

# Recommendations for Improving Oral Health Care Access, Quality, and Outcomes and Advancing Equity in Medicaid and the Children's Health Insurance Program

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## Acronyms

ASO	Administrative services only	MCO	Managed care organization
CAHPS	Consumer Assessment of Healthcare Providers and Systems	MCP	Managed care plan
CDT	Code on Dental Procedures and Nomenclature	MCQ	Managed care quality
CHIP	Children’s Health Insurance Program	NTDC	Non-traumatic dental condition
CMS	Centers for Medicare & Medicaid Services	OHI	Oral Health Initiative
CPT	Current Procedural Terminology	OHIP-5	5-item Oral Health Impact Profile
DQA	Dental Quality Alliance	OTAG	Oral Health Technical Advisory Group
ED	Emergency department	PAHP	Prepaid ambulatory health plan
EHR	Electronic health record	PCP	Primary care provider
EPSDT	Early and Periodic Screening, Diagnostic, and Treatment	PDENT	Percentage of Eligibles Who Received Preventive Dental Services
EQR	External quality review	PIP	Performance improvement project
EQRO	External equality review organization	PRAMS	Pregnancy Risk Assessment Monitoring System
FFS	Fee-for-service	QAPI	Quality assessment and performance improvement
FFY	Federal fiscal year	QI	Quality improvement
FV	Fluoride varnish	QS	Quality strategy
HCBS	Home and community-based services	SDF	Silver diamine fluoride
HEDIS	Healthcare Effectiveness Data and Information Set	SDP	State directed payment
HIE	Health information exchange	SPA	State Plan Amendment
ICD-10	International Classification of Diseases, 10th Revision	TA	Technical assistance
I/DD	Intellectual and developmental disabilities	TAF	T-MSIS Analytic File
KPI	Key performance indicator	T-MSIS	Transformed Medicaid Statistical Information System
		TPA	Third-party administrator
		VBP	Value-based payment

## Introduction

Oral health is vital to overall health and well-being. The concept of good oral health, which was once focused solely on the lack of disease, has broadened to include aspects of physical, social, and psychological health.<sup>1</sup> Even though it is largely preventable, tooth decay remains one of the most common chronic diseases for children and adults. Prevalence of tooth decay is higher among low-income children, who are likely to be enrolled in Medicaid and the Children’s Health Insurance Program (CHIP). Similarly, low-income adults are twice as likely as their higher-income peers to experience tooth decay and have other unmet oral health needs.<sup>2</sup>

For children and adolescents, poor oral health is associated with delayed growth and development and can negatively impact school attendance and academic performance.<sup>3</sup> In adults, poor oral health has been linked to cardiovascular disease, can be a significant source of pain, and is a cause for opioid prescriptions. Poor oral health during pregnancy is associated with poor health outcomes for the mother and baby, such as preterm birth and low birth weight. For older adults, declining overall health and nutritional deficiencies due to trouble eating are common outcomes of poor oral health.<sup>4</sup>

As of May 2023, Medicaid and CHIP provided health coverage to one in four people in the United States—approximately 94 million adults, children, pregnant people, older adults, and those with disabilities.<sup>5</sup> Medicaid and CHIP cover dental services for all child enrollees.<sup>6</sup> As of October 2022, 39 states and the District of Columbia provided Medicaid coverage beyond emergency dental services for adults, and all states cover at least emergency dental services for pregnant populations.<sup>7</sup>

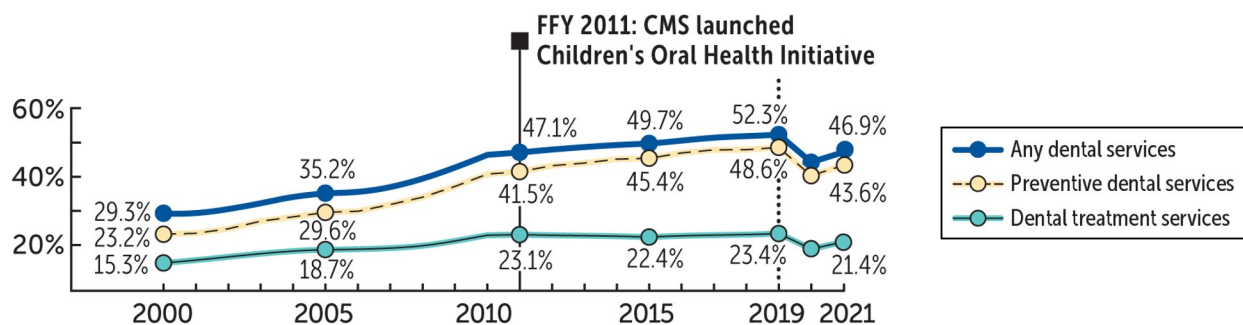
### Medicaid and CHIP Beneficiaries at a Glance

- Children and adolescents
- Adults
- Pregnant and postpartum people
- Older adults
- Individuals with chronic conditions
- Individuals with disabilities
- People with dual eligibility for Medicare and Medicaid

Ensuring access to high quality dental care for Medicaid and CHIP beneficiaries is a priority for the Centers for Medicare & Medicaid Services (CMS). In 2010, CMS launched the Medicaid and CHIP Children’s Oral Health Initiative (OHI) and set national and state-specific goals for improving the use of preventive dental care among children covered by Medicaid and CHIP. The aim of the OHI was to increase the percentage of children ages 1 to 20 receiving at least one preventive dental service by 10 percentage points between federal fiscal year (FFY) 2011 and FFY 2018. The FFY 2011 national baseline rate was 42 percent and the national goal was 52 percent. Each state had its own baseline and goal.

CMS measured national and state progress on the OHI through the preventive dental services rate (known as PDENT) derived from the annual Form CMS-416. As shown in Exhibit 1, the rate of preventive dental service use increased from 23 percent in FFY 2011 to 49 percent in FFY 2019, falling to 41 percent in FFY 2020 due to challenges during the COVID-19 pandemic. In FFY 2021, the rate of preventive dental service use trended upward, increasing to 44 percent.

**Exhibit 1. Percentage of children and adolescents, ages 1 to 20, enrolled in Medicaid for at least 90 continuous days who received dental services FFY 2000–FFY 2021**



Source: FFY 2000–2021 Form CMS-416 reports, Lines 1b, 12a, 12b, and 12c, as of March 4, 2022. The FFY 2020 and FFY 2021 percentages include data from the CMS-generated report using Transformed Medicaid Statistical Information System (T-MSIS) data for states that selected the option for T-MSIS Analytic File (TAF) reporting.

As of FFY 2019, nine states had reached their OHI goal of 10 percentage points of improvement over their FFY 2011 baseline. The progress observed during the OHI is mainly attributed to the increased access to preventive services rather than treatment services. The OHI supported a variety of quality measurement and improvement activities to help states reach these goals, including supporting states’ development of State Oral Health Action Plans; offering technical assistance (TA) resources and learning collaboratives; developing beneficiary-focused outreach materials; reviewing and providing TA on section 1115 demonstrations, 1915(b) waivers, and State Plan Amendments (SPAs) related to dental and oral health services; and engaging with lower-performing states.<sup>8</sup>

**Definition of Dental and Oral Health Services**

- **Dental services** refer to oral health care services provided by or under the supervision of a dentist
- **Oral health services** refer to oral health care services by a provider who is not a dentist and not under the supervision of a dentist (e.g., independently-practicing dental hygienist, primary care medical provider)

Since the OHI was established more than a decade ago, the landscape for improving oral health care in Medicaid and CHIP has changed in several ways, including increases in Medicaid and CHIP enrollment among children and adults; state expansion of dental benefits for adults enrolled in Medicaid; growth in dental managed care delivery systems; and the establishment of the Dental Quality Alliance (DQA) at the request of CMS.<sup>9</sup> More broadly, there has been a



growing recognition of the importance of oral health to overall health and well-being for children, adults, and older adults.<sup>10</sup> Finally, the COVID-19 pandemic posed challenges to maintaining the gains made in access under the OHI.

Building on the progress over the past decade and continued opportunities for improvement, CMS seeks to identify priorities for the next phase of the OHI. CMS asked Mathematica to establish and convene the 2023 Medicaid and CHIP OHI Workgroup to obtain input from experts about strategic priorities for the next five years. The Workgroup included 23 members representing oral health experts from state Medicaid and CHIP agencies, state public health agencies, managed care plans, providers, professional associations, and advocacy organizations (see inside front cover of report). The Workgroup also included federal liaisons representing eight agencies. Including federal liaisons reflects CMS’s commitment to working in partnership with other federal agencies to ensure alignment across programs.

The Workgroup was charged with identifying strategic priorities for the next phase of the OHI (see text box). Between January and May 2023, Mathematica convened four virtual meetings of the Workgroup. Through meeting discussions and homework assignments, Mathematica engaged the Workgroup in an iterative and interactive process to gather input on strategic priorities for the next phase of the OHI.

In this report, we describe the framework the Workgroup used to set priorities to achieve the primary aim of improving oral health care access, quality, and outcomes and advancing health equity in Medicaid and CHIP. We also summarize Workgroup input on the focus areas, strategic priorities, strategies, and measures for monitoring progress for the next phase of the OHI. The Workgroup recommended that CMS focus attention on three interrelated areas:

1. **Increase emphasis on preventive, minimally invasive, and timely care** with four strategic priorities: (1) improve coordination and integration of care to increase utilization of recommended care; (2) improve oral health care for pregnant and postpartum people; (3) improve oral health care for adults with intellectual and developmental disabilities; and (4) reduce avoidable emergency department (ED) utilization for dental needs.

### **2023 Medicaid and CHIP Oral Health Initiative Workgroup Charge**

The charge of the 2023 Oral Health Initiative Workgroup is to provide input on strategic priorities for the next phase of the Medicaid and CHIP Oral Health Initiative.

The Workgroup is charged with identifying up to five strategic priorities that aim to improve oral health care access, quality, and outcomes and advance health equity in Medicaid and CHIP.

The Workgroup should consider strategic priorities that are tied to measurable goals, can be achieved within five years, and where CMS has a significant opportunity to influence improvement in oral health care for Medicaid and CHIP beneficiaries.

