Salivary Testing
(For Ohio Only)

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Related References and Policies

- UnitedHealthcare Community Plan of Ohio Medicaid Dental Quick Reference Guide
- Dental Provider Manual: UnitedHealthcare Community Plan of Ohio

Application

This Dental Policy only applies to the state of Ohio. Any requests for services that are stated as unproven or services for which there is a coverage or quantity limit will be evaluated for medical necessity using Ohio Administrative Code 5160-1-01. Early and periodic screening, diagnostic, and treatment (EPSDT) covered dental service considerations are applied to members younger than age 21 years of age pursuant to Ohio Administrative Code 5160-1-14(C)(3).

Prior Authorization

The Ohio Department of Medicaid (ODM) determines coverage of dental services based on medical necessity, alignment with policy criteria, and clinical indications. CDT codes that are designated as covered by ODM are eligible for reimbursement when all applicable guidelines are met. For a comprehensive list of covered CDT codes, refer to the UnitedHealthcare Community Plan of Ohio Medicaid Dental Quick Reference Guide and/or Dental Provider Manual: UnitedHealthcare Community Plan of Ohio.

Non-covered codes may be reimbursable if special justification is submitted to include prior-authorization, clinical narrative of medical necessity, and supporting documentation including but not limited to clinical records, diagnostic imaging, periodontal charting, or any other relevant documentation to support the clinical rationale.

Description of Services

Saliva is made of water, mucus, proteins, minerals, and an enzyme called amylase. It lubricates the mouth, provides protection to the teeth from bacterial acids, helps rebuild damaged enamel, and begins the first stage of the digestive process. Salivary biomarkers for oral cancers have been explored for their role in earlier detection of oral cancer, particularly oral squamous cell carcinoma (OSCC). This is an active and promising area of research. To date, there are no FDA cleared salivary diagnostic tests for evaluating the risk of periodontal disease, dental caries, or head and neck cancer.

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While xerostomia is a subjective feeling of a dry mouth, hyposalivation is the objective measure of decreased salivary gland function. Hyposalivation and poor quality saliva increases risk for dental diseases. The information gathered from saliva testing (bacteria, biomarkers, quality and quantity of saliva) can be an additional diagnostic tool to lower incidence and/or severity of oral disease.

Definitions

Risk Assessment: Analysis of risks involved prior to action being taken.

Sialagogue: A drug that promotes the secretion of saliva.

Clinical Indications

Covered Codes

None

Collection, Preparation and Analysis of Saliva Sample for Laboratory Diagnostic Testing

Collection, preparation and analysis of saliva sample for laboratory diagnostic testing may be indicated for the following:

- As part of oral disease Risk Assessment and subsequent management
- The identification of biomarkers associated with oral cancers

Assessment of Salivary Flow by Measurement

Assessment of salivary flow by measurement may be indicated for the following:

- Systemic disease known to cause xerostomia (e.g., Sjögren's syndrome, diabetes, autoimmune disorders)
- Polypharmacy
- Radiation therapy to the head and neck.

Salivary flow measurement may also be indicated to monitor the effectiveness of Sialagogues.

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CDT Code	Description
D0417	Collection and preparation of saliva sample for laboratory analysis
D0418	Analysis of saliva sample-laboratory
D0419	Assessment of salivary flow by measurement
D0426	Collection, preparation, and analysis of saliva sample – point-of-care

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Clinical Evidence

Caries

Piekoszewska-Ziętek et al. (2019) conducted a systematic review of the literature to assess the relationship of chosen salivary proteins and peptides levels with the occurrence of caries in children. Twenty-two studies were included in the review, from which the issue of glycoproteins (including immunoglobulins), AMPs and salivary enzymes was discussed.

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The research involved primary dentition (13 papers), as well as mixed (7) and permanent dentition (5). Caries assessment included visual inspection, dmft/s and DMFT/S indexed; quantity of Streptococcus mutans and Lactobacillus spp. bacteria; and caries risk assessment. The authors concluded that the results are promising; however, further investigations should be undertaken. The majority of studies included are case-control and cross-sectional; however, it is necessary to conduct more cohort studies with adequate follow-up prior to considering this as markers for caries risk assessment.

