

BY ELECTRONIC MAIL:

MedicarePhysicianFeeSchedule@cms.hhs.gov

February 10, 2023

The Honorable Chiquita Brooks-LaSure Centers for Medicare and Medicaid Services Attention: CMS-1770-F 7500 Security Boulevard P.O. Box 8016 Baltimore, MD 21244-8016

Re: Dental Coverage Nomination – Treatment of Autoimmune Diseases

Dear Administrator Brooks-LaSure:

The Sjögren's Foundation (https://sjogrens.org) is honored to lead the effort along with related autoimmune disease organizations to provide the Centers for Medicare and Medicaid Services (CMS) our nomination of medically necessary dental services for systemic autoimmune diseases under Medicare coverage, pursuant to the final rule on Medicare and Medicaid Programs: CY2024 Payment Policies under the Physician Fee Schedule and Other Changes to Part B Payment Policies, Medicare Shared Savings Program Requirements, etc. (CMS-1770-F).

The Sjögren's Foundation is a 501(c)3 patient advocacy organization that serves as the voice for all Sjögren's patients through advocacy and awareness initiatives; supports Sjögren's patients and their loved ones through education, resources, and services; provides credible resources and education for healthcare professionals; and lead, encourage, and fund innovative research projects to better understand, diagnose and treat Sjögren's. We are proud to partner with other patient advocacy organizations representing related systemic autoimmune diseases with this

nomination and appreciate our and these groups' key medical leaders who rallied to support a critical need for patients.

We are grateful to CMS for providing the means to nominate conditions for which medically necessary dental coverage is essential. Your decision will have a major impact on the lives of autoimmune disease patients for whom dental treatment is critical to their whole health and whose oral and systemic complications are intertwined as integral parts of a systemic autoimmune condition. Without access to oral and dental care, these patients face a vastly decreased quality of life, an exacerbation of systemic symptoms and increased systemic complications. We, as patient advocates, public health professionals, physicians, and dental and oral medicine specialists, present the proposal below to bridge the gap in health equity and to improve the health outcomes for those ages 65 and older living with autoimmune diseases.

Systemic Autoimmune Diseases and a Clearcut Need for Dental Care

Dental care is an essential component of the medical treatment of persons affected by systemic autoimmune disease and should thus be covered by medical rather than dental insurance. Poor oral health and lack of dental care can exacerbate the systemic symptoms that occur in autoimmune disease patients, leading to the development of new symptoms and worsening existing disease complications. In autoimmune diseases, the immune system becomes hyperactive and attacks the body, affecting the oral cavity, salivary glands, mouth and throat, in addition to the gastrointestinal tract, heart, lungs, liver, kidneys and nervous and reproductive systems. The high rate of inflammation and infection that occur throughout the body in autoimmune disease can stem from inflammation and infection in the oral cavity or be increased further when these symptoms appear orally.

Several reasons support the premise that dental care is critical to good medical care in autoimmune disease. First, persons with specific forms of systemic autoimmune disease are at much higher risk of advanced dental decay, dental loss, and/or gum disease. Factors that contribute to this increased risk include inadequate secretion of saliva (as is seen in Sjögren's disease and often in systemic lupus erythematosus – SLE or "lupus," rheumatoid arthritis – RA, and scleroderma), difficulties with routine oral hygiene due to a narrowed oral aperture (as is seen in scleroderma due to perioral skin tightness and juvenile arthritis due to temporomandibular joint disease), gastroesophageal reflux (as is seen in Sjögren's due to lack of available saliva to buffer refluxed gastric acid and scleroderma due to a patulous esophagus), and direct effects of medications (such as dental loosening that occurs with the chronic use of corticosteroids).

Second, chronic gum infection (periodontitis) may have a direct role in the development of rheumatoid arthritis and other autoimmune diseases. Notably, specific bacteria species in the gum tissue of those with periodontitis have been linked to the autoimmune processes that result in RA. The introduction of sugar into the diet of Europeans during the Middle Ages (due to the emergence of the spice trade) resulted in a large rise in the prevalence of dental decay. RA first appeared as a new disease in Europe in the Middle Ages, possibly as a consequence of poor dental health stemming from sugar ingestion. Third, poor oral health contributes greatly to the

impaired quality of life that is experienced by most people affected by systemic autoimmune disease. Thus, it is important to address this as vigorously as other health issues with comparable impact.²

Below we present health challenges faced by autoimmune disease patients that delineate the need for the Centers for Medicare and Medicaid Services (CMS) to cover medically necessary dental care in systemic autoimmune disease patients as an important part of systemic health in Medicare parts A and B payment for Dental (Section II.L.). Table 1 contains the alphabetical references to the International Statistical Classification of Diseases and Related Health Problems (ICD) medical codes.