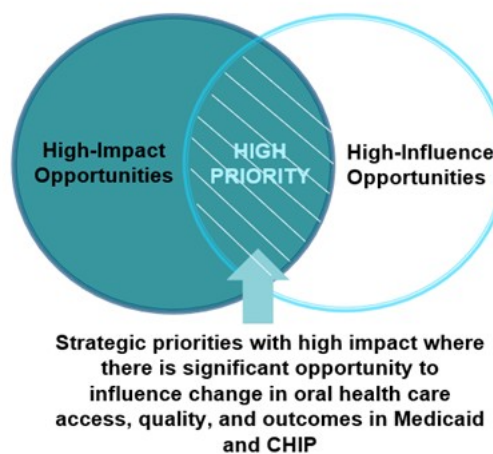
2. **Enhance managed care plan engagement and accountability** with three strategic priorities: (1) build capacity for using managed care quality (MCQ) tools; (2) identify and share best practices for care coordination in managed care settings; and (3) increase managed care accountability for providing high-value, high-quality care for all members.
3. **Enhance capacity for quality measurement and data analytics to track progress toward the primary aim**

The Workgroup recommendations summarized in this report are intended to support CMS in planning for the next phase of the OHI, including (1) developing new TA opportunities and resources to help states improve oral health outcomes for people enrolled in Medicaid and CHIP and (2) establishing an approach to measure performance, goals, and progress at the national and state levels and within subpopulations. CMS's engagement with the 2023 Medicaid and CHIP OHI Workgroup provides a strong foundation for collaborating on future improvement opportunities.

## Framework for Setting Priorities for the Next Phase of the Medicaid and CHIP Oral Health Initiative

To initiate the priority-setting process with the Workgroup, Mathematica invited Workgroup members to suggest up to three strategic priorities to improve oral health care access, quality, and outcomes and advance health equity in Medicaid and CHIP. Mathematica encouraged the Workgroup to consider the following guiding principles in suggesting strategic priorities:

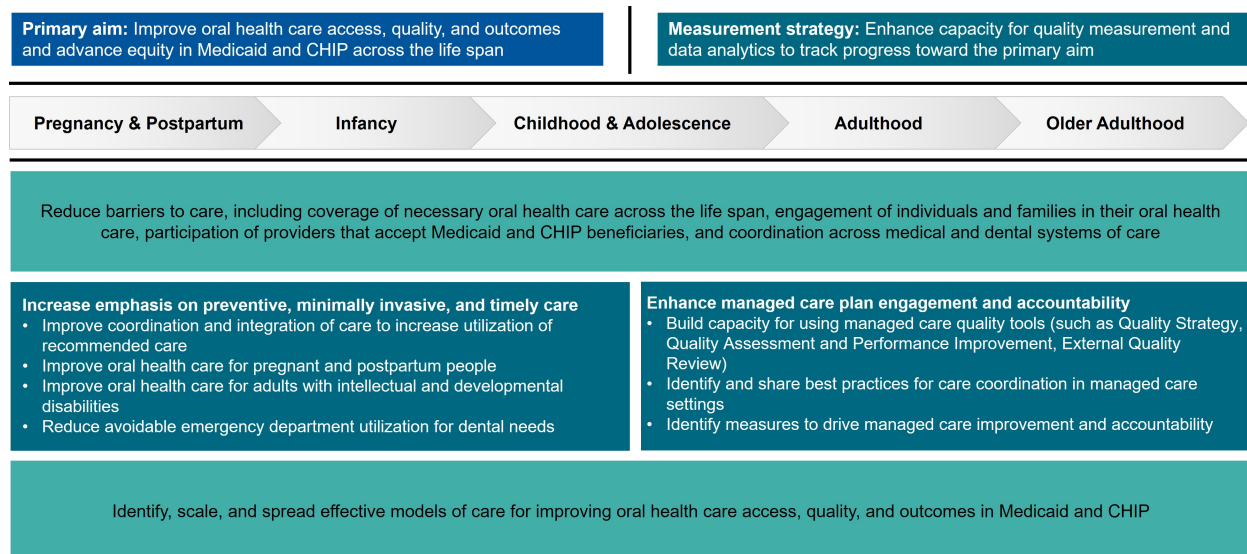
- **Inclusive Approach:** In the past, the OHI was focused on children and adolescents. Workgroup members were encouraged to consider a broader range of Medicaid and CHIP beneficiaries for the next phase of the OHI.
- **Impact and Influence:** The Workgroup was tasked with identifying strategic priorities that could have high impact and high influence. High impact indicates a significant opportunity to result in change, and high influence signifies opportunities in which CMS directly influences improvements in oral health care access, quality, and outcomes in Medicaid and CHIP.
- **Criteria for Potential Strategic Priorities:** The Workgroup also considered the following criteria to assess potential strategic priorities:
  - **Evidence-informed:** Does this strategic priority have evidence of effectiveness in improving oral health care access and quality in Medicaid and CHIP?
  - **Equity-focused:** Could this strategic priority help to reduce health disparities among Medicaid and CHIP beneficiaries?
  - **Actionable:** Could CMS and states use this strategic priority to drive improvements in oral health among Medicaid and CHIP beneficiaries?
  - **Feasible:** Will CMS and states be able to achieve measurable outcomes in this strategic priority over the next five years?
  - **Measurable:** Will CMS and states be able to measure progress toward this strategic priority?



Mathematica reviewed and synthesized the common themes from the strategic priorities suggested by the Workgroup and developed a framework to help set priorities for the next phase of the OHI (Exhibit 2). Mathematica used the framework to engage the Workgroup in an iterative and interactive process to gather additional input and confirmation on potential focus areas, strategic priorities, strategies, and measures to monitor progress for the next phase of the OHI. The framework shows the primary aim for the next phase of the OHI: improve oral health

care access, quality, and outcomes and advance equity in Medicaid and CHIP across the life span. In its work, the Workgroup showed commitment to addressing access, quality, and outcomes inclusive of all the life stages of Medicaid and CHIP beneficiaries. This is shown explicitly in the framework, both in the primary aim and immediately below it.

## Exhibit 2. Framework for setting priorities for the next phase of the Medicaid and CHIP Oral Health Initiative



Workgroup input through meeting discussions and assignments culminated in identifying the three interrelated focus areas for the next phase of the OHI. The first focus area is to **increase emphasis on preventive, minimally invasive, and timely care**. The second focus area is to **enhance managed care plan engagement and accountability**. The third focus area is to **enhance capacity for quality measurement and analytics to track progress toward the primary aim**. These focus areas are described in more detail below.

Workgroup members also suggested potential strategic priorities related to reducing barriers to care, such as providing coverage of necessary oral health care across the lifespan, engaging individuals and families in their oral health care, increasing provider participation in Medicaid and CHIP, and enhancing coordination across medical and dental systems of care. The Workgroup also emphasized a need to identify, scale, and spread effective models for improving oral health care access, quality, and outcomes in Medicaid and CHIP. Although the Workgroup recognized these strategic priorities as integral to achieving the primary aim, they require broader action outside the focus of the next phase of the OHI.<sup>11</sup>

We turn now to a summary of Workgroup input on the three focus areas, potential strategies to achieve the desired outcomes, and potential measures to track progress.

# Workgroup Recommendations for the Next Phase of the Medicaid and CHIP Oral Health Initiative

## Focus Area #1: Increase Emphasis on Preventive, Minimally Invasive, and Timely Care

Good oral health can be achieved through preventive care, home oral care practices, and early detection, treatment, and management of disease. In the United States, people are more likely to have poor oral health if they are of low income and/or members of racial and ethnic minority groups.<sup>12</sup> About 33 percent of Mexican American and 28 percent of non-Hispanic Black children ages two to five years old have had tooth decay in their primary teeth, compared to 18 percent of non-Hispanic White children.<sup>13</sup> Children and adolescents from low-income families, including those covered by Medicaid and CHIP, are about twice as likely to have untreated tooth decay compared to their higher-income peers.<sup>14</sup>

Adults also experience disparities in oral health. During 2011–2016, 45 percent of low-income adults ages 20 to 64 years had untreated tooth decay, and 6 percent had lost all of their teeth. Non-Hispanic Black and Mexican American adults were almost twice as likely to have untreated tooth decay as non-Hispanic White adults.<sup>15</sup> Oral health–related illnesses can be detrimental to a person’s overall health and quality of life. Chronic conditions, such as heart disease and diabetes, have been linked to oral health conditions such as periodontitis (gum disease).<sup>16</sup>

The Workgroup strongly supported a focus on ensuring access to timely and high-quality preventive and minimally invasive care. They noted that minimally invasive dentistry is increasingly recognized as an effective approach to caries management. Minimally invasive dentistry focuses on the early prevention of caries and timely interception of disease; the practice centers around preserving as much of the original, healthy tooth structure as possible.<sup>17, 18</sup> A 2016 study found that 77 percent of dentists surveyed believed minimally invasive dentistry met the standard of care for permanent teeth.<sup>19</sup> However, for a provider to use minimally invasive care techniques, a patient must be seen before extensive disease has developed. As the major health insurance program for low-income individuals in the United States, Medicaid and CHIP play an important role in ensuring access to preventive, minimally invasive, and timely oral health care. Medicaid and CHIP will also continue to provide access to treatment for individuals with existing oral disease that cannot be resolved through preventive or minimally invasive care.