Chokshi et al (2016) conducted a study to estimate the salivary levels of Streptococcus mutans, Lactobacilli and Actinomyces and to correlate it with dental caries experience in mixed and permanent dentition. The sample size comprised 110 subjects. The decayed, missing and filled teeth (DMFT) index of all the individuals participating in the study was calculated. Saliva samples were collected from patients and samples were inoculated on specific culture media and incubated for a period of 48 hours, and colony characteristics, S. mutans, Lactobacilli and Actinomyces were identified. A positive correlation exists between DMFT and S. mutans, Lactobacilli and Actinomyces in mixed dentition and permanent dentition group samples (P < 0.001). The conclusion from the results obtained was that S. Mutans, lactobacilli and Actinomyces which are the components of the normal microbial flora of the oral cavity play an important role in the pathogenesis of dental caries and increased number of microorganisms is associated with an increased caries frequency.

Periodontal Disease

Kim et al. (2020) conducted a systematic review to determine the changes in inflammatory cytokines after non- surgical periodontal therapy, and a meta-analysis of the utility of interleukin (IL)-1 β and matrix metalloproteinase (MMP)-8 as salivary biomarkers. The results showed that biomarkers that were present in high levels in periodontal disease were salivary IL-1 β, IL-4, IL-6, MMP-8, and tissue inhibitor of matrix metalloproteinases (TIMP)-2. Those in the controls were tumor necrosis factor (TNF)- α, IL-10, IL-17, and IL-32. Biomarkers that decreased after scaling and root planning (SRP) and oral hygiene instruction (OHI) in periodontitis patients were IL-1 β, MMP-8, MMP-9, prostaglandin E2 (PGE2), and TIMP-2. The pooled standardized mean difference of IL-1 β and MMP-8 was -1.04 and 35.90, respectively, but the differences between periodontitis patients and healthy controls were not significant. The authors concluded that although the changes in salivary IL-1 β and MMP-8 levels after non-surgical periodontal therapy were not significant, salivary cytokines could be used to confirm the effect of periodontal therapy or diagnose periodontal disease.

Liebsch et al. (2019) conducted a study regarding salivary metabolites and the relationship to oral parameters (clinical attachment level, periodontal probing depth, supragingival plaque, supragingival calculus, number of missing teeth, and removable denture). Subjects included 909 nondiabetic participants from the Study of Health in Pomerania . Linear regression analyses were performed in age-stratified groups and adjusted for potential confounders. A multifaceted image of associated metabolites (n = 107) was revealed with considerable differences according to age groups. In the young (20 to 39 y) and middle-aged (40 to 59 y) groups, metabolites were predominantly associated with periodontal variables, whereas among the older subjects (≥ 60 y), tooth loss was strongly associated with metabolite levels. Metabolites associated with periodontal variables were clearly linked to tissue destruction, host defense mechanisms, and bacterial metabolism. Across all age groups, the bacterial metabolite phenylacetate was significantly associated with periodontal variables. The results revealed alterations of the salivary metabolome in association with age and oral health status with periodontitis significantly associated with the bacterial metabolite phenylacetate. The authors concluded this is aa promising substance for further biomarker research.

