

Quality Measurement 105

Measurement in Action *Oral Healthcare Quality Reports – State Profiles*

How to interact during the webinar



Use the Chat function
for questions for the
Technical Team

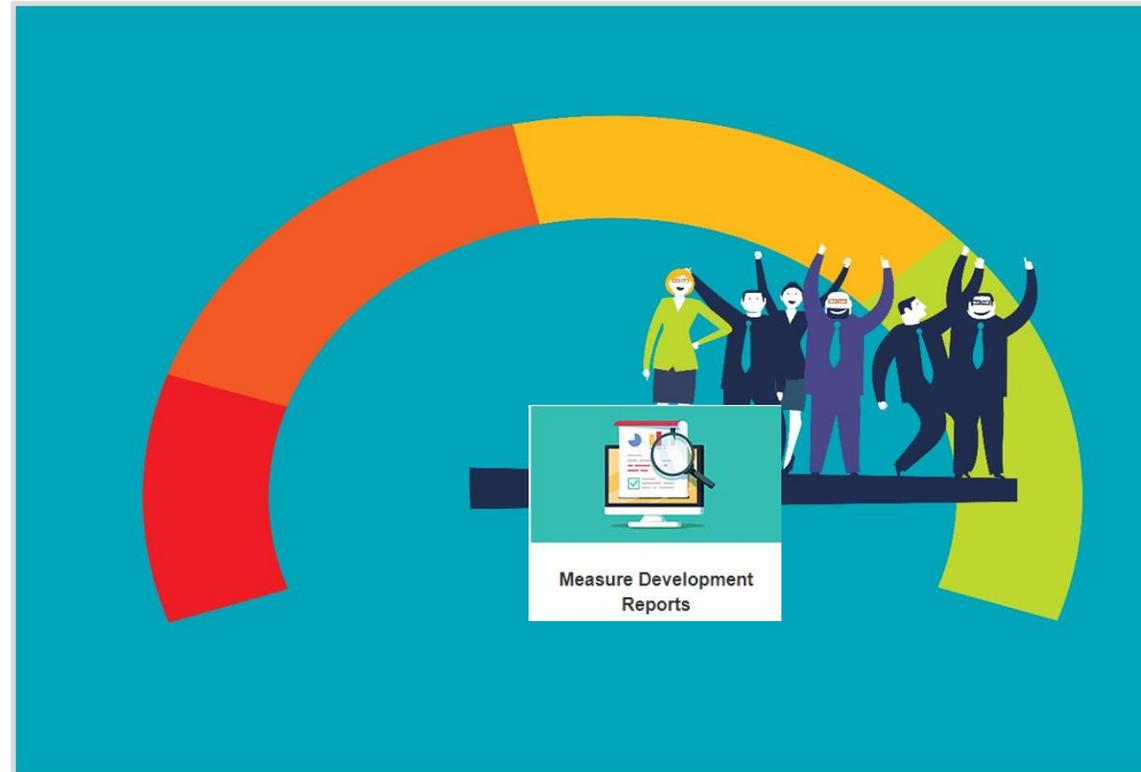


Use the Q&A function
for questions for the
presenter(s)

**Dr. Marie
Schweinebraten, DMD**

**Chair, DQA Education
Committee**





MEASURE and IMPROVE



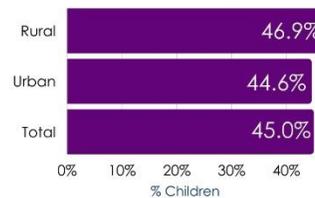
Oral Health Quality in Medicaid and CHIP
Michigan <21 years
7/2021

Overview: Child Healthcare Quality

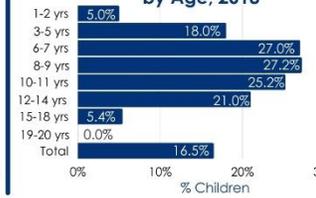
Year	Any Service (% children)	Oral Evaluation (% children)	Caries Risk Documentation (% children)	Topical Fluoride ≥ 2/year (% children)	Caries-Related ED Visits Per 100,000 Member Months
2018	51.3%	45.5%	0.0%	16.5%	34.9
2017	50.9%	45.5%	0.0%	16.9%	36.0
2016	49.6%	43.9%	0.0%	15.7%	37.7
National Sample, 2018*	53.1%	47.8%	3.1%	21.3%	24.5

*Based on analysis of 18 states. See [DQA Oral Health Quality Reports](#) for more info.

Oral Evaluation by Geography, 2018



Topical Fluoride at Least 2/Year by Age, 2018



MEASURE and IMPROVE

45% of children had an oral evaluation.



1 in 4 children 6-11 years & 1 in 20 children 15-20 years had at least 2 topical fluoride applications.



Children aged 19-20 years had more than 3 times as many ED visits as the program average.

Caries-Related ED Visits by Age and Geography, 2018



Source: Analysis of Transform Medicaid Statistical Information System (T-MSSIS) Analytic Files (RAF), Centers for Medicare & Medicaid Services. Analyses conducted by Key Analytics and Consulting. Contact dqa@dentalqualityalliance.org for questions or additional data. © 2021 American Dental Association on behalf of the Dental Quality Alliance (DQA). All rights reserved.

Learning Objectives

By the end of this webinar, participants will be able to:

- Gain familiarity with how data are reported and compiled at the state and plan levels for Medicaid and CHIP.
- Learn how the DQA is using national data for Medicaid and CHIP programs contained within the Transformed Medicaid Statistical Information System (T-MSIS) to conduct research that supports systems-level improvement.
- Understand how measurement can be used to identify disparities in care.

Speaker

Dr. Jill Herndon, owner and principal consultant with Key Analytics and Consulting.

Disclosures

Dr. Herndon is presenting in her capacity as a methodology consultant to the Dental Quality Alliance.

Measurement in dentistry: where we were



IOM (2011), *Advancing Oral Health In America*, Key Findings and Conclusions

“Oral health lags significantly behind the remainder of the health care system in developing quality measures, and as a result, little is known about the quality of oral health care.”



U.S. Department of Health and Human Services

Centers for Medicare & Medicaid Services

2008 NATIONAL DENTAL SUMMARY

January 2009

Dental Quality Alliance: CMS is interested in forming a Dental Quality Alliance (DQA) and is currently in discussions with the ~~American Dental Association~~ (ADA) to begin this process. The DQA would bring together parties from many aspects of oral health fields including national dental organizations, Federal and State partners, payers and consumers to begin working together on measurements that could be used by States for purposes of improving the delivery of oral health services and the development of quality measures. These measures could ultimately be used to enhance reporting on the CMS form 416 or through state-based value based purchasing initiatives. While children eligible for Medicaid will be the primary area of concern, the DQA will also address dental services for the adult population.

Measurement in dentistry: where we are

Validated measures in use

Validated Measures

Utilization of Services
Preventive Services for Children
Treatment Services
Caries Risk Assessment Documentation
Oral Evaluation
Topical Fluoride for Children
Receipt of Sealants on First Permanent Molars
Receipt of Sealants on Second Permanent Molars
Care Continuity
Usual Source of Services
Oral Evaluation – Adults with Diabetes
Topical Fluoride for Adults at Elevated Caries Risk
Periodontal Evaluation in Adults with Periodontitis
Non-Surgical Ongoing Periodontal Care in Adults with Periodontitis
Follow-Up after ED Visit by Children/Adults
Per Member Per Month Cost of Clinical Services

Used for Quality Improvement, Public Reporting, and Payment Programs: Example

Centers for Medicare & Medicaid Services: Medicaid and CHIP Child Core Set
Health Resources & Services Administration: Uniform Data System Reporting
Covered California – Health Benefit Exchange, Plan Contracts
Massachusetts Delivery System Reform Incentive Payment
Oregon Health Authority (Payment Program, Public Reporting, QI)
Michigan Healthy Kids Dental, Dental Plan Request for Proposals (RFP)/Contract
Florida Medicaid, Dental Plan RFP/Contract
Texas Medicaid and CHIP, Plan Contracts

Who's measured: different levels



% of patients **in the practice, clinic, health center** who received recommended care



**HRSA UDS reporting
eCQMs
ADA DERE**



% of patients **enrolled in the health plan** who received recommended care



**DQA Program/
Plan level measures**



% of patients **enrolled in the program (e.g., Medicaid)** who received recommended care