Systemic Complications in Autoimmune Disease Resulting from Poor Oral Health

Cardiovascular disease (CVD), pulmonary complications, cognitive dysfunction, and susceptibility to cancer may occur in autoimmune diseases. Poor oral health can make these complications worse.³ Severe periodontitis, which is increased in autoimmune disease, has been linked to CVD⁴ while treatment of periodontal disease has been shown to improve outcomes in CVD.⁵ Tooth loss, which is prevalent in Sjögren's and related autoimmune diseases that have dry mouth as a major component, has been linked to greater mortality from CVD.⁶ Periodontal disease can contribute to an increase in inflammatory cytokines and contribute to cognitive issues⁷, which can already be a major issue for autoimmune disease patients.

Inflammation is a key feature of autoimmune disease, and any increase in inflammation contributes to disease flares, increased systemic disease activity, damage, and increased susceptibility to systemic infection. Pulmonary infection, for example, may become exacerbated in autoimmune patients who already have high rates of inflammation.

Autoimmune patients are at increased risk of pulmonary complications, and oral health and hygiene has been shown to impact the incidence and outcome of these manifestations, including pneumonia and chronic obstructive pulmonary disease. Oral bacteria can lead to lung and other organ infection. Atrophy of the salivary glands of the oral cavity and submucosal glands of the lungs, as occurs in Sjögren's disease and related autoimmune diseases, contribute to increased infection rates. The lack of barrier protection ultimately exacerbates lung problems induced by micro-aspirations in these patients. Recent COVID-19 literature supports this by noting micro-aspirations and oral infection leading to lung infections and worse outcomes. An autoimmune patient with pre-existing quiescent inflammation of the lungs would be particularly at risk for such a sequelae.

Infection, in conjunction with genetic susceptibility, is a root cause of autoimmune disease development. A 2017 Swedish cohort study found that oral infection, and especially a higher plaque index, was associated with an increased incidence of subsequently developing an autoimmune disease. The study cited oral infection as an up-regulator of increased inflammatory reactions that can lead to systemic disease. Conversely, treatment of oral infection led to the resolution of an autoimmune disease in a recent case report. This case demonstrated how surgical removal of an infected jaw and subsequent treatment with an anti-inflammatory and anti-infection agent resolved endodontically infected teeth in a person with the autoimmune

disease dermatomyositis. The resolution of the infection led to a full recovery of the autoimmune disease.

Good oral health can affect the microbiome, which, when out of balance, can impact autoimmune disease symptoms and may even play a role in autoimmune disease development. Oral bacteria can translocate to the gut and change the microbiota and potentially one's immune defenses. Swallowing large quantities of dead bacteria from the mouth may cause gut necrotrophy and create a new phenotype by upregulating bacterial virulence genes (necrovirulence) and increasing cytotoxicity, disrupting the gut microbiome. In some cases, this might lead to the development of autoimmune diseases such as RA. *Prevotella copri* species are enriched in the gut of patients with new-onset rheumatoid arthritis at the expense of *Bacteroides* species in the gut. 14,15

Reducing oral infection of the mucosa, teeth and gums, oral inflammation, and tooth loss through consistent oral management reduces the systemic impact that these features have on a patient's systemic autoimmune disease. ¹⁶

<u>Oral Manifestations are an Integral Part of a Systemic Autoimmune Disease Process, and Each Impacts the Other</u>

Sjögren's disease is a systemic autoimmune disease that specifically targets the exocrine glands, such as the salivary, lacrimal, and submucosal glands of the lungs and genitourinary tracts. The disease involves lymphocytic infiltration into the tissues and causes dysfunction and damage, leading to such symptoms as xerostomia, xeropthalmia, atrophic vulvovaginitis, xerotrachea, and pulmonary pneumonitis. This disease process affecting the oral cavity and other organs in the body places a significant burden on overall management of systemic autoimmune disease.

Dry mouth (xerostomia) due to a systemic disease pathology is a leading component of Sjögren's disease^a and occurs frequently in patients with lupus,^{b,c} RA,^d and scleroderma,^e leading to devastating consequences for those who suffer from these diseases. Eleven ICD codes under Sjögren's demonstrate that Sjögren's is truly a systemic autoimmune disease that includes dental involvement^f as an integral, common, and serious diagnosis and has a specific M35 ICD code citing this complication.^f Dry mouth can lead to systemic issues, as noted below.