### Examples of Preventive and Minimally Invasive Oral Health Care

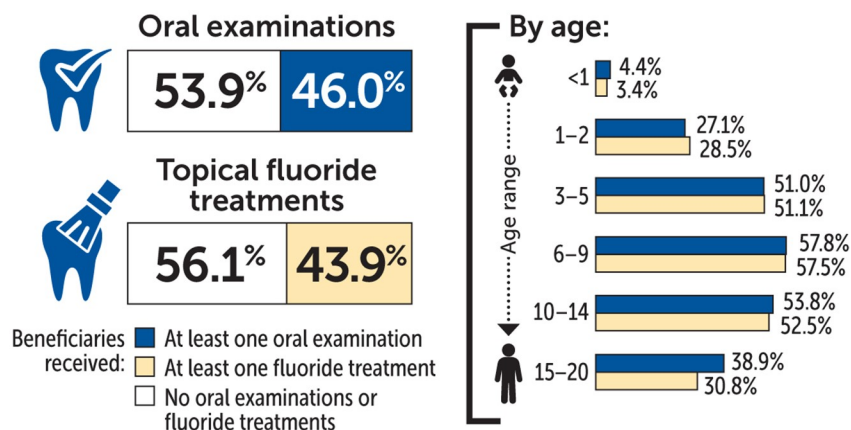
- Oral evaluation
- Fluoride varnish
- Dental sealants
- Silver diamine fluoride
- Home oral care

We turn now to the four strategic priorities identified by the Workgroup in this area.

### Strategic priority 1.1: Improve coordination and integration of care to increase utilization of recommended care

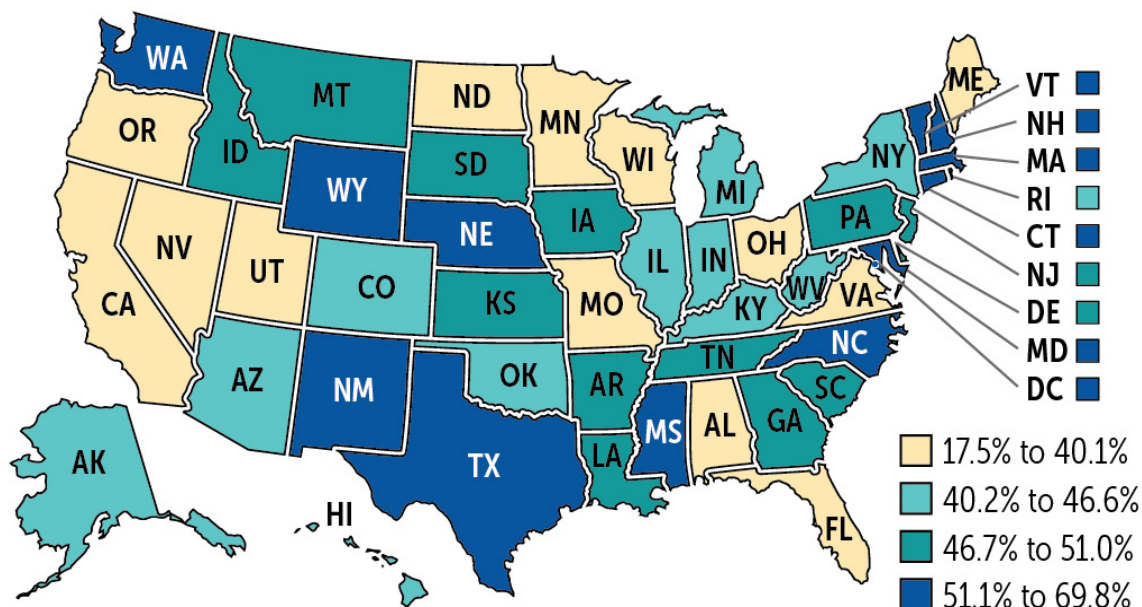
Preventive dental care is essential to maintaining good oral health throughout a person’s life span. However, many preventive dental services, despite being evidence-based, remain underutilized. For example, topical fluoride varnish is recommended for all infants and children from tooth eruption through age 5 years, at least once every six months, or once every three months for high-risk children.<sup>20</sup> As shown in Exhibit 3, 44 percent of Medicaid and CHIP beneficiaries under age 21 received at least one topical fluoride treatment in 2018. The rates for children ages 1 to 2 (29 percent) and ages 3 to 5 (51 percent) show there is substantial room for improvement.<sup>21</sup>

**Exhibit 3. Percentage of Medicaid children and adolescents under age 21 who received oral examinations or topical fluoride treatments, 2018**



Children should also have their first oral evaluation at the eruption of the first tooth but no later than 12 months; subsequent visits should occur every six months or more frequently, as indicated by the child’s risk for oral disease.<sup>22</sup> As shown in Exhibit 3, 46 percent of Medicaid and CHIP beneficiaries under age 21 received an oral examination in 2018; the rate was substantially lower (27 percent) for Medicaid and CHIP beneficiaries ages 1 to 2. The rate of oral examinations varied widely across states, as shown in Exhibit 4.

**Exhibit 4. Geographic variation in the percentage of Medicaid children and adolescents under age 21 who received oral examinations, 2018**



Source: Mathematica analysis of TAF 2018 Version 4 data.

Access to and use of recommended dental care among low-income adults is dependent on several factors, including the extent of Medicaid coverage of dental benefits, out-of-pocket costs, availability of dental providers, and beneficiary awareness of the importance of regular oral health care. Adults with commercial dental coverage are more than twice as likely to have seen a dental provider within the last year compared with adults enrolled in Medicaid or uninsured adults.<sup>23</sup> Out-of-pocket cost is cited as a major barrier to low-income adults' access to dental care. As of October 2022, 39 states and the District of Columbia offer limited or extensive dental benefits for adults enrolled in Medicaid.<sup>24</sup>

Evidence increasingly suggests an association between poor oral health and medical conditions. For example, periodontitis, a chronic inflammatory disease that affects the integrity of the tissues supporting the teeth, is associated with several chronic disorders, such as cardiovascular disease, Type 2 diabetes mellitus, rheumatoid arthritis, inflammatory bowel disease, Alzheimer's disease, nonalcoholic fatty liver disease, and certain cancers.<sup>25</sup> In children, poor oral health can adversely impact healthy growth and development, cause difficulty with eating and sleeping, and negatively impact school attendance and performance.<sup>26</sup> In addition, Medicaid beneficiaries are more likely to have a medical visit than a dental visit each year. In 2019, about 29 percent of publicly insured individuals had both a medical and a dental visit, while 46 percent had a medical-only visit and 6 percent had a dental-only visit.<sup>27</sup> Young children under age 5 are more likely to see a primary care provider (PCP) than a dental provider, giving PCPs an important opportunity to support preventive oral health practices and connect beneficiaries to ongoing dental care.<sup>28</sup>

The Workgroup highlighted the importance of integrated and coordinated care to increase use of recommended dental services. Workgroup members defined integrated and coordinated care as increased collaboration among dental providers, health care providers, case managers, and beneficiaries, to encourage the development of comprehensive care plans that address both oral health and overall physical health. Because young children under age five are more likely to see a PCP than a dental provider, PCPs can play an important role in expanding the use of evidence-based care through providing oral health education, oral screenings, fluoride varnish applications, and referrals to dental care.<sup>29</sup> PCPs can use a caries risk assessment tool to identify risk factors that cause tooth decay and provide anticipatory guidance, for example, on home oral health practices, fluoride treatments, and the importance of establishing regular care with a dental provider. Dental providers also play an important role in ensuring adequate access to recommended dental health services by accepting referrals from PCPs and establishing a regular source of dental care for beneficiaries. In addition, the Workgroup identified school-based and other community-based care settings as opportunities to increase the use of recommended dental services.

Workgroup members also discussed opportunities to integrate oral health into chronic disease management. For example, medical providers treating beneficiaries with diabetes can ask questions about oral health during each visit and offer a referral to a dentist.<sup>30</sup> In addition, the Workgroup discussed integrating other screenings (such as blood pressure, blood glucose levels, and depression) into oral health visits to promote bidirectional communication and collaboration between medical and dental providers, and address physical health conditions that can have an impact on oral health. Coordination with chronic disease self-management programs that educate beneficiaries on at-home care management was suggested as a method to improve and integrate oral health and overall health.<sup>31</sup> The Workgroup also suggested using existing pathways, such as home and community-based services (HCBS) benefits and 1115 demonstrations, as additional opportunities to address oral health in a way that is tailored to the needs of subgroups of beneficiaries (such as pregnant people or adults with intellectual and developmental disabilities [I/DD]). For example, these pathways can support care coordination between medical and dental providers and oral health education efforts. The Workgroup also recognized the need to identify and share best practice models for integration and coordination of care.

## **Strategic priority 1.2: Improve oral health care for pregnant and postpartum people**

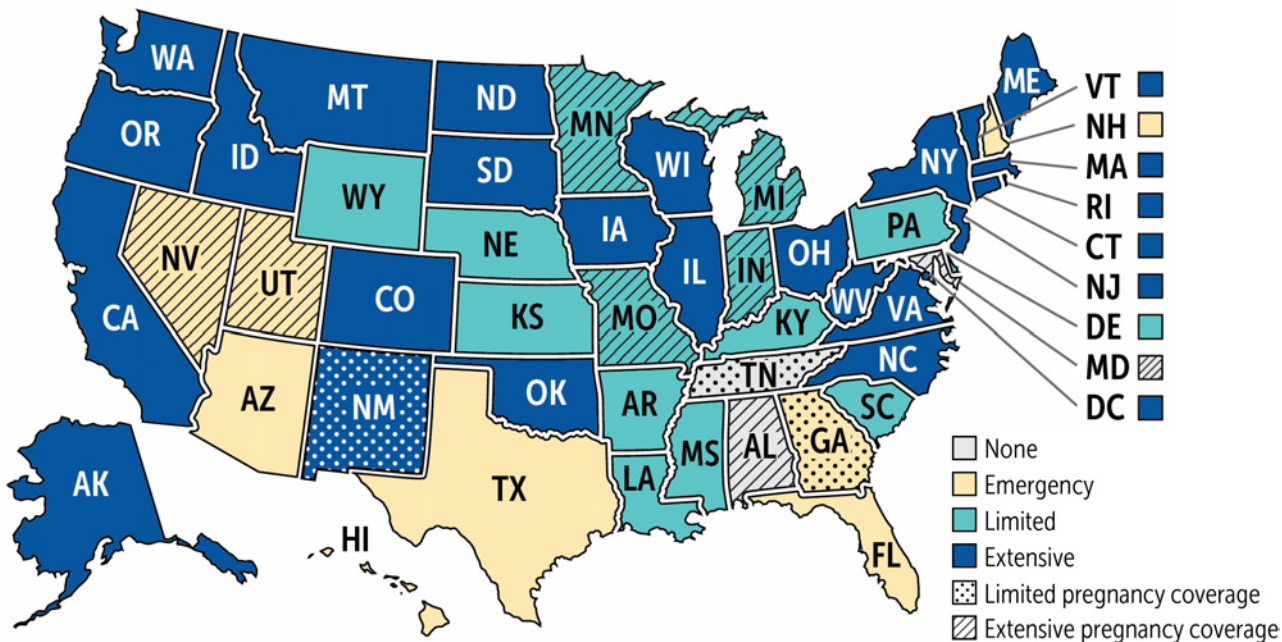
Medicaid and CHIP play an important role in ensuring access to care for pregnant and postpartum people, improving the quality of maternal health care, and addressing disparities in health outcomes. In 2021, Medicaid covered 41 percent of all births in the United States.<sup>32</sup> Pregnant people are at an increased risk of poor oral health outcomes such as tooth decay and gingivitis because of physiological changes.<sup>33, 34</sup> Other oral health conditions, such as periodontal disease, are associated with preterm birth, low birth weight, and preeclampsia.<sup>35</sup> In 2021, nearly 9 percent of infants were born with low birthweight, and 10 percent of infants were born preterm.<sup>36</sup> Poor oral health during pregnancy and the postpartum period are associated with