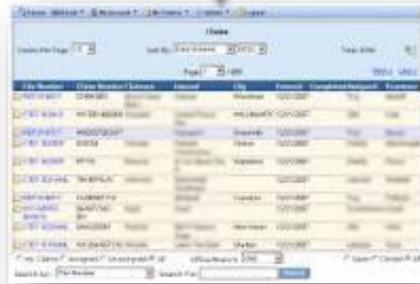
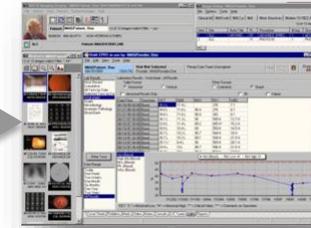


**CMS Core Set
DQA State Profiles**

How's it measured: different data sources

Health Records

HRSA
UDS
reports



Administrative
Database
(enrollment, claims and
encounters)

Registries

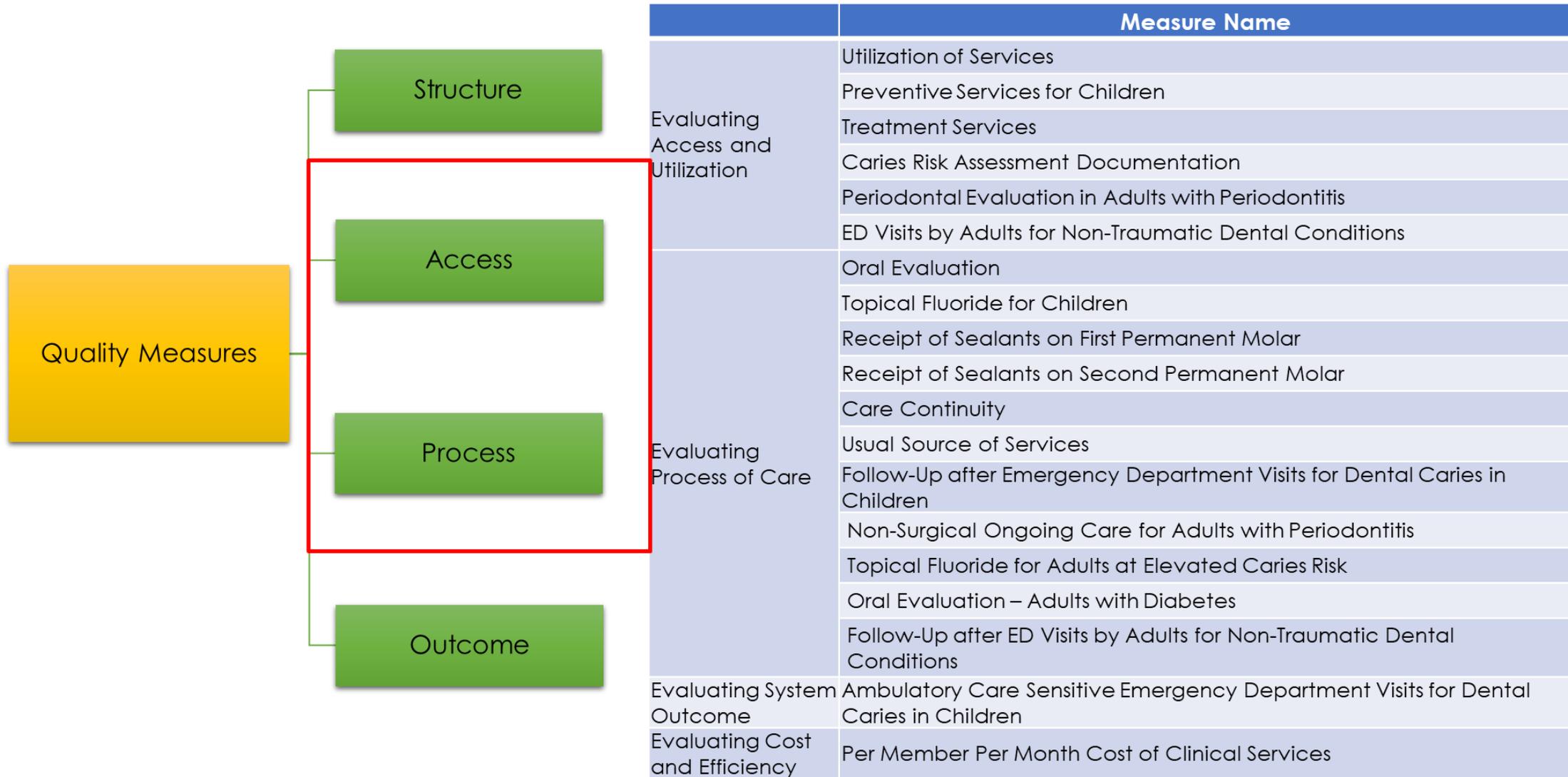
ADA
DERE

CMS Core Set
DQA State Profiles

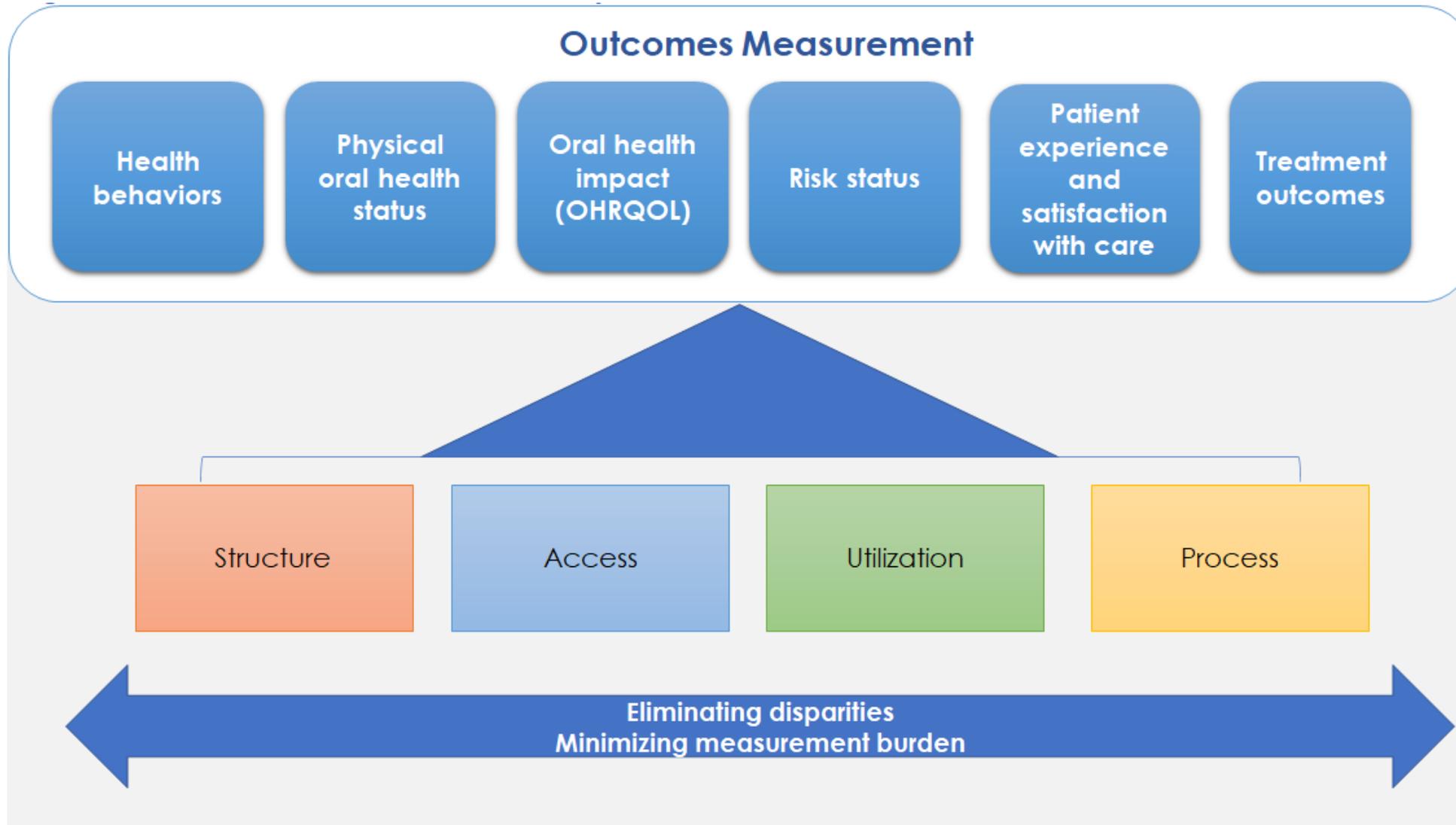


Patient surveys (patient
reported outcomes, satisfaction,
experience with care and health status)

What's measured: categories of measures



Measurement in dentistry: where we are headed



Outcome measures, especially those most meaningful to patients, are essential to measuring value.

