022 data was obtained using updated NTDC codes methodology.

#### Worsening Trends

- Incidence and mortality rates for oral cavity and pharynx cancers remained unchanged.

### Domain 2: Access to Care

#### Improving Trends

- 2022 data for pregnant Medicaid members showed significant improvement in receiving prevention or periodontal services. This may be due HFS's Bureau of Managed Care Organization's quarterly tracking of a dental service use measure and MCO plan's maternal health and outreach initiatives.
- The percentage of expectant mothers who reported receiving teeth cleaning by a dentist or dental hygienist showed a slight increase.

#### Worsening Trends

- The proportion of Medicaid-enrolled children receiving oral health services from non-dentists decreased from 4.2% to 2.9% between 2018 and 2022.
- The percentage of children under the age of 6 receiving any dental services decreased from 29.5% to 27.8%, with variations in intervening years.
- The proportion of adults unable to access needed dental care due to affordability constraints increased from 11.3% to 14.6%.
- The percentage of expectant persons who reported receiving teeth cleaning by a dentists or dental hygienist showed a slight increase.

## Domain 3: Intervention Strategies

### Improving Trends

- Adolescent up-to-date HPV vaccination series coverage increased from 53.4% to 65.7%.
- A positive trend was observed in reducing smoking and electronic vapor product use among adolescents from 2019 to 2021.

## Domain 4: Workforce and Infrastructure

### Improving Trends

- Medicaid participation by oral surgeons experienced a slight increase.
- The number of actively licensed oral health specialists exhibited a small growth.
- The total number of community health workers trained in oral health concepts increased; at the end of 2022, totaled 311 individuals.
- The total number of non-oral health licensed professionals who completed at least one module of the "Smiles for Life an Oral Health Curriculum and, at the end of 2022, totaled 1,796 individuals.

### Other

- The number of actively licensed dentists and dental hygienists exhibited variation however, a small decrease was noted from years 2020 and 2021.

### Worsening Trends

- Active Medicaid participation by dentists experienced a large reduction.
- A Large gap persists between the existing workforce and the threshold required to address dental health professional shortage areas (HPSAs).

## Summary

The addition of 2022 data to the IOHSB showed that even during times of challenge and stress to health care delivery, education, and other public health-related initiatives, Illinois has made noteworthy progress in various facets of oral health, such as reducing unmet needs in children, enhancing HPV vaccination rates, and expanding the oral health workforce.

The Illinois Oral Health Surveillance Brief ties closely with the [Illinois Oral Health Plan IV](#), its three major goals, and associated indicators. A recent evaluation of the Illinois Oral Health Plan by its stakeholders confirmed its continued relevance and utility.

Illinois stakeholders and the public can further support actions toward optimal oral health. These local and state actions can include:

- Re-integrate oral health within the larger umbrella of health and health care.
- Advocate for dental insurance coverage as a critical component of health insurance, rather than an optional benefit to be purchased separately.
- Meet the health and well-being needs of adults insured by Medicaid and Medicare by covering services that also treat oral disease conditions.
- Support actions, policies, and resources that expand the general and specialty dentist Medicaid provider network throughout Illinois.
- Develop structures that re-integrate social supports such as secure, affordable quality food and nutrition; transportation; and housing to improve health outcomes.
- Policies that support transparency of the nutritional and/or sugar content of food and drink items.
- Sustain focus on tobacco cessation and HPV vaccination initiatives to decrease oral cancer rates.
- Support workforce investment focused on representation of racial, ethnic, and geographically underrepresented minorities at all levels of the oral health workforce – community health worker, dental assistant, dental hygienist, dentist, and specialist providers.
- Support the ability of rural communities to recruit and retain oral health providers.
- Expand the use of risk-based reimbursement for evidence-based, disease reducing, cost-saving services, such as the application of fluoride varnish in non-oral health care settings and timely, closed, bi-directional referrals.
- Expand the use of dental diagnostic codes, diagnostic coding used for oral health conditions.
- Support increases in reimbursement and coverage levels for oral health services and benefits that are risk-based.
- Continued investments to develop, to implement, and to maintain robust state-based oral health surveillance systems.

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