poor health outcomes for both the mother and baby. For example, children of mothers who have high levels of untreated tooth decay or tooth loss are more than three times as likely to experience tooth decay during childhood.<sup>37</sup> Despite the recommendations that pregnant people receive dental care, fewer than 50 percent do; even lower rates occur among pregnant Medicaid beneficiaries.<sup>38, 39</sup> Low utilization rates may be attributed to a limited understanding by providers and beneficiaries of the importance and safety of dental care during pregnancy, hesitancy of dental providers to treat pregnant people, and lack of partnerships between obstetric and dental providers.<sup>40, 41</sup>

Although adult dental benefits are optional in Medicaid, as of October 2022, all states and the District of Columbia offer at least some level of dental coverage for pregnant and postpartum Medicaid beneficiaries for at least 60 days after pregnancy.<sup>42</sup> Exhibit 5 shows Medicaid coverage of dental services for adults, including pregnant people, in each state. Evidence suggests that the level of dental coverage for pregnant and postpartum people has an impact on use of dental services. An analysis of Pregnancy Risk Assessment Monitoring System (PRAMS) data from 2014 and 2015 showed that pregnant people in states with no Medicaid dental coverage were less likely to receive a dental cleaning during pregnancy (27 percent) compared with pregnant people in states with either limited dental coverage (37 percent) or extensive dental coverage (45 percent).<sup>43</sup>

**Exhibit 5. State Medicaid coverage of adult dental services for general adult and pregnant populations, 2022**



Source: State Medicaid Coverage of Dental Services for General Adult and Pregnant Populations, National Academy for State Health Policy, updated on October 20, 2022.

Note: Since the publication of this map in October 2022, two states began offering extensive coverage of dental services for general adult populations: NH and TN.<sup>44, 45</sup>

The Workgroup emphasized that a focus on pregnant and postpartum people has the potential to significantly improve the well-being of both pregnant beneficiaries and their children. The Workgroup discussed potential strategies to improve oral health care for this population. For example, the Workgroup noted that states can leverage the option to extend Medicaid postpartum coverage, which can include dental benefits, for up to 12 months via a SPA or an 1115 demonstration.<sup>46, 47</sup> CMS and states can also monitor progress using the DQA quality measure, Oral Evaluation During Pregnancy.<sup>48</sup> Additionally, the Workgroup discussed the importance of identifying and sharing best practices for improving oral health care among pregnant and postpartum people. Some examples of best practices include educating medical and dental providers and pregnant people about the importance and safety of dental care during pregnancy, promoting dental referrals, and developing partnerships between obstetric and dental providers.

### **Strategic priority 1.3: Improve oral health care for adults with intellectual and developmental disabilities**

There are nearly 7.3 million individuals with I/DD in the United States, and 60 percent of them rely on Medicaid for health care coverage.<sup>49</sup> Most adults with I/DD enrolled in Medicaid are served by state agencies through Medicaid 1915(c) HCBS waivers. Their health-related needs are often complex and require specially trained providers to render appropriate services. Adults with I/DD are less likely to receive timely care, are more likely to experience comorbidities, and experience higher rates of oral health–related disease than the general population.<sup>50</sup> Individuals with I/DD face unique barriers to care, such as difficulty finding a dentist who accepts Medicaid and has experience treating adults with I/DD, along with other accessibility issues.<sup>51</sup> In addition, when individuals with I/DD age out of child benefits under Medicaid, they are no longer eligible for Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefits. Upon transitioning into adult eligibility categories, adults with I/DD often face more stringent eligibility rules and have more limited benefits than what was available to them through EPSDT benefits.<sup>52</sup>

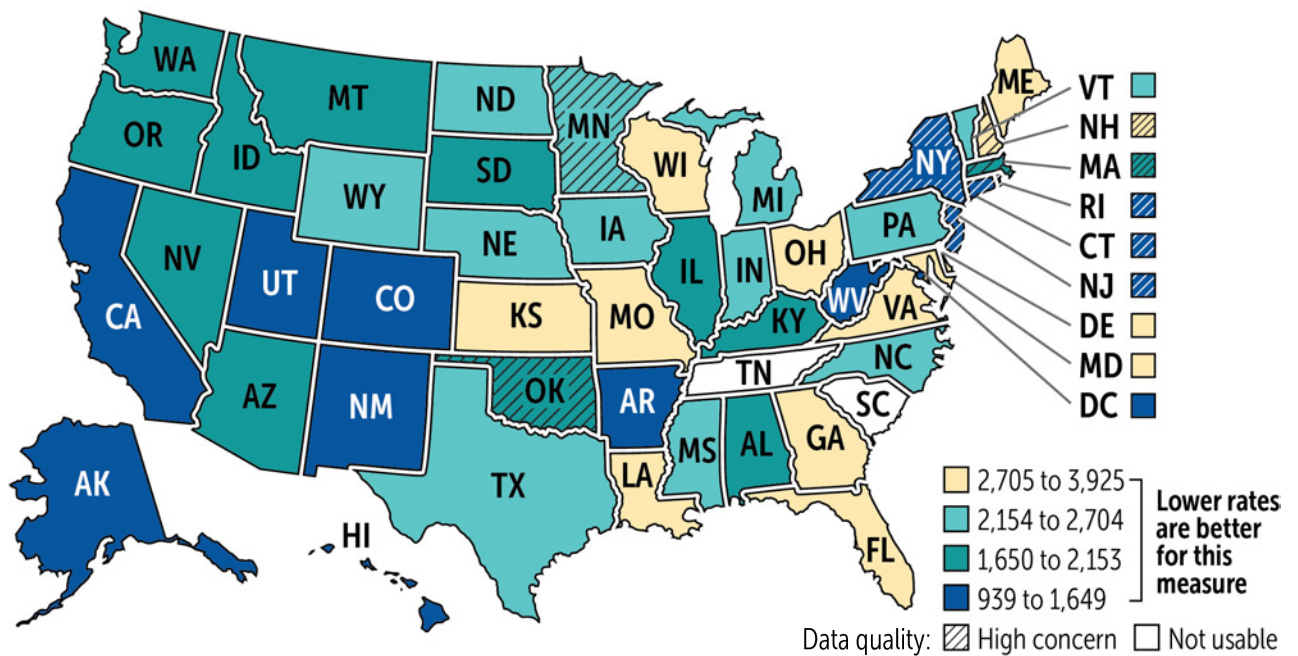
The Workgroup identified improving oral health care for adults with I/DD as a priority, given long-standing disparities in access to oral health care, oral health outcomes, and the potential to improve the management of other chronic health conditions (for example, diabetes or coronary disease). The Workgroup discussed opportunities to leverage existing authorities to improve oral health care for adults with I/DD. For example, states can enhance dental services for adults with I/DD using existing or new SPAs (such as Medicaid health home SPAs and 1915(i) SPAs) and 1915(c) waivers.<sup>53</sup> However, the Workgroup noted that without a consistent definition of I/DD at the federal and state levels, populations served by pathways such as 1915(c) waivers vary by state. The Workgroup suggested that states should use available data and evaluations to prioritize the types of dental services to include for adults with I/DD. Other pathways, such as 1115 demonstrations and HCBS, offer additional opportunities to incorporate oral health system navigation and supports. For example, states can include supports for coordinating care between medical and dental providers and enabling services to address the special needs of adults with

I/DD. The Workgroup also discussed the importance of identifying and sharing best practices for improving oral health care for adults with I/DD.

### Strategic priority 1.4: Reduce avoidable emergency department utilization for dental needs

Non-traumatic dental conditions (NTDCs) are oral health–related conditions most appropriately treated in an outpatient dental office setting. Examples of NTDCs include tooth decay, intraoral abscesses, gingivitis, and periodontitis. NTDC ED visits represent an ongoing public health concern in the United States, accounting for approximately two million visits by adults and \$2.7 billion in costs in 2017.<sup>54</sup> Avoidable ED visits are costly for both Medicaid programs and beneficiaries. One study found that Medicaid beneficiaries who accessed preventive oral health care experienced 43 percent lower costs than those who did not.<sup>55</sup> Medicaid programs are the primary payer for these visits.<sup>56, 57</sup> NTDC ED visits are disproportionately experienced by Medicaid beneficiaries compared to privately insured individuals, and there are significant racial disparities. The rate of NTDC ED visits varies widely across states, as shown in Exhibit 6.

**Exhibit 6. Emergency department visits for non-traumatic dental conditions per 100,000 adult Medicaid beneficiaries, 2019**



Source: CMS analysis of TAF 2019 Version 5 data.