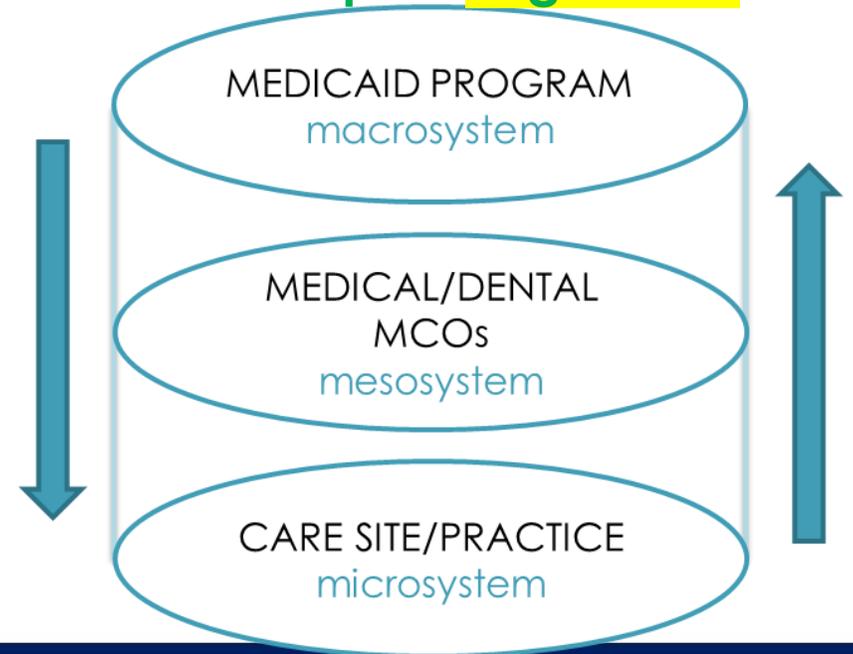


Why is measurement so focused on using administrative data at the program level, focused on access and process measures, when we ultimately want to measure patient outcomes?

Well-known challenges – we are lacking:

- Ability to integrate and aggregate EHR data
- Consistent, structured capture of diagnostic data for outcomes measurement.
- Validated patient-reported performance measures
- Data and methodologies to account for patient characteristics

All system levels are connected and require alignment



Access and process drive towards outcomes

Access: Oral Evaluation/Continuity

Process – Prevention: Fluoride

Process – Prevention: Sealants

Clinically-Assessed Outcome: New Caries

Patient-Reported Outcome: Painful Aching in Mouth

Measurement in dentistry: where we are

Data for testing and reporting measures



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Home » Medicaid » Data & Systems » MACBIS » Medicaid & CHIP Research Files » T-MSIS Analytic Files

MACBIS

Transformed Medicaid
Statistical Information System
(T-MSIS)

**Medicaid & CHIP Research
Files**

T-MSIS Analytic Files

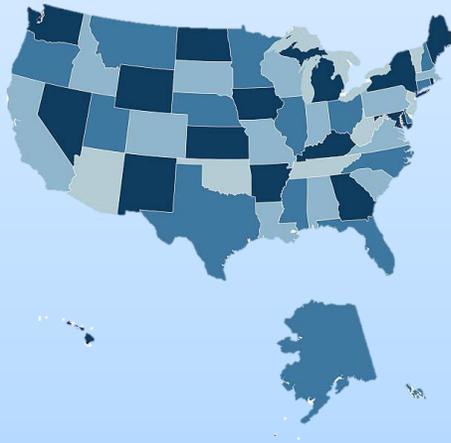
Medicaid Analytic eXtract

Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF)

The Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF) Research Identifiable Files (RIF) are a research-optimized version of T-MSIS data and serve as a data source tailored to meet the broad research needs of the Medicaid and CHIP data user community. These files include data on Medicaid and Children's Health Insurance Program (CHIP) enrollment, demographics, service utilization and payments.

What is T-MSIS

Medicaid/CHIP eligibility and claims data for all states



DQA approved for data access:

- Calendar years 2014–2018
- Dental, Medical, Pharmacy Claims and Enrollment Data



- Includes facility and professional claims; inpatient and outpatient

Objectives:

- Develop state profiles using DQA measures
- Support ongoing evaluations of measurement reliability and validity and identify opportunities for measure development
- Develop technical assistance resources to support DQA measure implementation

From the state Medicaid/CHIP program to T-MSIS

Enrollment,
encounters,
claims

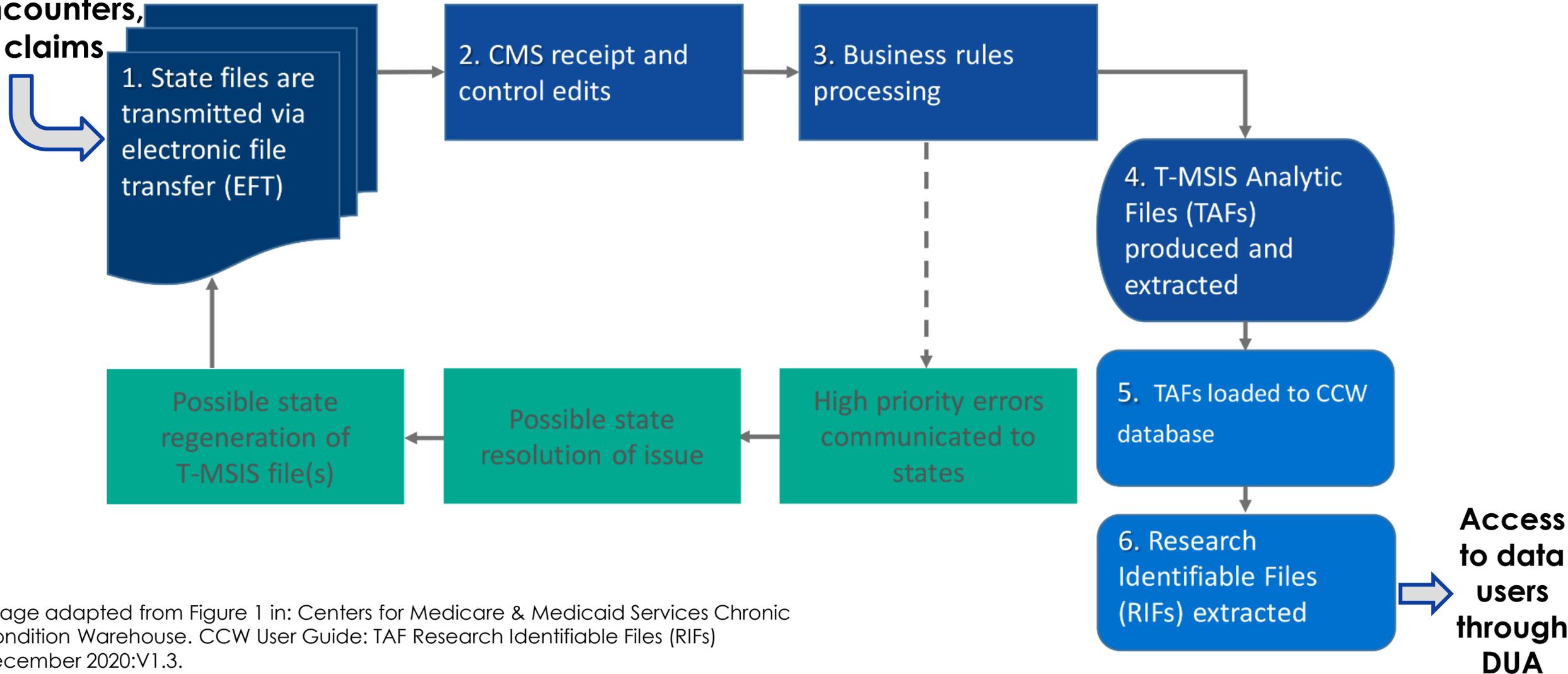


Image adapted from Figure 1 in: Centers for Medicare & Medicaid Services Chronic Condition Warehouse. CCW User Guide: TAF Research Identifiable Files (RIFs) December 2020:V1.3.