Nisha et al. (2018) conducted a cross sectional study designed to estimate the levels of macrophage inflammatory protein-1 alpha (MIP-1 α) and monocyte chemo attractant protein-1 (MCP-1) in whole unstimulated saliva from 75 patients and to evaluate their role as reliable salivary biomarkers in discriminating gingivitis and periodontitis from health. Participants were divided into healthy (Group 1, n = 25), gingivitis (Group 2, n = 25) and chronic generalized periodontitis (Group 3, n = 25). MIP-1 α and MCP-1 levels were estimated by using ELISA and were correlated with clinical parameters. ROC curve analysis was done to determine the sensitivity and specificity of these biomarkers in distinguishing periodontal disease from health. The results showed both biomarkers were detected in all the saliva samples. There was a statistically significant difference in the concentration of both the analytes in Group 3 and Group 2 compared with Group 1 (P < 0.001). ROC curve analysis showed 100% sensitivity and specificity for MIP-1 α and MCP-1 in discriminating periodontitis from health. For discriminating gingivitis from health, MIP-1 α had a higher sensitivity and specificity (100% & 88% respectively) compared to MCP-1(84.1% & 80% respectively). The authors concluded there is a substantial increase in the concentration of both MIP-1 α and MCP-1 with increasing severity of periodontal disease. Both the analytes showed promising results as biomarkers for discriminating periodontal disease from health.

de Lima et al (2016) conducted a systematic review and meta-analysis to evaluate the accuracy of host-derived salivary biomarkers in the diagnosis of periodontal disease by assessing the published literature. 4 studies were included for full analysis. One biomarker, macrophage inflammatory protein-1 alpha (MIP-1a), had excellent diagnostic accuracy

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(sensitivity 95% and specificity 93%) and interleukin-1 beta (IL-1b) and IL-6 showed acceptable diagnostic values: IL-1b sensitivity varied from 54% to 88% and specificity varied from 55% to 100% and IL-6 sensitivity varied from 59% to 88% and specificity varied from 60% to 97%. The meta-analysis forest plot showed that MIP-1a was the best marker evaluated. The authors concluded that MIP-1a had high diagnostic capability and excellent accuracy and that biomarkers IL-1b and IL-6 had acceptable accuracy. However, they also indicated that the evidence reviewed was too restricted to endorse the use of salivary biomarkers as a diagnostic tool based on the available data and suggested more and larger multi centered studies.

Kuboniwa et al (2016). In this pilot study, the authors explored the use of salivary metabolites to reflect periodontal inflammation severity with a recently proposed parameter-periodontal inflamed surface area (PISA)-used to quantify the periodontal inflammatory burden of individual patients with high accuracy. Following PISA determination, whole saliva samples were collected from 19 subjects before and after removal of supragingival plaque and calculus (debridement) with an ultrasonic scaler to assess the influence of the procedure on salivary metabolic profiles. Metabolic profiling of saliva was performed with gas chromatography coupled to time-of-flight mass spectrometry, followed by multivariate regression analysis with orthogonal projections to latent structures (OPLS) to investigate the relationship between PISA and salivary metabolic profiles. Sixty-three metabolites were identified. OPLS analysis showed that post debridement saliva provided a more refined model for prediction of PISA than did predebridement samples, which indicated that debridement may improve detection of metabolites eluted from subgingival areas in saliva, thus more accurately reflecting the pathophysiology of periodontitis. Based on the variable importance in the projection values obtained via OPLS, 8 metabolites were identified as potential indicators of periodontal inflammation, of which the combination of cadaverine, 5-oxoproline, and histidine yielded satisfactory accuracy (area under the curve = 0.881) for diagnosis of periodontitis. The authors' findings identified potential biomarkers that may be useful for reflecting the severity of periodontal inflammation as part of monitoring disease activity in periodontitis patients.

Morozumi et al (2016). A diagnosis of periodontitis progression is presently limited to clinical parameters such as attachment loss and radiographic imaging. The aim of this multicenter study was to monitor disease progression in patients with chronic periodontitis during a 24-month follow-up program and to evaluate the amount of bacteria in saliva and corresponding IgG titers in serum for determining the diagnostic usefulness of each in indicating disease progression and stability. A total of 163 patients with chronic periodontitis who received trimonthly follow-up care were observed for 24 months. The clinical parameters and salivary content of Porphyromonas gingivalis, Prevotella intermedia and Aggregatibacter actinomycetemcomitans were assessed using the modified Invader PLUS assay, and the corresponding serum IgG titers were measured using ELISA. The changes through 24 month period were analyzed using cut-off values calculated for each factor. One-way ANOVA or Fisher's exact test was used to perform between-group comparison for the data collected. Diagnostic values were calculated using Fisher's exact test. Of the 124 individuals who completed the 24-month monitoring phase, 62 exhibited periodontitis progression, whereas 62 demonstrated stable disease. Seven patients withdrew because of acute periodontal abscess. The ratio of P. gingivalis to total bacteria and the combination of P. gingivalis counts and IgG titers against P. gingivalis were significantly related to the progression of periodontitis. The combination of P. gingivalis ratio and P. gingivalis IgG titers was significantly associated with the progression of periodontitis. The authors suggest this study shows that the combination of P. gingivalis ratio in saliva and serum IgG titers against P. gingivalis may be associated with the progression of periodontitis.