Care for NTDCs provided in the ED is not definitive and requires follow-up with a dental provider. Since treatment in the ED is focused on alleviating pain rather than treating underlying oral disease, these visits are associated with high rates of opioid prescribing.<sup>58</sup> Medicaid beneficiaries without a preventive dental visit are eight times more likely to have an NTDC ED visit and six times more likely to receive an opioid prescription as a result.<sup>59</sup> Efforts aimed at

reducing NTDC ED visits can support efforts to decrease opioid use among Medicaid beneficiaries.<sup>60</sup> In addition, education of ED providers on proper triage, treatment of dental pain, and referral to dental providers can support efforts to decrease opioid prescriptions and connect beneficiaries to an ongoing source of dental care.<sup>61</sup>

The Workgroup highlighted the opportunity to address a significant public health concern by focusing on decreasing NTDC ED visits among Medicaid beneficiaries, especially given an increasing number of state Medicaid programs offering limited or extensive dental benefits for adults. NTDC ED visits signify untreated disease and worsen health disparities. These visits are largely preventable through primary prevention, early detection of disease, and disease management in dental settings. The Workgroup suggested implementing DQA’s Ambulatory Care Sensitive Emergency Department Visits for Non-Traumatic Dental Conditions in Adults measure.<sup>62</sup> This measure can be used to assess performance and track progress over time and can help to determine whether quality improvement (QI) strategies, such as ED referral strategies, are having an impact on reducing NTDC ED visits. The Workgroup also discussed the importance of identifying and sharing best practices for promoting better access to definitive oral health care and reducing NTDC ED visits.

In Exhibit 7, we summarize the potential strategies to increase the emphasis on preventive, minimally invasive, and timely care, organized by the four strategic priorities described above.

**Exhibit 7. Potential strategies to increase emphasis on preventive, minimally invasive, and timely care**

Strategic priority	Potential strategies
Improve coordination and integration of care to increase utilization of recommended care	<ul style="list-style-type: none"> <li>• Expand the use of existing evidence-based strategies that are underutilized in dental and primary care settings (e.g., dental sealants, FV, SDF)</li> <li>• Identify best practice models for coordination and integration of care, including care management services</li> <li>• Expand the use of chronic disease management for oral diseases and caries risk assessment</li> <li>• Incorporate oral health navigation and supports within existing authorities (e.g., HCBS, 1115 demonstrations)</li> </ul>
Improve oral health care for pregnant and postpartum people	<ul style="list-style-type: none"> <li>• Identify best practices for improving oral health care outreach, referral, and follow-up during pregnancy</li> <li>• Leverage existing authorities to enhance services for pregnant and postpartum people (e.g., pregnancy-related State Plan coverage, waivers)</li> <li>• Monitor the use of oral health services during pregnancy (for example, using the DQA measure of Oral Evaluation During Pregnancy)</li> </ul>

Strategic priority	Potential strategies
Improve oral health care for adults with I/DD	<ul style="list-style-type: none"> <li>• Identify best practices for providing oral health care to adults with I/DD</li> <li>• Leverage existing authorities to enhance services for adults with I/DD (e.g., extended State Plan services through 1915(c) HCBS waivers and 1915(i) state plan HCBS benefits)</li> <li>• Incorporate oral health navigation and supports within existing authorities</li> </ul>
Reduce avoidable ED utilization for dental needs	<ul style="list-style-type: none"> <li>• Identify best practices for reducing rates of avoidable ED visits</li> <li>• Monitor the rate of avoidable ED utilization (for example, using the DQA measure of Ambulatory Care Sensitive Emergency Department Visits for Non-Traumatic Central Conditions in Adults)</li> </ul>

FV = Fluoride varnish; SDF = silver diamine fluoride.

## Focus Area #2: Enhance Managed Care Plan Engagement and Accountability

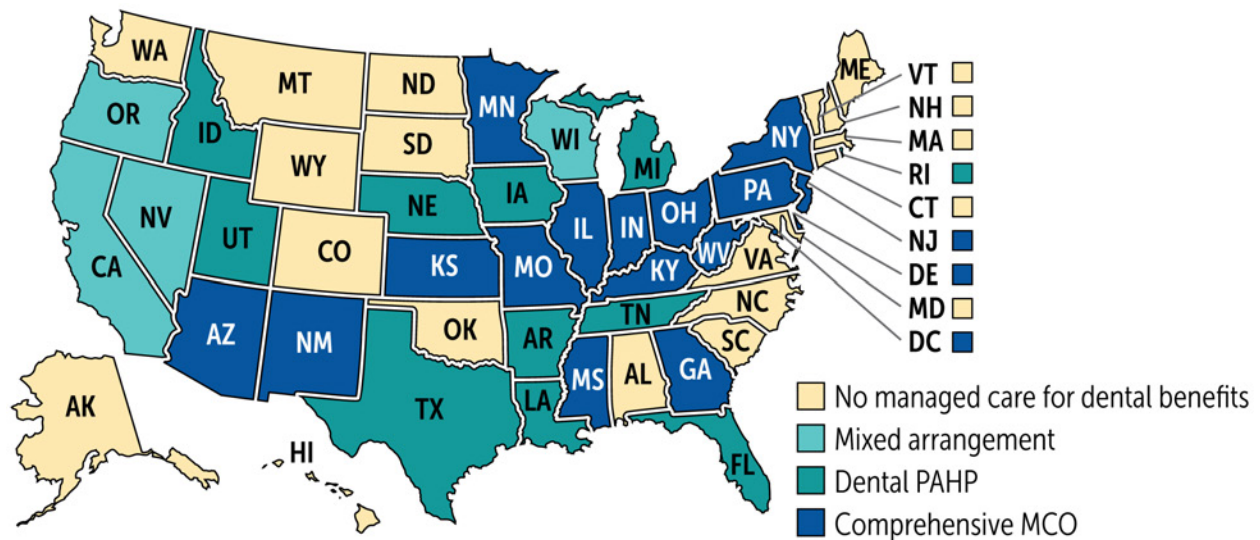
The main objectives of Medicaid and CHIP managed care include improving health and dental plan performance, quality, and outcomes for beneficiaries.<sup>63</sup> State Medicaid and CHIP programs can use contract provisions to hold managed care plans (MCPs) accountable for improving oral health care, for example, through performance measurement, performance improvement projects (PIPs), or value-based payment (VBP) initiatives. As of July 1, 2021, approximately 85 percent of all Medicaid and CHIP beneficiaries were enrolled in some form of managed care, although the rate of managed care enrollment in states using a managed care delivery system varies widely and not all managed care enrollees receive their dental benefits through managed care arrangements.<sup>64</sup> State Medicaid and CHIP programs use a variety of managed care arrangements for their dental delivery systems.

- **Carve-in.** Under a carve-in arrangement, a state contracts with one or more comprehensive MCPs that provide all acute and primary health services, including oral health services. Some plans may also cover behavioral health and/or long-term care. A comprehensive MCP may subcontract delivery and administration of dental services to a separate entity (such as a specialized dental MCP or other vendor).
- **Carve-out.** Under a carve-out arrangement, a state implements its dental delivery system arrangement separate from its medical MCPs. A state may contract with a vendor to deliver or administer dental benefits or may oversee them directly.
  - **Prepaid ambulatory health plan (PAHP).** A state may opt to contract for dental benefits through a dental prepaid health plan, known as a PAHP. Most PAHPs are paid on a capitated basis. PAHPs are subject to the same managed care oversight requirements as comprehensive MCPs.<sup>65</sup>

- **Administrative services only (ASO)/third-party administrator (TPA).** A state may contract with an ASO/TPA vendor to outsource certain administrative functions related to administration of its dental benefits. The state retains risk and may also maintain some administrative responsibilities. The division of administrative responsibilities between the state and ASO/TPA varies based on the specifics of the contract.
- **Fee-for-service (FFS).** A state may opt to administer dental benefits through FFS. The state establishes the fee levels for covered services and pays participating providers directly for each service delivered to beneficiaries.

As shown in Exhibit 8, the Medicaid and CHIP dental delivery system arrangements vary by state. The arrangements may also vary by population (such as children and adults), and by program (Medicaid and CHIP). Thus, the approaches used to enhance managed care plan engagement and accountability will need to be tailored to the arrangement in each state. We turn now to the three strategic priorities the Workgroup identified in this area.

**Exhibit 8. Medicaid and CHIP managed care arrangements for dental benefits, 2021**



Source: CMS analysis of state websites, 2020-2021 Annual External Quality Review Reports, and State Quality Strategy documents. The sources for this information are up to date as of calendar year 2021.

Notes: Managed care arrangements for dental benefits may have changed since this map was produced and may vary by population (such as children and adults), program (Medicaid and CHIP), and geography (see state-specific comments). Categories include no managed care for dental benefits, mixed arrangement (see state-specific comments), dental PAHP, and comprehensive MCO.

FFS = fee for service; MCO = managed care organization; PAHP = prepaid ambulatory health plan.

State-specific comments:

CA has a dental PAHP in Los Angeles and Sacramento counties only; the rest of the state is FFS.

NV has a dental PAHP in Washoe and Clark counties only; the rest of the state is FFS.

OR offers dental benefits through a mix of comprehensive coordinated care organization contracts and stand-alone dental care organization contracts.

WI offers dental benefits through comprehensive MCO contracts in Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha counties only; the rest of the state is FFS.