How much data are we talking about?

75-80 million Medicaid/CHIP Enrollees per Year

Eligibility File:

188 variables

Enrollment spans, benefits, demographic/geographic information

Hospital Inpatient Files:

>200 variables

Inpatient stay information – dates of service, diagnoses, procedures, provider and payment information

Prescription Drug Files:

>100 variables

Prescription and covered OTC drugs, NDC codes, filled dates, units, quantity supplied, provider and payment information

Other Services Files:

>150 variables

Outpatient services - dates of service, procedure codes, diagnoses, provider and payment information

Long-Term Care Files:

>150 variables

Long-care institutional claims, dates of service, diagnoses, provider and payment information

Separate set of files for each state and each year (each month for claims files).

T-MSIS: Why it is a game-changer

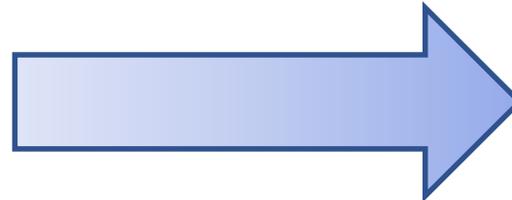
Where we were

Testing

2-3 programs included

Reporting

Each state programs its own measures



Where we are

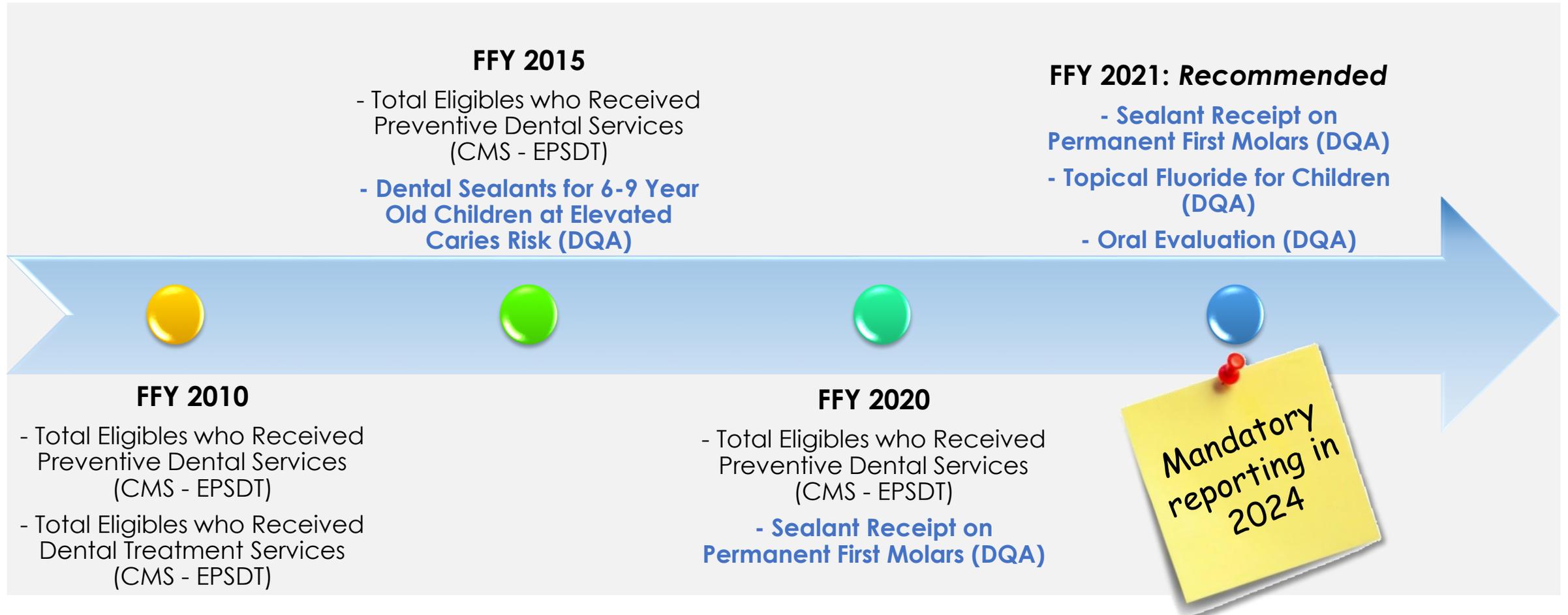
Testing

Access to data for ALL state Medicaid/CHIP programs

Reporting

Centralized reporting: states can focus on quality improvement

CMS Medicaid/CHIP Child Core Set: moving from broad utilization indicators to evidence-based quality measures



Centers for Medicare & Medicaid Services: Core Set of Children's Health Care Quality Measures for Medicaid and CHIP - Dental and Oral Health Services

T-MSIS Data: State Profiles

Why?

- Provide high level information about dental care quality
 - Support setting QI goals and monitoring progress
- Encourage viewing measures in “sets” rather than focusing on a single measure
- Provide context for measure scores



What?

- Time trends
- Contextual data
 - National average
- Stratification by demographic characteristics
 - e.g., age and geography (urban/rural)
 - Enable identification of disparities and where to target outreach

Initial focus: CHILDREN



MEASURES

- Utilization of Dental Services
- Oral Evaluation
- Caries Risk Documentation
- Topical Fluoride
- Caries-Related ED Visits

STATES WITH COMPLETED DATA ANALYSES

- Alaska
- Connecticut
- Delaware
- Georgia
- Hawaii
- Idaho
- Louisiana
- Massachusetts
- Michigan
- Mississippi
- Missouri
- Montana
- New Hampshire
- New Mexico
- North Dakota
- Oklahoma
- Oregon
- Washington

T-MSIS Data: All States Summary (n=18)

MEASURE	AVERAGE	MINIMUM	MAXIMUM
Utilization of Dental Services	53.1%	37.1%	65.5%
Oral Evaluation	47.8%	33.0%	55.7%
Caries Risk Documentation	3.1%	0.0%	49.4%
Topical Fluoride	21.3%	14.3%	27.5%
Caries-Related ED Visits	24/ 100,000 MM	15/ 100,000 MM	35/ 100,000 MM

- Significant percentage of children not receiving any dental care
- Even fewer receiving recommended prevention
- Substantial variation between states
- **NOTE:** Only services for which there are claims are captured.

We are using T-MSIS data to create state profiles

Time trends – how do scores vary over time?



ALASKA

Year	Any Service (% Children)	Oral Evaluation (% Children)	Caries Risk Documentation (% Children)	Topical Fluoride (% Children)	Caries-Related ED Visits/100,000 MM
2018	46.7% ↓	39.0%	2.0%	15.3%	17.7 ↓
2017	46.8%	38.3%	2.2%	15.0%	20.6
2016	49.2%	41.2%	0.0%	16.8%	23.8

GEORGIA

Year	Any Service (% Children)	Oral Evaluation (% Children)	Caries Risk Documentation (% Children)	Topical Fluoride (% Children)	Caries-Related ED Visits/100,000 MM
2018	52.0% ↓	49.5%	0.0%	21.7%	20.4 ↓
2017	53.7%	51.3%	0.0%	21.5%	21.4
2016	53.8%	51.2%	0.0%	21.2%	21.4

MICHIGAN

Year	Any Service (% Children)	Oral Evaluation (% Children)	Caries Risk Documentation (% Children)	Topical Fluoride (% Children)	Caries-Related ED Visits/100,000 MM
2018	51.3% ↑	45.5%	0.0%	16.5%	34.9 ↓
2017	50.9%	45.5%	0.0%	16.9%	36.0
2016	49.6%	43.9%	0.0%	15.7%	37.7

WASHINGTON

Year	Any Service (% Children)	Oral Evaluation (% Children)	Caries Risk Documentation (% Children)	Topical Fluoride (% Children)	Caries-Related ED Visits/100,000 MM
2018	61.1% ↑	55.3%	4.9%	27.0%	18.7 ↓
2017	60.4%	54.8%	3.4%	27.4%	20.0
2016	60.3%	54.3%	2.7%	27.4%	21.6

Why stratify? The equity-quality link

The IOM identifies **equity** as one of six attributes of high-quality care.