Zhang et al (2016). In periodontitis, activated macrophages not only initiate immune responses to periodontal-pathogen infections, but also damage the periodontal tissues by releasing a series of inflammatory cytokines. Macrophage-activating factor (MAF) and macrophage-chemotactic factor (MCF) are two important mediators involved in macrophage accumulation, activation and function. This study analyzed the levels of salivary MAF and MCF in healthy individuals and those with different periodontal diseases, and assessed the usefulness of salivary MAF and MCF as diagnostic biomarkers in periodontal tissue health status. Ninety-five saliva specimens were collected from healthy individuals and patients with gingivitis, mild periodontitis, moderate periodontitis, and severe periodontitis. Pocket probing depth (PPD) and alveolar bone loss (ABL) were recorded via periodontal probing and dental radiography, respectively. Salivary MAF and MCF concentrations were assayed using enzyme-linked immunosorbent assays. MAF level tended to increase in saliva as periodontal diseases progressed. The concentration of salivary MAF in periodontitis correlated positively with ABL and PPD. In contrast, salivary MCF levels increased significantly only in periodontitis. The authors concluded that salivary MAF levels correlate positively with tissue destruction in periodontal diseases. It is a potential valuable biomarker that could be used to assess periodontal health status.

Oral Cancer

In a 2021 systematic review and meta-analysis, Chiamulera et al. identified salivary cytokines (SC) as biomarkers, and their role as a potential tool for earlier diagnosis of oral cancer. Only case-control studies that measured SC by ELISA from treatment naïve patients were included in the qualitative review. For the meta-analysis, all comparable studies that provided enough data (sample size, mean and standard deviation or standard error of the mean) for SC levels in OC

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patients, non-cancer controls and patients with oral potentially malignant disorders (OPMD), including leukoplakia were included. Comparisons with patients with oral lichen planus (OLP) and gingivitis were included in the qualitative analysis. 28 articles were included in the systematic review and describe 10 distinct SC, with IL-8 and IL-6 being the most commonly studied. This showed SC levels consistently higher among OC patients when compared with healthy controls, and patients with oral potentially malignant disorders (OPMD), oral lichen planus (OLP) and gingivitis. For the meta-analysis, 23 studies were eligible and showed IL-8, IL-6, TNF-a, IL-1 β and IL-10 salivary levels were significantly higher in OC patients compared to controls; and that IL-8, IL-6, TNF- α and IL-1 β salivary levels were also higher in OC patients compared to individuals with OPMD. When compared to healthy controls, OPMD patients showed significantly higher IL-6 and TNF- α salivary levels. The results showed SC were highly variable among the studies and further improvement and standardization is needed before being able to successfully test for SC in clinical practice.

Zielińska et al. (2020) conducted a study assessing the levels of IL-17 and TNF- α in the saliva of 71 patients with oral and oropharyngeal cancer prior to treatment. Saliva samples were collected from subjects, and cytokine concentrations in the saliva were measured with ELISA and Luminex Multiplex Assays. The higher salivary concentrations of IL-17A, IL-17F, and TNF- α were significantly associated with disease advancement. The authors concluded that these results suggest that IL-17A, IL-17F, and TNF- α measured in the saliva may be a potential biomarker for cancer of the oral cavity and oropharynx.