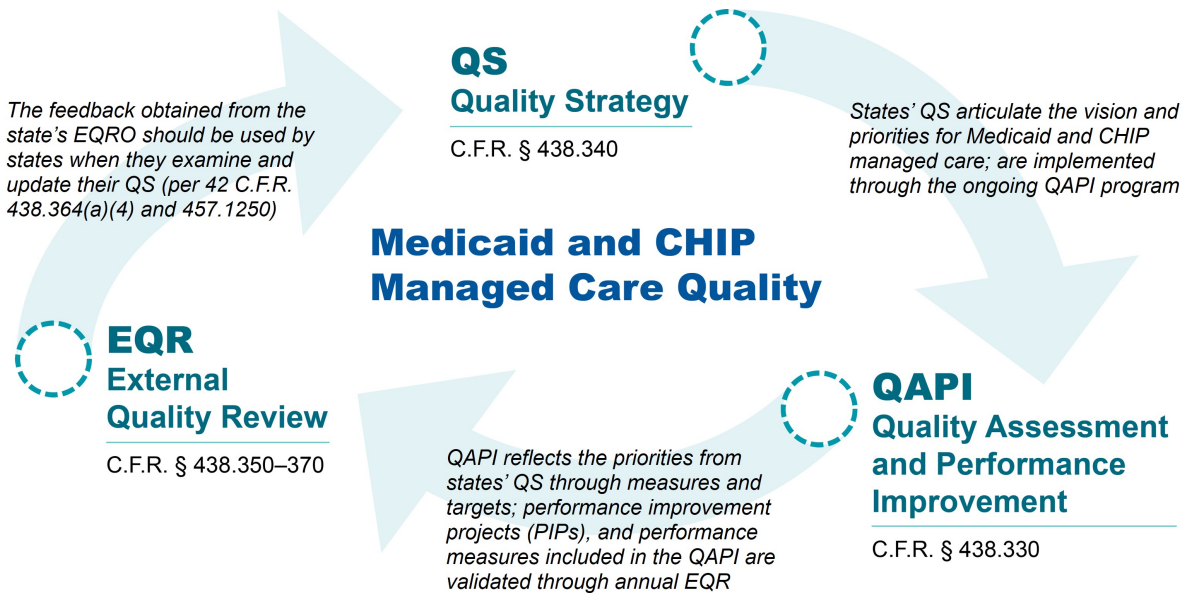
## **Strategic priority 2.1: Build capacity for using managed care quality (MCQ) tools**

Medicaid and CHIP MCPs are subject to an interrelated set of quality requirements and associated tools, shown in Exhibit 9 (next page). States use the Medicaid and CHIP MCQ tools to drive improvement, provide accountability, and monitor performance. Each of these MCQ tools inform and reinforce the others:

- **Quality Strategy (QS).** The state's QS lays out the vision and priorities for Medicaid and CHIP managed care. The QS is intended to serve as a guide for states and their contracted health and dental plans in assessing the quality of care that beneficiaries receive and for establishing measurable goals and targets for improvement.<sup>66</sup> The QS requirement applies to states administering dental benefits through both comprehensive MCOs and PAHPs.
- **Quality Assessment and Performance Improvement Program (QAPI).** A state's QS is implemented through the ongoing comprehensive QAPI program that contracted Medicaid and CHIP MCPs are required to establish for the services they provide to enrollees. QAPI programs include (1) the performance measures and targets the state will use to monitor MCP performance, (2) the PIPs the MCPs will conduct to improve health outcomes and enrollee satisfaction, and (3) mechanisms to detect underutilization and overutilization of services and to assess the quality and appropriateness of care for enrollees with special health care needs or who receive long-term services and supports. The performance measures and PIPs reflect the priorities, measures, and targets included in the QS. Beginning in 2016, QAPI requirements were extended to PAHPs, including dental PAHPs. This can enable increased oversight and use of QI tools with those plans.<sup>67</sup>
- **External Quality Review (EQR).** Annual EQR is the analysis and evaluation of aggregated information on quality, timeliness, and access to health care services provided by MCPs.<sup>68</sup> The annual EQR provides insights into MCP approaches to QI as well as MCP strengths and weaknesses. The EQR validates PIPs and performance measures included in QAPI programs and shares results in the EQR technical report that is developed by a qualified external quality review organization (EQRO).<sup>69</sup> The EQR technical report includes recommendations for how the state and its MCPs can continue to drive QI. These recommendations are incorporated into the QS and implemented by MCPs. In addition, EQR now includes the validation of network adequacy indicators, including for pediatric dental providers. Through this requirement, states must ensure that MCPs maintain provider networks that are sufficient to provide timely and accessible care to Medicaid and CHIP beneficiaries across the continuum of services.
- **State Directed Payments (SDPs).** SDP arrangements allow states to direct Medicaid managed care organizations (MCOs) and PAHPs to reimburse providers according to specific rates and/or coordinate their VBP arrangements and other delivery system reform initiatives.<sup>70</sup> Most often, SDPs are used to establish minimum payment rates for certain

provider types. The small number of dental-focused SDPs have established such minimum payment rates, or provided uniform fee schedule increases for certain providers (e.g., dental schools) or dental provider types.<sup>71</sup> To receive CMS approval for their SDPs, states must demonstrate how the payment arrangement will further at least one of the goals and objectives of their QS.

### Exhibit 9. Medicaid and CHIP managed care compliance and quality requirements



The Workgroup pointed to opportunities for using existing MCQ tools to improve the quality of oral health care delivered to Medicaid and CHIP beneficiaries. Many managed care states already use these tools to focus on oral health services. For example, from 2018 to 2021, six states used the PDENT measure as the basis for a QS goal or objective and 12 states included PDENT as a QS metric, or a metric the state will use to monitor MCP performance.<sup>72</sup>

During the 2021–2022 EQR reporting cycle, 17 states reported on PIPs related to oral health.<sup>73</sup> When validating these PIPs, EQROs assessed the PIP methodology by reviewing the PIP design and implementation, confirmed the accuracy of the MCPs' results, assessed whether the PIP interventions were achieving improvements, and provided recommendations for improving the PIP design.

States can also require their EQROs to validate oral health–related metrics as part of their annual EQR. During the 2021–2022 EQR reporting cycle, 21 states reported on oral health performance measures included in their MCP QAPI programs. When reporting these measures, EQROs can assess MCP performance over time and compare it with other plans, state benchmarks (such as QS goal and objective targets), and national benchmarks (such as Healthcare Effectiveness Data and Information Set [HEDIS] Medicaid rates). These comparisons allow states to identify strong performance and opportunities for improvement.



Finally, under Medicaid and CHIP managed care requirements, states must ensure that MCPs maintain provider networks that are sufficient to provide timely and accessible care to Medicaid and CHIP beneficiaries across a continuum of services. The validation of MCP network adequacy indicators, including those for pediatric dental providers, is a mandatory EQR activity.<sup>74</sup> In February 2023, CMS released updates to the EQR protocols, including a protocol for network adequacy validation.<sup>75</sup> The Workgroup emphasized the importance of identifying and sharing best practices for developing network adequacy indicators, standards, and measures for dental and oral health care providers.

### **Network Adequacy Standards**

State-defined network adequacy standards must be included in the state's QS. States can work with MCPs to improve network adequacy and beneficiary access to care, according to their state QS goals and objectives and QAPI programs.

## **Strategic priority 2.2: Identify and share best practices for care coordination in managed care settings**

As discussed earlier, coordination of care is essential to increasing access to preventive, minimally invasive, and timely care and improving oral health outcomes. Medical providers and MCPs can play an important role in promoting oral health and connecting people to dental and oral health care. However, evidence suggests that PCPs may be missing opportunities or facing other barriers to offering oral health education, caries risk screening, and preventive oral health services.<sup>76</sup> The Workgroup discussed that it would be beneficial for managed care contracts to include requirements for MCPs to promote preventive oral health practices.

The Workgroup also emphasized the importance of greater coordination between medical and dental managed care contractors to promote improved oral health, more effectively manage chronic conditions, improve referrals for dental care, and establish dental homes.<sup>77</sup> States can incorporate contract language that requires its medical and dental plans to establish referral pathways and assume responsibility for members seeking dental care in the ED.<sup>78</sup> For example, state Medicaid programs can require MCOs to have a liaison for their prepaid dental health plan to help integrate medical care, behavioral health, and long-term benefits with the dental plan.<sup>79</sup>

## **Strategic priority 2.3: Identify measures to drive managed care improvement and accountability**

Medicaid and CHIP managed care arrangements can help states increase budget predictability while enhancing efficiency and outcomes for beneficiaries. To ensure delivery of high-quality care, states are increasingly focused on getting more value from their plans and explicitly building state priorities into contractual requirements. The Medicaid managed care contracting process offers an opportunity to establish parameters for performance measurement and QI related to oral health. The Workgroup suggested that states consider incorporating dental

performance measures and associated targets into their managed care contracts. These could include:

- The dental and oral health services measures in the Child Core Set<sup>80</sup>
- Oral health–related measures for monitoring oral health care access, quality, and outcomes gleaned from EQR technical reports
- Additional measures such as those identified in Focus Area #3, below

Contract language can also be employed to guide quality measurement and oversight of progress toward measurable goals. States could benefit from support in identifying and sharing best practices related to setting key performance indicators (KPIs). For example, states could choose to set a KPI for MCPs related to reductions in ED use for NTDCs.

In Exhibit 10, we summarize potential strategies to enhance MCP engagement and accountability, organized by the three strategic priorities described above.

**Exhibit 10. Potential strategies to enhance managed care plan engagement and accountability**

Strategic priority	Potential strategies
Build capacity for using MCQ tools	<ul style="list-style-type: none"> <li>• Increase state focus on oral health care delivery and outcomes in states’ managed care QS</li> <li>• Encourage use of EQR to monitor dental quality measures and foster accountability</li> <li>• Promote use of dental PIPs to improve oral health care delivery and outcomes</li> <li>• Identify best practices for developing network adequacy indicators, standards, and measures for dental and oral health care providers</li> </ul>
Identify and share best practices for care coordination in managed care settings	<ul style="list-style-type: none"> <li>• Identify best practices for medical plans promoting preventive oral health practices</li> <li>• Develop model contract language for coordination between medical and dental plans/providers</li> </ul>
Identify measures to drive managed care improvement and accountability	<ul style="list-style-type: none"> <li>• Incorporate dental performance measures and targets into managed care contracts</li> <li>• Identify oral health–related quality measures from EQR technical reports</li> <li>• Develop model contract language related to quality measurement and oversight of progress toward measurable goals</li> <li>• Share best practices on setting KPIs</li> </ul>

## **Focus Area #3: Enhance the Capacity for Quality Measurement and Data Analytics to Track Progress Toward the Primary Aim**

The Workgroup emphasized that a cross-cutting measurement strategy will be essential for tracking progress toward the primary aim, identifying disparities, and focusing on opportunities for improvement. Workgroup input centered on potential measures and measure concepts as well as analytical, methodological, and TA considerations. CMS can use this input to select key measures for the next phase of the OHI.