“the goal of a health care system is to improve health status . . . in a manner that reduces health disparities among particular subgroups”

“the quality of care should not differ because of such characteristics as gender, race, age, ethnicity, income, education, disability, sexual orientation, or location of residence”

Measure Stratifications

help us identify:

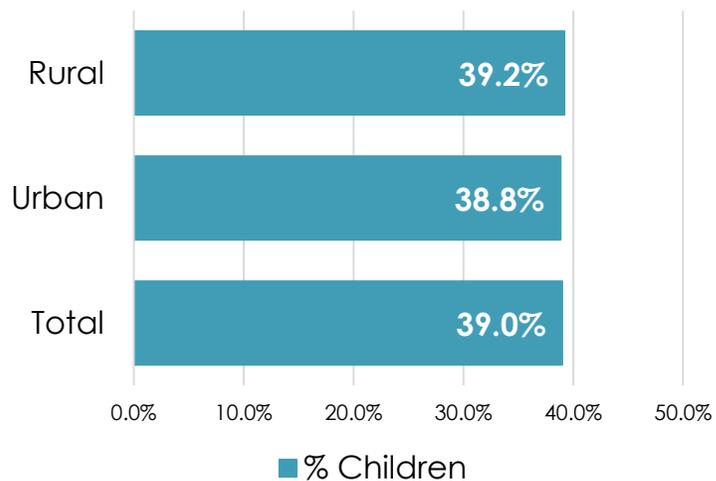
- Which populations are we having the most success reaching?
- Which populations have the biggest care gaps?

Institute of Medicine (U.S.). Committee on Quality of Health Care in America. Crossing the Quality Chasm : a new health system for the 21st century. Washington, D.C.: National Academy Press; 2001.

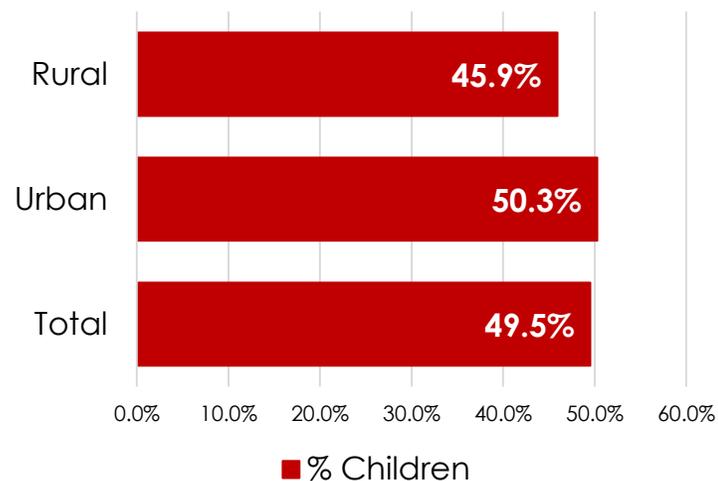
State Profiles: Stratifications

Oral Evaluation by Geography, 2018

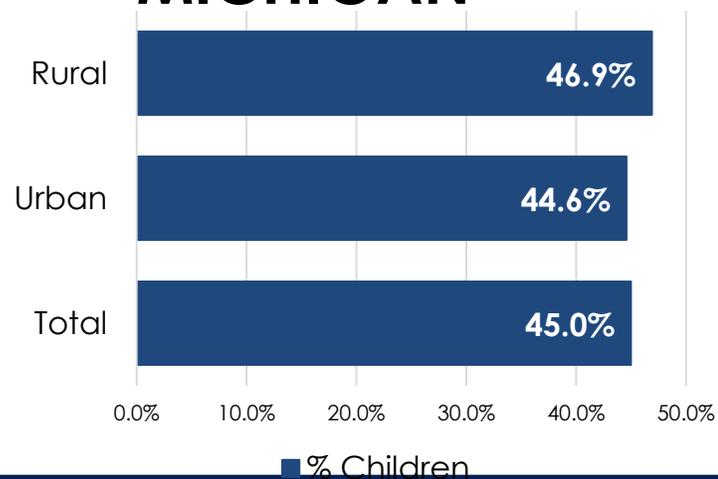
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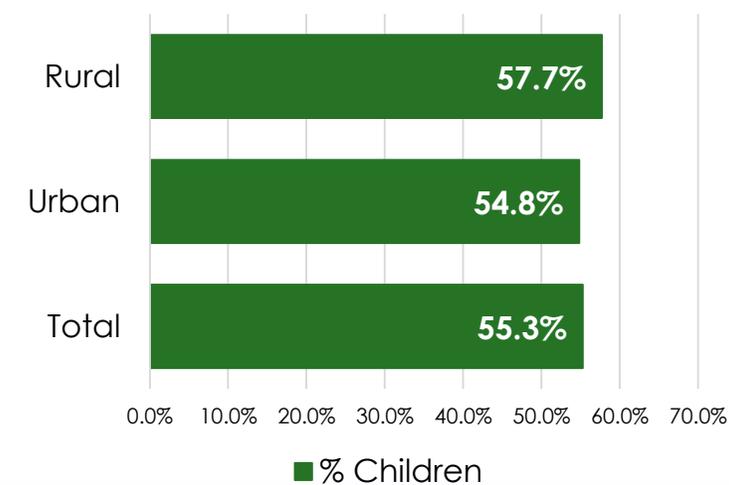
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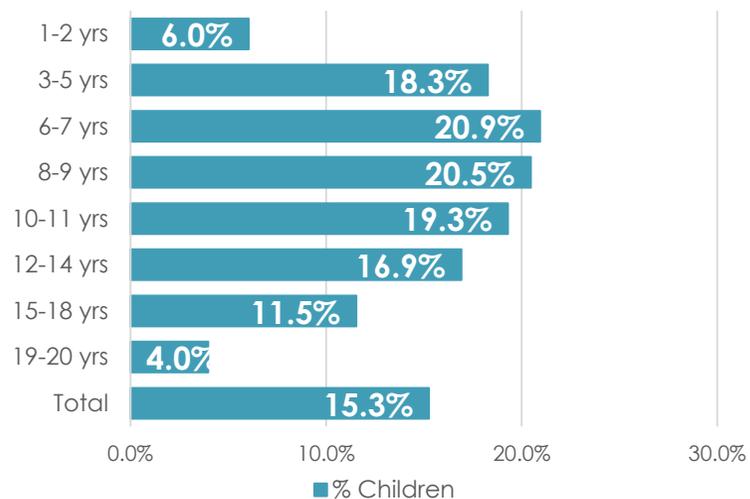
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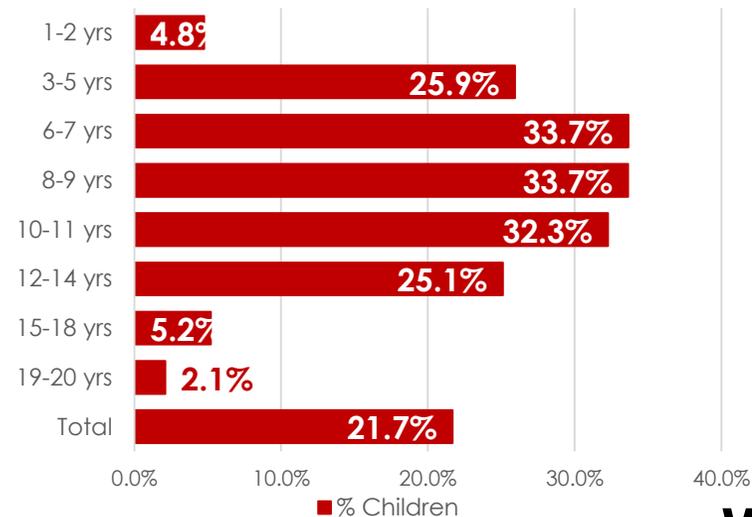
State Profiles: Stratifications