In a 2019 comparative study, Chu et al. sought to identify oral squamous cell carcinoma (OSCC) biomarkers by salivary proteomes, of OSCC patients. Individuals with oral potentially malignant disorders (OPMDs), and healthy volunteers were comparatively profiled with isobaric tags for relative and absolute quantitation (iTRAQ)-based mass spectrometry (MS). The salivary levels of 67 and 18 proteins in the OSCC group are elevated and decreased compared to that in the noncancerous group (OPMD and healthy groups), respectively. The candidate biomarkers were further selected using the multiple reaction monitoring (MRM)-MS and validated with the immunoassays. More importantly, the higher salivary level of three proteins, complement factor H (CFH), fibrinogen alpha chain (FGA), and alpha-1-antitrypsin (SERPINA1) was correlated with advanced stages of OSCC. The authors concluded that analysis of salivary proteome is a feasible strategy for biomarker discovery, and the three proteins are potential salivary markers for OSCC diagnosis.

Ishikawa et al (2016). The objective of this study was to explore salivary metabolite biomarkers by profiling both saliva and tumor tissue samples for oral cancer screening. Patients with oral cancer and healthy controls were recruited at the Department of Dentistry, Oral and Maxillofacial Plastic and Reconstructive Surgery of Yamagata University Hospital from 2012 to 2014. None had received any prior treatment such as chemotherapy or radiotherapy. All oral cancer patients provided both tumor tissues and saliva samples. No controls had a history of prior malignancy or autoimmune disorders. Paired tumor and control tissues were obtained from oral cancer patients and whole unstimulated saliva samples were collected from patients and healthy controls. The comprehensive metabolomic analysis for profiling hydrophilic metabolites was conducted using capillary electrophoresis time-of-flight mass spectrometry. In total, 85 and 45 metabolites showed significant differences between tumor and matched control samples, and between salivary samples from oral cancer and controls, respectively ($P < 0.05$ correlated by false discovery rate); 17 metabolites showed consistent differences in both saliva and tissue-based comparisons. Of these, a combination of only two biomarkers yielded a high area under receiver operating characteristic curves (0.827; 95% confidence interval, 0.726-0.928, $P < 0.0001$) for discriminating oral cancers from controls. Various validation tests confirmed its high generalization ability. The demonstrated approach, integrating both saliva and tumor tissue metabolomics, helps eliminate pseudo-molecules that are coincidentally different between oral cancers and controls. These combined salivary metabolites could be the basis of a clinically feasible method of non-invasive oral cancer screening.

Polz-Dacewicz et al (2016). Each year approximately 6,000 new cases of head and neck cancer are registered in Poland. Human papillomavirus (HPV) and Epstein-Barr virus (EBV) have been associated with tumor formation. Cytokines have been shown to play an important role both in inflammation and carcinogenesis and they can be detected in saliva and serum with ELISA assays. Salivary biomarkers may be used as markers of early cancer detection. The aim of this study was the analysis of the serum and salivary levels of IL-10, TNF- α, TGF- β and VEGF in patients with oropharyngeal cancer and in healthy individuals. The level of these biomarkers was also analyzed in HPV- and EBV-related cases. The study involved 78 patients with histopathologically confirmed oropharyngeal squamous cell carcinoma and 40 healthy controls. Serum and salivary levels of IL-10, TNF- α, TGF- β and VEGF were analyzed both in patients and in healthy individuals by ELISA method using Diaclone SAS commercially available kits (France). EBV DNA was detected by the nested PCR for amplification of EBNA-2. HPV detection and genotyping was performed using the INNO-LiPA HPV Genotyping Extraassay (Innogenetics N. V, Gent, Belgium). The obtained results were subjected to statistical analysis using Mann-Whitney and Kruskal Wallis tests. The level of tested cytokines was higher in patients than in controls both in serum as well as in saliva. EBV DNA was detected in 51.3 % of patients and 20 % of controls, HPV DNA was present in 30.8 % of patients and 2, 5 % of controls. The level of IL-10 was statistically higher in patients infected with EBV, HPV and

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co-infected with EBV/HPV. The level of TNF-α was significantly higher in patients infected with EBV, while TGF-β in patients with HPV infection and EBV/HPV co-infection. The authors concluded that the detection of salivary cytokines may be very helpful in early diagnosis, treatment and prognosis of OSCC.