### **Potential measures and measure concepts**

The Workgroup noted that, over the past five years, many new quality measures have been developed, tested, and in some cases implemented to measure access to and quality of oral health care in Medicaid and CHIP. Led by the Dental Quality Alliance, these efforts have produced validated measures that cover the continuum of populations across the life span, address the oral health needs of specific populations (such as pregnant people and people with diabetes), and are appropriate for calculation at multiple levels (such as national, state, and plan levels).<sup>81</sup> In addition, Workgroup members identified measure concepts that could contribute to measuring and improving oral health care performance in Medicaid and CHIP. Exhibit 10 (next page) lists 22 measures and measure concepts suggested by the Workgroup for monitoring performance and progress during the next phase of the OHI, including the measure name, the National Quality Forum number (if endorsed), and the name of the measure steward (if applicable). Mathematica organized the potential measures and measure concepts into five domains:

1. Utilization of recommended care
2. Medical–dental integration
3. Network adequacy and access
4. Measures using patient-reported data
5. Outcomes

Exhibit 11 shows both standardized measures maintained by measure stewards and measure concepts that have not been formally specified for standardized implementation. The Workgroup acknowledged that the list includes measures at various stages of implementation readiness and suggested that CMS allow states to choose a subset of measures that align with their performance monitoring and QI priorities. This approach would enable states to include measures reflecting unique aspects of their program, population, and policy. It would also support the development, refinement, and testing of new measures as the next phase of the OHI evolves.<sup>82</sup>

Workgroup members emphasized the value of beneficiary-reported data to understand beneficiary experience with oral health care and quality of life. They suggested considering the

Consumer Assessment of Healthcare Providers and Systems (CAHPS) Dental Plan Survey to measure access to dental care, experiences with dentists and staff, dental plan costs and services, and ratings of the dental plan, patients’ regular dentist, ease of finding a dentist, and overall dental care.<sup>83</sup> They indicated this data would help assess the extent to which individuals are receiving care that is respectful of and responsive to their preferences, needs, and values. Workgroup members also noted that the 5-item Oral Health Impact Profile (OHIP-5) could be used as an indicator of oral health care outcomes. A review article noted that dental patient-reported outcome measures are important for evidence-based dentistry; the study concluded that the OHIP-5 has the lowest burden for the patient and allows for comparisons across diseases, settings, and populations.<sup>84</sup> Given current limitations with outcome measures, the Workgroup indicated that beneficiary-reported data could offer another approach for understanding outcomes.

**Exhibit 11. Potential measures and measure concepts for the next phase of the Medicaid and CHIP Oral Health Initiative, by domain**

Measure name	Measure steward
<b>Utilization of recommended care</b>	
<a href="#">Oral Evaluation, Dental Services</a> (OEV-CH) <sup>a</sup>	DQA
<a href="#">Topical Fluoride for Children</a> (TFL-CH) <sup>a</sup>	DQA
<a href="#">Sealant Receipt on Permanent First Molars</a> (SFM-CH) <sup>a</sup>	DQA
<a href="#">Caries Risk Documentation in Children</a>	DQA
<a href="#">Oral Evaluation During Pregnancy</a> <sup>b</sup>	DQA
<a href="#">Utilization of Services During Pregnancy</a>	DQA
<a href="#">Adults with Diabetes – Oral Evaluation</a>	DQA
<a href="#">Dental Exam in the Past Year for Adults with Intellectual and Development Disabilities</a> <sup>c</sup>	NASDDDS/HSRI
<b>Medical-dental integration</b>	
<a href="#">Follow-Up after Emergency Department Visits for Dental Caries in Children</a>	DQA
<a href="#">Follow-Up after Emergency Department Visits for Non-Traumatic Dental Conditions in Adults</a>	DQA
Utilization of CPT codes for preventive care (such as fluoride varnish, silver diamine fluoride, oral evaluation, oral health education)	NA
<b>Network adequacy and access</b>	
<a href="#">Ambulatory Care Sensitive Emergency Department Visits for Dental Caries in Children</a>	DQA
<a href="#">Ambulatory Care Sensitive Emergency Department Visits for Non-Traumatic Dental Conditions in Adults</a> <sup>b</sup>	DQA
Wait times and ease of getting an appointment	NA
Provider to patient ratios for general and specialty dentists (including telehealth)	NA

Measure name	Measure steward
<b>Measures using beneficiary-reported data</b>	
<a href="#">Consumer Assessment of Healthcare Providers and Systems (CAHPS) Dental Plan Survey</a>	AHRQ
5-item Oral Health Impact Profile (OHIP-5) <sup>d</sup>	NA
<b>Outcomes</b>	
Caries prevalence <sup>e</sup>	NA
Rate of untreated decay <sup>e</sup>	NA
Level of caries risk (low, medium, high) <sup>f</sup>	NA
Use of general anesthesia for dental cases	NA
Rate of beneficiaries receiving an opioid prescription after a dental visit	NA

<sup>a</sup> These measures are included in the 2023 Child Core Set, available at <https://www.medicaid.gov/medicaid/quality-of-care/downloads/2023-child-core-set.pdf>.

<sup>b</sup> These measures were recommended for addition to the 2025 Child and Adult Core Sets.

<sup>c</sup> This measure is collected through the National Core Indicators Survey<sup>®</sup>.

<sup>d</sup> More information about OHIP-5 is available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4841723/>.

<sup>e</sup> These measures require the use of diagnostic codes.

<sup>f</sup> The CDT codes for caries risk are D0601, D0602, and D0603.

AHRQ = Agency for Healthcare Research and Quality; CPT = Current Procedural Terminology; NA = not applicable (measure has not been formally specified by a measure steward); NASDDDS/HSRI = National Association of State Directors of Development Disabilities Services/Human Services Research Institute.

## Analytical considerations

Workgroup members noted several analytical considerations to support assessment of progress and to focus improvement efforts during the next phase of the OHI.

- Establishing benchmarks.** The Workgroup suggested that CMS consider performance benchmarks for potential measures. Examples could include peer benchmarks (such as median state performance), national or state performance targets (such as a goal of improving by “x” percentage points over baseline), or external comparisons (such as rates for Medicaid versus privately insured individuals).
- Trending.** The Workgroup noted the importance of monitoring trends in quality measures over time. Trending is particularly useful in monitoring whether interventions or policy changes result in improvements over time. Trending for the next phase of the OHI could be done on a national level and by examining year-over-year progress at the state level.
- Stratifying measures.** The Workgroup emphasized the importance of stratifying measures to help in identifying and understanding disparities and focusing QI initiatives and priorities. The Workgroup suggested stratifying by such demographic characteristics as age, race, ethnicity, language, and disability status. They also discussed developing performance targets focused on monitoring progress in reducing disparities. Calculation of some quality measures by provider type (such as use of dental versus other oral health providers) can also provide

important context on the status of medical–dental integration efforts. Workgroup members acknowledged that states cannot require demographic information as part of eligibility determinations, which often results in incomplete and missing data. In addition, dental plans may not have access to comprehensive demographic data on their members.

## **Methodological considerations**

The Workgroup noted several key methodological considerations that could affect the measurement strategy for the next phase of the OHI.

- **Data quality and data suppression.** The Workgroup noted that CMS and states should consider data quality issues, such as missing data and data inconsistencies, and data suppression for small sample sizes. These considerations are particularly important for measure stratification, which may be affected by missing data or small sample sizes. Data inconsistencies could affect comparability of results across states or over time. CMS and states should incorporate statistical considerations in reporting on potential quality measures, to support insightful and methodologically sound analyses.
- **Limited use of ICD-10 diagnostic codes in dentistry.** The coding system used for reporting diagnoses is the International Classification of Diseases, 10th Revision (ICD-10). Use of ICD-10 codes is supported by the American Dental Association, and ICD-10 codes are included in its Code on Dental Procedures and Nomenclature (CDT) book.<sup>85</sup> However, the use of ICD-10 codes in dental clinical practice remains limited. The Workgroup identified this limitation as a major challenge in measuring outcomes. It recognized the increased use of ICD-10 codes as essential to measuring and improving outcomes. The use of ICD-10 codes can also help identify existing disparities, such as differences in treatment planning for the same condition by race and/or ethnicity. Low uptake of ICD-10 codes also impedes analyses of the impact of dental care on the management of chronic diseases, such as diabetes. Some states are beginning to pilot the use of ICD-10 codes in dentistry, and lessons from those pilots could inform future work in this area.
- **Electronic health record (EHR) and health information exchange (HIE) interoperability.** The Workgroup identified dental EHR interoperability and the inclusion of dental data in HIEs as critical components of medical–dental integration. Linking medical and dental records in HIEs could improve dental patient safety, preventive care, and treatment outcomes. In addition, integrated billing and coding of medical and dental visits would enable reporting on integrated care measures.

## Technical assistance considerations

The Workgroup highlighted the importance of offering TA to states on quality measurement. They cited several examples of potential TA needs: (1) improving data accuracy and completeness for measure stratification, (2) sharing data across medical and dental plans for measures that involve medical–dental integration, and (3) producing results at the practice, plan, and program levels. In addition, states with limited capacity for data analysis could benefit from TA on how to incorporate a measurement strategy into their Medicaid and CHIP programs, for example, offering templates that include formulas and guidance for calculating quality measures.

## Key measures for the next phase of the OHI

The Workgroup cast a wide net in suggesting measures that could be used to monitor oral health care access, quality, and outcomes, and advance health equity. To track progress toward the primary aim, CMS could build on existing measures in the Child Core Set, and measures recommended for future Core Sets. Note that the Oral Evaluation, Dental Services measure is also included in CMS’s Universal Foundation of quality measures, which seeks to align quality measures across CMS programs.<sup>86</sup>

### Key Measures for National- and State-Level Monitoring of the Next Phase of the OHI

- Child Core Set measures
  - Oral Evaluation, Dental Services
  - Topical Fluoride for Children
  - Sealant Receipt on Permanent First Molars
- Measures recommended for addition to the Core Sets
  - Oral Evaluation During Pregnancy
  - Ambulatory Care Sensitive Emergency Department Visits for Non-Traumatic Dental Conditions in Adults

The key measures listed above rely on Medicaid and CHIP claims and encounter data and are specified for national, state, and plan level reporting. They also are designed for trending and benchmarking and could be stratified by demographic characteristics if data permit. In addition, other measures and measure concepts shown in Exhibit 10 provide a strong foundation for future quality measurement and improvement efforts.