Topical Fluoride by Age, 2018

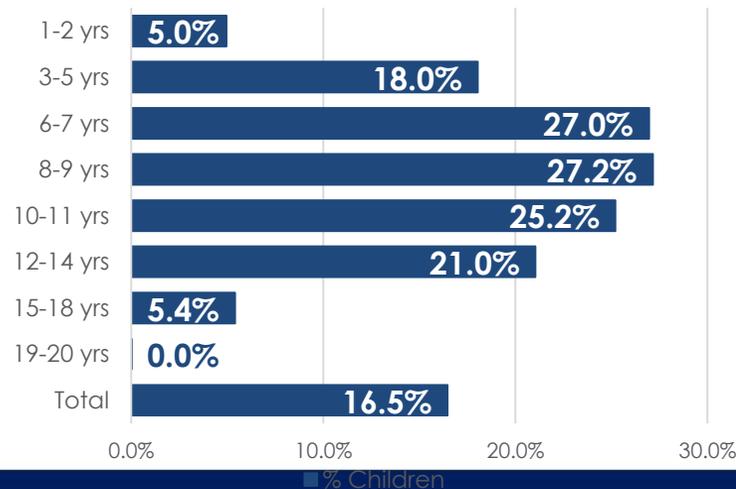
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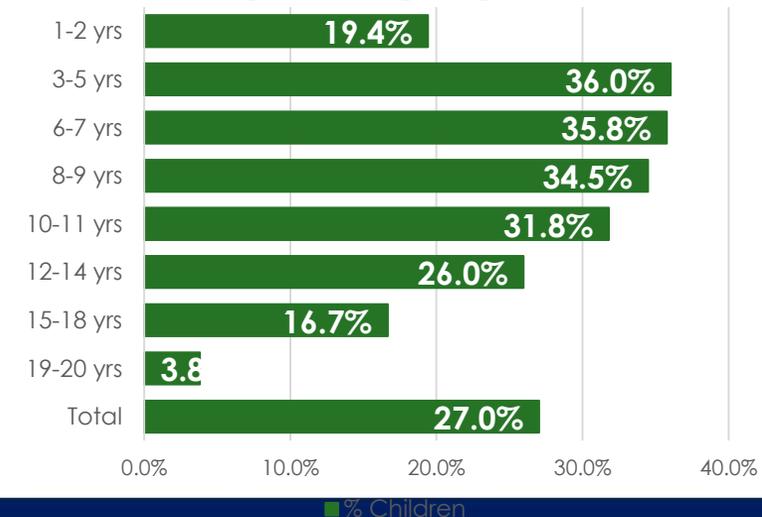
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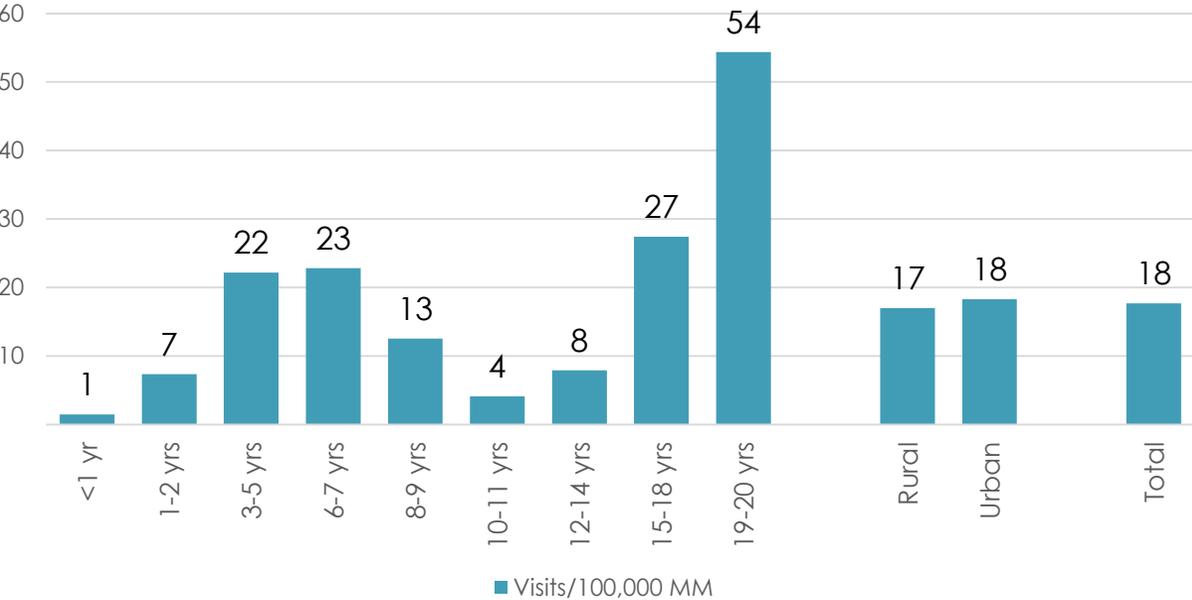
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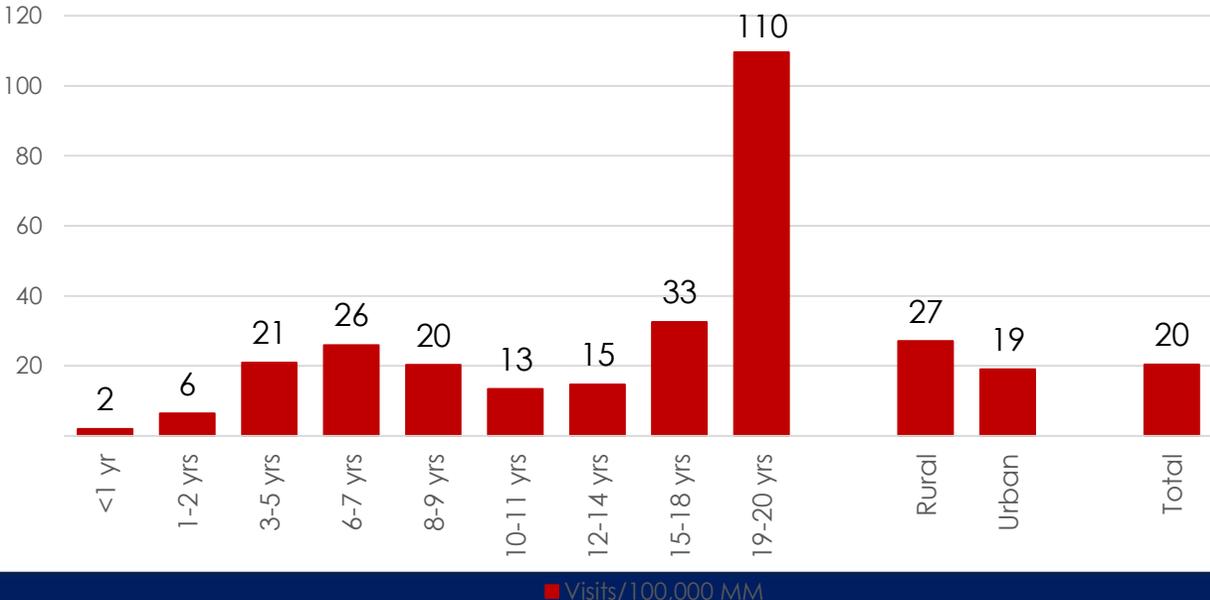
State Profiles: Stratifications