Guerra et al (2015). The purpose of this systematic review and meta-analysis was to evaluate the diagnostic value of salivary biological markers in the diagnosis of head and neck carcinoma. Studies were gathered by searching Cochrane, EMBASE, LILACS, MEDLINE, and PubMed. The references were also crosschecked and a partial grey literature search was undertaken using Google Scholar. The methodology of selected studies was evaluated using the 14-item Quality Assessment Tool for Diagnostic Accuracy Studies. 15 articles were identified and subjected to qualitative and quantitative analyses. The studies were homogeneous, and all had high methodological quality. Combined biomarkers demonstrated better accuracy with higher sensitivity and specificity than those tested individually. Furthermore, the salivary biomarkers reviewed predicted the early stages of head and neck carcinoma better than the advanced stages. A restricted set of five single biomarkers (interleukin-8, choline, pipecolinic acid, l-phenylalanine, and S-carboxymethyl-l-cysteine) as well as combined biomarkers demonstrated excellent diagnostic test accuracy. The results of this systematic review confirm the potential value of a selected set of salivary biomarkers as diagnostic tools for head and neck carcinoma.

Salivary Flow by Measurement

Villa et al. (2015) conducted a systematic review to assess the literature on the prevalence, diagnosis, treatment, and prevention of medication-induced salivary gland dysfunction (MISGD). Electronic databases were searched for articles related to MISGD through June 2013. Four independent reviewers extracted information regarding study design, study population, interventions, outcomes, and conclusions for each article. Only papers with acceptable degree of relevance, quality of methodology, and strength of evidence were retained for further analysis. There were limited data on the epidemiology of MISGD. Furthermore, various methods were used to assess salivary flow rate or xerostomia. Preventive and therapeutic strategies included substitution of medications, oral, or systemic therapy with sialagogues, use of saliva substitutes or of electro-stimulating devices. Although there are promising approaches to improve salivary gland function, most studies are characterized by small numbers and heterogeneous methods. Physicians and dentists should identify the medications associated with xerostomia and salivary gland dysfunction through a thorough medical history. Preferably, health care providers should measure the unstimulated and stimulated whole salivary flow rates of all their patients so that these values can be used as a baseline to rate the complaints of patients who subsequently claim to experience xerostomia or salivary gland dysfunction as well as the possibilities of effectively treating this condition.

Löfgren et al. (2012) conducted a systematic review to evaluate the quality of the evidence for the efficacy of diagnostic methods used to identify oral dryness. The most advocated clinical method for diagnosing salivary dysfunction is to quantitate unstimulated and stimulated whole saliva (sialometry). Since there is an expected and wide variation in salivary flow rates among individuals, the assessment of dysfunction can be difficult. A literature search, with specific indexing terms and a hand search, was conducted for publications that described a method to diagnose oral dryness. The electronic databases of PubMed, Cochrane Library, and Web of Science were used as data sources. Four reviewers selected publications on the basis of predetermined inclusion and exclusion criteria. Data were extracted from the selected publications using a protocol. Original studies were interpreted with the aid of Quality Assessment of Diagnostic Accuracy Studies (QUADAS) tool. A total of 18 original studies were judged relevant and interpreted for this review. In all studies, the results of the test method were compared to those of a reference method. Based on the interpretation (with the aid of the QUADAS tool) it can be reported that the patient selection criteria were not clearly described and the test or reference methods were not described in sufficient detail for it to be reproduced. None of the included studies reported information on uninterpretable/intermediate results nor data on observer or instrument variation. Seven of the studies presented their results as a percentage of correct diagnoses. The authors concluded that the evidence for the efficacy of clinical methods to assess oral dryness is sparse and improved standards for the reporting of diagnostic accuracy are needed in order to assure the methodological quality of studies. There is need for effective diagnostic criteria and functional tests in order to detect those individuals with oral dryness who may require oral treatment, such as alleviation of discomfort and/or prevention of diseases.