The Workgroup also encouraged a broader focus on data analytics that could provide additional context for understanding patterns and trends in oral health care access, quality, outcomes, and equity in Medicaid and CHIP. For example, CMS could consider continuing to produce data analytic products using TAF and other data sources.<sup>87</sup>

## Recommended CMS Activities and Potential Strategies for the Next Phase of the Medicaid and CHIP Oral Health Initiative

CMS is well positioned to implement the next phase of the OHI and to help states and other interested parties achieve the primary aim of improving oral health care access, quality, and outcomes, and advancing equity for Medicaid and CHIP beneficiaries across the life span. The Workgroup recommended potential strategies where there is significant opportunity to drive improvement in oral health care access, quality, and outcomes in Medicaid and CHIP. These strategies align with potential CMS activities across the three interrelated focus areas to support quality improvement TA, quality measurement TA, SPA, waiver, and demonstration TA, peer learning and knowledge sharing, and managed care TA resources (see Exhibit 12). These activities reflect the opportunities available to CMS to promote oral health care quality measurement and improvement in Medicaid and CHIP. There are synergies across these activities and strategies, which are designed to make progress within each focus area and toward the broader primary aim.

**Exhibit 12. Examples of recommended CMS activities and potential strategies for the next phase of the Medicaid and CHIP Oral Health Initiative**

Recommended Activities	Potential strategies
Quality improvement TA	<ul style="list-style-type: none"> <li>• Expand the use of existing evidence-based strategies that are underutilized (e.g., dental sealants, FV, SDF)</li> <li>• Expand the use of chronic disease management and caries risk assessment</li> <li>• Increase state focus on oral health care delivery and outcomes in state QS</li> </ul>
Quality measurement TA	<ul style="list-style-type: none"> <li>• Implement Oral Evaluation During Pregnancy (DQA) measure</li> <li>• Implement Ambulatory Care Sensitive Emergency Department Visits for Non-Traumatic Dental Conditions in Adults (DQA) measure</li> <li>• Encourage the use of dental performance measures and targets in managed care contracts</li> <li>• Identify oral health–related quality measures from EQR technical reports</li> <li>• Use states’ required EQR reporting to monitor dental quality measures and foster accountability</li> </ul>
SPA, waiver, and demonstration TA	<ul style="list-style-type: none"> <li>• Work with states to:               <ul style="list-style-type: none"> <li>○ Incorporate oral health navigation and supports within existing authorities (e.g., HCBS, 1115 demonstrations)</li> <li>○ Leverage existing authorities to enhance services for pregnant and postpartum people (e.g., pregnancy-related State Plan coverage, waivers)</li> <li>○ Leverage existing authorities to enhance services for adults with I/DD (e.g., enhanced SPAs, 1915[c] waivers)</li> </ul> </li> </ul>



Recommended Activities	Potential strategies
Peer learning and knowledge sharing (cross-cutting with quality improvement and quality measurement TA)	<ul style="list-style-type: none"> <li>• Identify and share best practices on:               <ul style="list-style-type: none"> <li>○ Reducing rates of avoidable ED visits for dental needs</li> <li>○ Models for coordination and integration of care, including care management services, maternal and infant health programs, home visiting programs, and school-based programs</li> <li>○ Improving oral health care during pregnancy</li> <li>○ Providing oral health care to adults with I/DD</li> <li>○ Developing network adequacy indicators, standards, and measures for dental and oral health care providers</li> <li>○ Medical plans promoting preventive oral health practices</li> <li>○ Setting KPIs</li> </ul> </li> </ul>
Managed care TA resources	<ul style="list-style-type: none"> <li>• Promote use of dental PIPs to improve oral health care delivery and outcomes</li> <li>• Develop model contract language for coordination between medical and dental plans/providers</li> <li>• Develop model contract language related to quality measurement and oversight of progress toward measurable goals</li> </ul>

## Quality improvement TA

Building on the success of the Advancing Oral Health Prevention in Primary Care affinity group, CMS could offer QI TA to states and their quality partners focused oral health topics.<sup>88</sup> For example, CMS could convene an affinity group focused on identifying best practices for MCPs in promoting preventive oral health practices for a specified population group (for example, pregnant people, adults with I/DD). Other QI TA options include on-demand support and learning collaboratives.

CMS could also build on the success of recent MCQ QI TA efforts to focus on the use of MCQ tools to advance quality of oral health care through QS goals and objectives and performance measures; QAPI projects focused on oral health; and EQR validation of PIP, performance measure, and network adequacy data. The TA could be targeted to states, plans, and EQROs to strengthen their capacity related to oral health QI.

## Quality measurement TA

Quality measurement is a priority for the next phase of the OHI because it helps to identify opportunities for improvement, track progress, and address remaining gaps. Several strategies focus on enhancing state capacity for quality measurement, especially for new measures recommended for the Child and Adult Core Sets: Oral Evaluation During Pregnancy and Ambulatory Care Sensitive Emergency Department Visits for Non-Traumatic Dental Conditions in Adults. In addition, to help reduce burden for states as reporting of the Child Core Set measures becomes mandatory in FFY 2024, CMS could continue to explore the use of T-MSIS to calculate the quality measures on behalf of states.

## **SPA, waiver, and demonstration TA**

The Workgroup frequently discussed opportunities for enhancing the focus on oral health within new and existing SPAs, waiver requests, and section 1115 demonstrations. For example, CMS could offer TA to states interested in leveraging SPAs and waivers to advance oral health priorities. CMS could provide sample language for oral health–related measures and goals and conduct reviews of SPAs, waivers, and section 1115 demonstrations with a focus on oral health components. In addition, CMS could disseminate examples of state initiatives that have successfully integrated oral health priorities through the different authorities.

## **Peer learning and knowledge sharing**

Many potential strategies focus on sharing best practice models that align with advancing the strategic priorities. CMS is well positioned to promote peer learning and knowledge sharing through the Oral Health Technical Advisory Group (OTAG), which includes state Medicaid dental program managers. The OTAG offers the opportunity to share best practices that align with the strategic priorities for the next phase of the OHI. Other venues include the CMS Quality Conference, national spotlight webinars, or other learning and diffusion activities undertaken as part of a learning collaborative.

## **Managed care TA resources**

CMS could develop and publish a variety of TA resources and tools to support states in their efforts to advance oral health priorities. For example, CMS could develop model contract language to promote MCP accountability for medical–dental care coordination or dental performance measures and targets; prepare a TA resource on approaches to assessing network adequacy for oral health providers (such as developing standards, calculating measures, and conducting a secret shopper study); or share best practices on planning, implementing, and evaluating oral health PIPs.

## Conclusion

As noted in this report, oral health is recognized as a critical component of overall health and well-being for both children and adults. Although good oral health can be achieved through regular preventive care and early detection, treatment, and management of disease, persistent oral health disparities exist in the United States. Despite improvements in oral health for the population, oral diseases continue to impact Medicaid and CHIP beneficiaries disproportionately. CMS asked Mathematica to convene an expert workgroup to help plan for the next phase of the Medicaid and CHIP OHI. Mathematica used an iterative and interactive approach to gather input from the Workgroup on the focus areas, strategic priorities, strategies, and measures for monitoring progress for the next phase of the OHI. The Workgroup recommended that CMS focus attention on three interrelated areas:

1. Increase emphasis on preventive, minimally invasive, and timely care
2. Enhance managed care plan engagement and accountability
3. Enhance the capacity for quality measurement and data analytics to track progress toward the primary aim

The Workgroup concluded that improvements in these three areas would promote oral health care access, quality, and outcomes, and advance equity in Medicaid and CHIP across the lifespan. These focus areas include both children and adults and recognize the growth in dental managed care delivery systems. The Workgroup recommendations summarized in this report are intended to support CMS in planning for the next phase of the OHI, including (1) developing new TA opportunities and resources to help states improve oral health outcomes for people enrolled in Medicaid and CHIP and (2) establishing an approach to measure baseline performance, goals, and progress at the national and state levels and within subpopulations. CMS's engagement with the 2023 Medicaid and CHIP OHI Workgroup provides a strong foundation for collaborating on future improvement opportunities.

## Endnotes

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- <sup>66</sup> The 2021 Medicaid and CHIP Managed Care Quality Strategy Toolkit is available at <https://www.medicaid.gov/medicaid/downloads/managed-care-quality-strategy-toolkit.pdf>.
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- <sup>69</sup> An EQRO is an organization that meets the competence and independence requirements set forth in 42 CFR 438.354, and performs EQR, EQR-related activities, or both.
- <sup>70</sup> See 42 CFR 438.6(c) for more information on state directed payments. SDP requirements also extend to prepaid inpatient health plans (PIHPs), which are generally not used to administer dental benefits.
- <sup>71</sup> Approved state directed payment preprints are searchable at <https://www.medicaid.gov/medicaid/managed-care/guidance/state-directed-payments/approved-state-directed-payment-preprints>.
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- <sup>85</sup> More information about the Code on Dental Procedures and Nomenclature is available at <https://www.ada.org/publications/cdt>.
- <sup>86</sup> More information about CMS’s Universal Foundation is available at <https://www.cms.gov/aligning-quality-measures-across-cms-universal-foundation>.
- <sup>87</sup> Examples include the 2023 Medicaid and CHIP Beneficiary Profile, which is available at <https://www.medicaid.gov/medicaid/quality-of-care/downloads/beneficiary-profile-2023.pdf>; and the 2023 Medicaid & CHIP Beneficiaries at a Glance: Oral Health, which is available at <https://www.medicaid.gov/medicaid/benefits/downloads/2023-oral-health-at-a-glance.pdf>.
- <sup>88</sup> More information about the Advancing Oral Health Prevention in Primary Care affinity group is available at <https://www.medicaid.gov/medicaid/quality-of-care/quality-improvement-initiatives/oral-health-quality-improvement-resources/index.html#OI>.