ED Visits by Age and Geography, 2018

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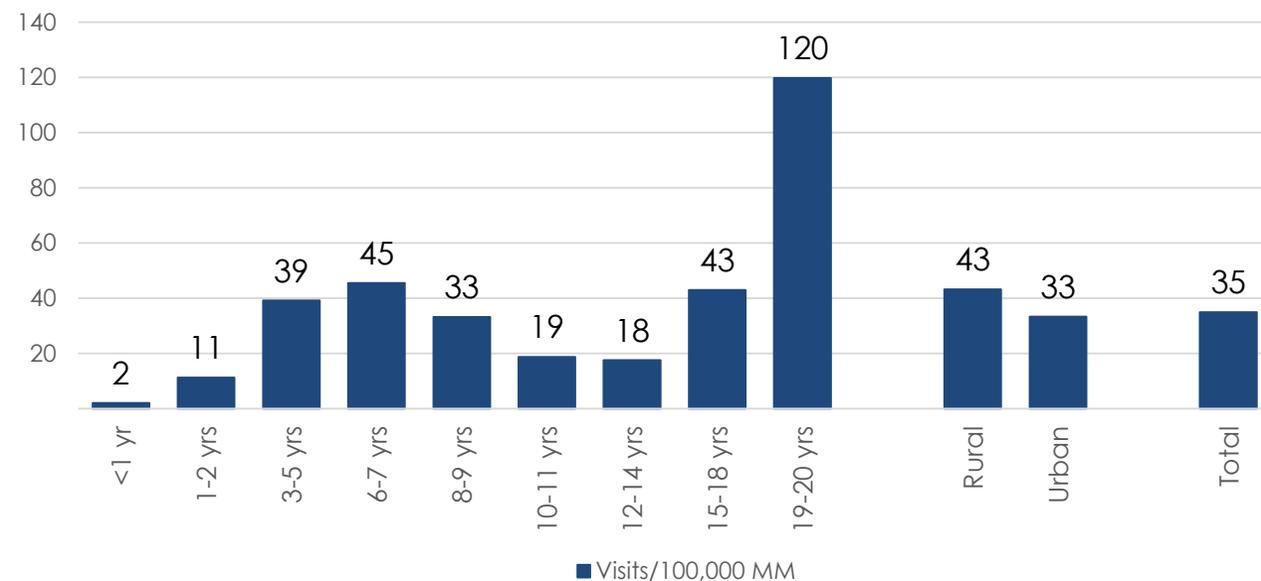
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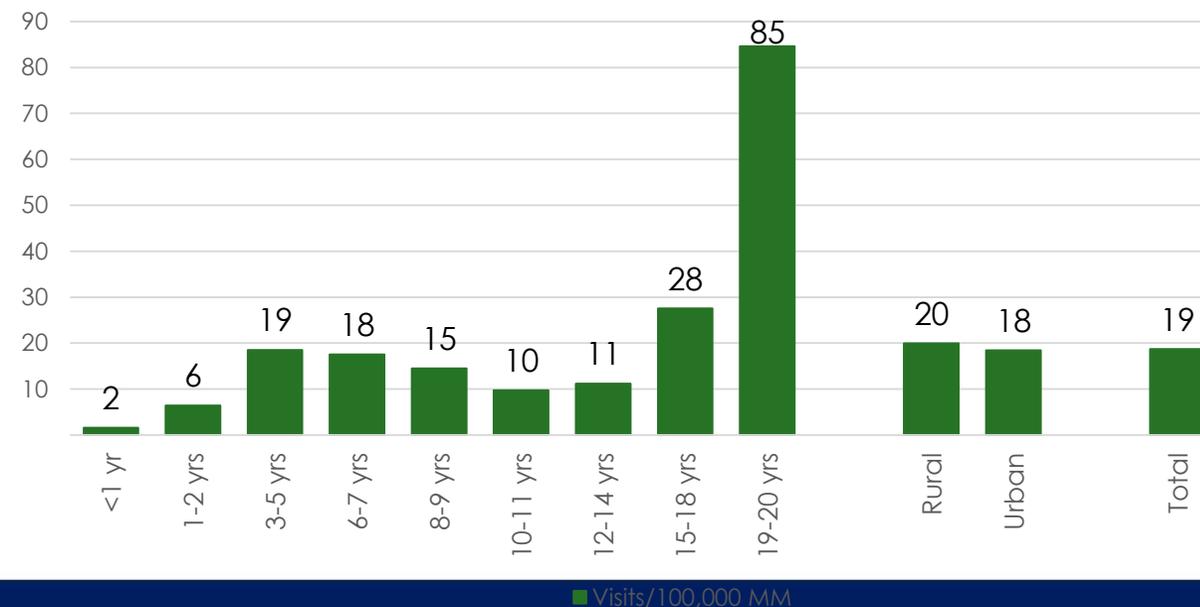
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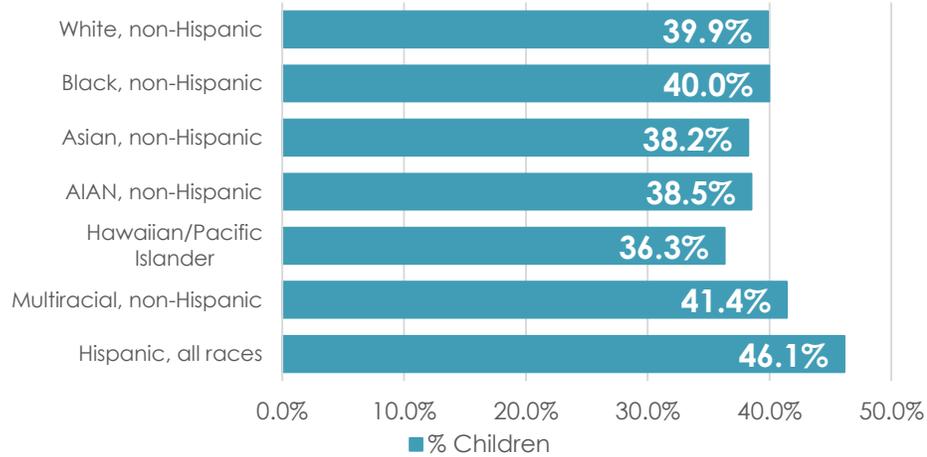
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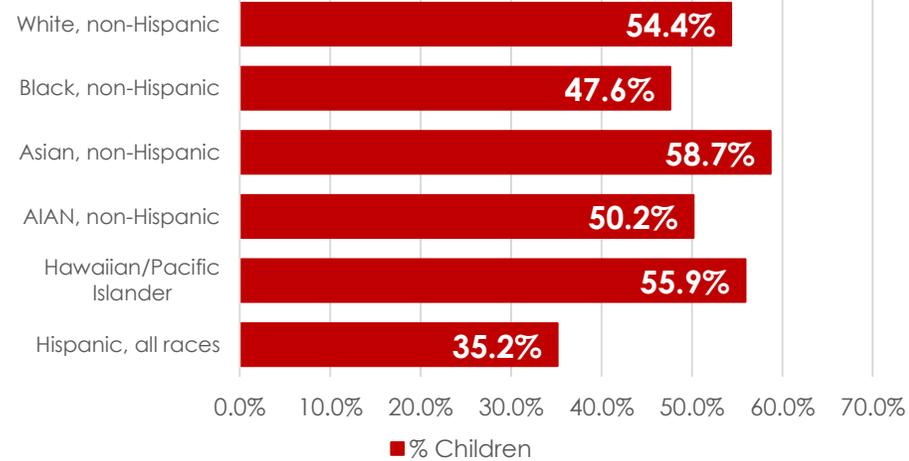
State Profiles: Stratifications

Oral Evaluation by Race/Ethnicity, 2018

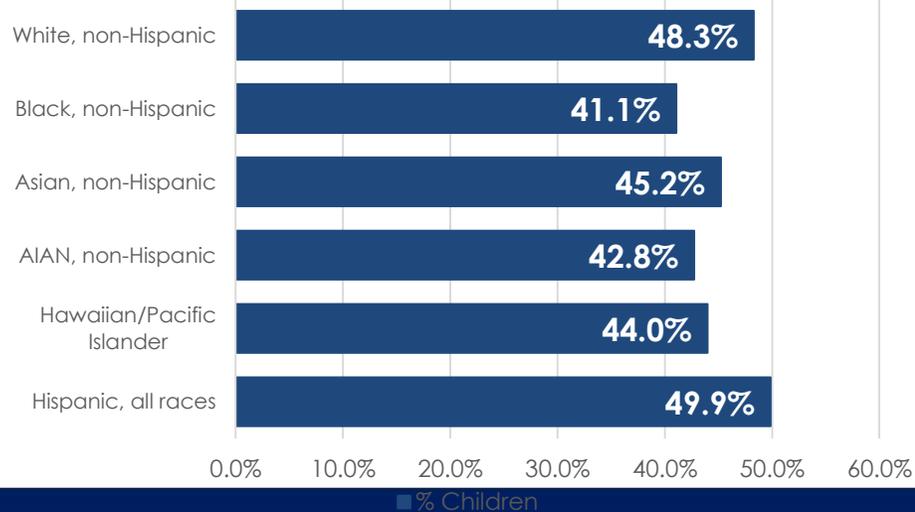
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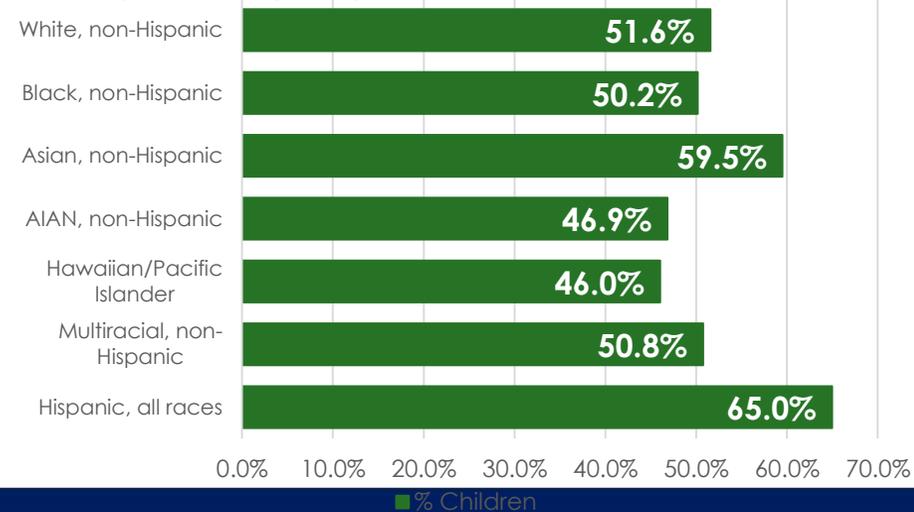
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! Data Issue

Approximately 50% of states have inadequate race and ethnicity data for reliable reporting.