Clinical Practice Guidelines

American Dental Association (ADA) Council on Scientific Affairs

In a 2014 report by the ADA Council on Scientific Affairs, the following recommendation was made:
Initial evaluation of patients with dry mouth should include a detailed health history to facilitate early detection and identify underlying causes. Comprehensive evaluation, diagnostic testing and periodic assessment of salivary flow, followed by corrective actions, may help prevent significant oral disease. A systematic approach to xerostomia management can facilitate interdisciplinary patient care, including collaboration with physicians regarding systemic conditions and medication usage. Comprehensive management of xerostomia and hyposalivation should emphasize patient education and lifestyle modifications. It also should focus on various palliative and preventive measures.

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American Dental Association (ADA) Statement on Salivary Diagnostics

Large-scale, multicenter clinical trials and independent validation studies are required to establish evidence of clinical utility of salivary and oral fluid diagnostics in the early diagnosis and/or monitoring of oral cancer and other diseases or conditions. Current challenges include identification of disease-specific markers, establishing sensitivity and specificity of developed tests, and standardization of collection/storage of salivary samples. Refinement of oral fluid screening and diagnostic tests may further elucidate our understanding of the relationship between oral health and overall health. Presently there are no FDA approved salivary diagnostic tests for evaluating risk of periodontal disease, dental caries, or head and neck cancer (ADA 2023).

American Dental Association (ADA) Science & Research Institute

Standardized caries risk assessment developed by the ADA do not include salivary diagnostics as part of a comprehensive risk assessment strategy. Xerostomia and visually inadequate salivary flow are indicated as risk factors, however measurement is not mentioned (ADA 2023).

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Laboratories that perform salivary diagnostic tests are regulated under the Clinical Laboratory Improvement Amendments (CLIA) Act of 1988. More information is available at: https://www.cms.gov/clia/. Accessed August 15, 2025).

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Policy History/Revision Information

Date	Summary of Changes
12/01/2026	**Template Updates** • Renamed *Related Dental Policy* to *Related References and Policies* • Reordered contents of policy ○ Moved *Description of Services* and *Definitions* towards beginning of policy ○ Added Prior Authorization section • Renamed *Coverage Rationale* to *Clinical Indications* • Added *Covered Codes* **Coverage Rationale** ***Collection, Preparation, and Analysis of Saliva Sample for Laboratory Diagnostic Testing*** • Revised list of conditions for which collection, preparation, and analysis of saliva sample for laboratory diagnostic testing may be indicated; added "the identification of biomarkers associated with oral cancers" ***Assessment of Salivary Flow by Measurement*** • Replaced language stating "assessment of salivary flow by measurement may be indicated for systemic disease" with ""assessment of salivary flow by measurement may be indicated *for the presence of* systemic disease known to cause xerostomia" **Applicable Codes** • Updated list of applicable CDT codes to reflect annual edits: ○ Added D0426 ○ Revised description for D0417 and D0418 **Supporting Information** • Updated *Desctiption of Services*, *Clinical Evidence, FDA* and *References* sections to reflect the most current information • Archived previous policy version CSDEN408.A

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Instructions for Use

This Dental Policy provides assistance in interpreting the UnitedHealthcare Community Plan of Ohio dental benefit plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plans may differ. In the event of a conflict, the member specific benefit plan document governs. Before using this policy, please check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Dental Policy is provided for informational purposes. It does not constitute the practice of medicine or medical advice.

Archived Policy Versions

Effective Date	Guideline Number	Guideline Title
11/01/2025 – 11/30/2026	CSDEN408OH.A	Salivary Testing
12/01/2023 – 10/31/2025	CSDEN332OH.A	Salivary Testing

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