State Profiles: Bringing it All Together

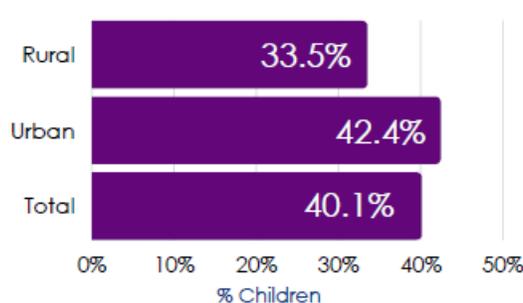
Available at:
<https://www.ada.org/en/science-research/dental-quality-alliance/dqa-publications>

Overview: Child Healthcare Quality

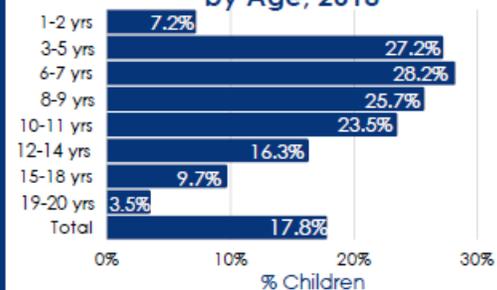
Year	Any Service (% children)	Oral Evaluation (% children)	Caries Risk Documentation (% children)	Topical Fluoride ≥ 2/year (% children)	Caries-Related ED Visits Per 100,000 Member Months
2018	51.4% ↑	40.1% ↑	21.3% ↑	17.8% ↔	29.7 ↔
2017	49.5%	39.5%	13.7%	17.6%	31.9
2016	46.5%	37.1%	7.2%	15.2%	34.5
National Sample, 2018*	53.1%	47.8%	3.1%	21.3%	24.5

*Based on analysis of 18 states. See [DQA Oral Health Quality Reports](#) for more info.

Oral Evaluation by Geography, 2018



Topical Fluoride at Least 2/Year by Age, 2018



1/3 of children living in rural areas had an oral evaluation.

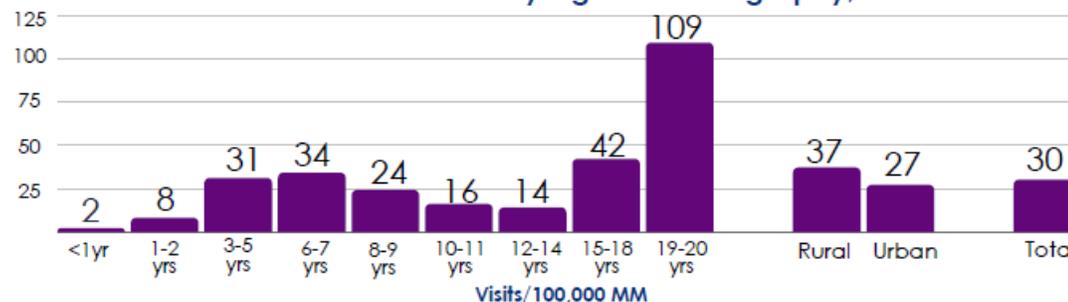


Fewer than 20% of children received at least 2 topical fluoride applications.



Children aged 19-20 years had more than 3 times as many ED visits as the program average.

Caries-Related ED Visits by Age and Geography, 2018



Source: Analysis of Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF), Centers for Medicare & Medicaid Services. Analyses conducted by Key Analytics and Consulting. Contact dqa@ada.org for questions or additional data. 2021 American Dental Association on behalf of the Dental Quality Alliance (DQA)®. All rights reserved.

State Profiles: Questions



Rather than delaying release until all states are completed, we wanted to start releasing reports in batches as they are available. States were prioritized, in part, based on data completeness and quality.



Standard delays in reporting administrative claims data to allow for claims processing and resolution – PLUS time for states to submit, CMS to process & QA, then create analytic files and make available to data users (see slide 20).



Later this month!
Please check
<https://www.ada.org/en/science-research/dental-quality-alliance/dqa-publications>
for updates!

T-MSIS Data Acknowledgements & Resources

- Oral Healthcare Quality State Profile reports are part of a research project titled "The State of Oral Healthcare Use, Quality and Spending: Findings from Medicaid and CHIP Programs," made possible through Data Use Agreement (DUA) RSCH-2020-55639 with the Centers for Medicaid and Medicare Services.
- Centers for Medicare & Medicaid Services, T-MSIS Data: <https://www.medicare.gov/medicaid/data-systems/macbis/medicaid-chip-research-files/transformed-medicare-statistical-information-system-t-msis-analytic-files-taf/index.html>
- T-MSIS Analytics Files (TAF) Data Quality Atlas: <https://www.medicare.gov/dq-atlas/welcome>

Concurrent efforts: practice-level measurement



ADA Dental Experience
and Research Exchange™
ADA.org/DERE



Dental Quality Alliance

PRACTICE-LEVEL MEASURES FOR QUALITY IMPROVEMENT

RELIABILITY NOT ESTABLISHED. USE ONLY FOR QUALITY IMPROVEMENT

https://www.ada.org/~media/ADA/DQA/DQA_2016_Practice_Level_Measures_for_QI.pdf?la=en

IHI Open School Online Courses

New Open School Course from the Dental Quality Alliance (DQA)

Are you a dental professional looking to improve anything about your practice? A cultural shift is taking place in dentistry, which is putting greater emphasis on measurement — not for judgment, but for improvement.

In this unique Open School online course — the first of its kind exclusively for dental professionals, developed in close partnership with the **Dental Quality Alliance (DQA)** — you'll learn how to use quantitative and qualitative feedback to evaluate the quality of services in your practice, both clinical and operational, and use that feedback to drive toward meaningful change for you and your patients.

Through a series of five short lessons, you'll learn how to use the Model for Improvement to improve everything from your clinic's sealant rates to you own tennis game. Because, as you'll learn, the basic steps for any improvement project are the same: Set an aim, select measures, develop ideas for changes, and test changes using Plan-Do-Study-Act (PDSA) cycles.

When you're ready to begin learning the basic steps of quality improvement, enter the course here:

Start the DQA
Open School Course



The IHI Open School offers more than 30 online courses in the areas of quality, safety, the Triple Aim, patient-centered care, and

<http://www.ihl.org/education/IHIOpenSchool/Courses/Pages/Dental-Quality-Alliance-DQA.aspx>

GUIDANCE ON PRACTICE BASED MEASURES IMPLEMENTATION

The development of this guidance document has been informed by the DQA's Project on Pediatric Practice-Based Measures Testing:

Alignment and Harmonization in Reporting Quality: Establishing Reliability Across Reporting Levels

KEY RECOMMENDATIONS

- Comparisons should be made within a data source (i.e., one practice's measure score calculated using claims data should not be compared with another practice's measure score calculated using billing data or electronic dental record, EDR, data).
- Recommended minimum denominator sizes when used in accountability applications that are based on relative comparisons between practices are:

(1) 100 when using payer claims data, (2) 50 when using practice billing data, and (3) 50 when using practice EDR data.
- When practice measure scores are clustered closely together (i.e., there is low practice-to-practice variation), accountability applications should focus on overall improvement across practices rather than relative comparisons between practices.
- Before incorporating any quality measures in accountability applications, those applications should be tested using multiple years of measure data to evaluate whether the application achieves the intended goals and whether there are unintended consequences that may undermine quality improvement efforts. It is incumbent upon the users of performance measures to carefully evaluate these impacts prior to implementing the accountability application.

https://www.ada.org/~media/ADA/DQA/2018_PB_M_Guidance_Implementation_Final20181108t102945.pdf?la=en



Use the Q&A function
for questions for the
presenter(s)



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Improvement Resources



Publications



Thank you!