While the risk of cancer is higher overall in autoimmune diseases, including Sjögren's, lupus, RA, and psoriasis, the salivary glands are a key site affected by Sjögren's and for the development of Mucosa-Associated Lymphoid Tissue (MALT) non-Hodgkin B-cell lymphoma. Approximately 10% of Sjögren's patients develop a non-Hodgkin B-cell lymphoma. Dental appointments are critical for examination of the major (parotid) salivary glands and minor salivary glands for potential malignancy.

Tight skin is a major manifestation of the systemic autoimmune disease scleroderma; this complication leads to a small mouth opening, creating difficulty with eating and caring for teeth. A wide range of oral complications in scleroderma are delineated in 3 case studies. Oral ulcerations are dominant features of SLE and Behçet's disease but also occur frequently in Sjögren's, scleroderma, and RA. Swallowing difficulties (dysphagia) are dominant features of

scleroderma and Sjögren's, SLE and RA as well.²² Oral infection such as thrush and periodontal disease are increased in all of these autoimmune diseases.²³

When oral manifestations are not managed and treated in a timely manner, complications and damage often lead to extensive oral problems and effects on systemic health and quality of life.

Oral Manifestations of Autoimmune Disease

Proper oral care for the following conditions can help prevent systemic features such as weight loss, malnutrition, infection, and inflammation.

Xerostomia (dry mouth)

Hyposalivation causes xerostomia and leads to rampant caries, chipping and breaking of teeth, and tooth erosion and loss. g,h,i,j Dental fillings and crowns are a common need in dry mouth patients. Dentures do not work well in a dry mouth, so dental implants are often needed once someone loses teeth due to caries l,m,n,o,p,q,r,s,t,u and breakage. Implants can be successful but are sometimes subject to failure. V

Saliva not only protects the teeth and keeps the oral mucosa healthy, but it is vital to proper digestion and gastrointestinal function. Lack of saliva leads to frequent infection, including thrush, and oral sores and ulcers. Diminished saliva also affects the tongue, causing atrophy of tongue papillae, and thereby affecting one's sense of taste, and causing epithelial cell disturbance of the oral mucosa and the tongue. Candida often develops at the corners of the mouth (angular cheilitis) due to a dry mouth. Periodontal disease also is increased in these diseases and can lead to tooth loss. Ab, ac, ad, ae, af

Loss of taste can lead to loss of appetite and systemic manifestations of weight loss and malnutrition and an overall reduction in quality of life.²⁷ Dry mouth makes it difficult to swallow (dysphagia) and digest foods. Sjögren's dysphagia and other autonomic symptoms that affect speech and mobility may involve a disorder of the vagus nerve, which could play a significant role in the proper function of oral processes and demonstrating nervous system involvement in oral complications.^{28,29,30,ag,ah}

Gastro-Esophageal Reflux Disease (GERD, acid reflux)

GERD frequently accompanies autoimmune diseases, causing chest and throat pain, a dramatic increase in tooth decay and erosion, and esophageal lesions that can lead to the development of cancer. 31,32

Microstomia (small mouth) and tightness of oral mucosa

Microstomia^{ai} and tightness of oral mucosa occur most commonly in the systemic autoimmune disease, scleroderma. These complications make it difficult for patients and professionals to clean one's teeth, cause the gums (gingiva) to pull away from teeth, ^{ak,al,am,an,ao,ap,aq} limits tongue movement, and creates difficulty in drawing lips together to kiss or chew food properly.³³

Myofacial pain and temporomandibular joint (TMJ) pain

Myofacial pain and TMJ pain can affect one's ability to chew. This may occur in scleroderma, Sjögren's, lupus, and RA. ar,as,at,au,av

These manifestations demonstrate the difficulty in trying to separate systemic features from oral involvement in autoimmune disease.

Impact of Oral Manifestations in Autoimmune Disease on Systemic Symptoms and QOL

Oral repercussions of systemic autoimmune diseases can decrease quality of life (QOL) substantially in addition to aggravating systemic symptoms of the disease. An inability to chew and swallow food affects enjoyment of eating, participation in social gatherings, and good nutrition. The World Health Organization (WHO) states that "Oral health affects people physically and psychologically and influences how they grow, enjoy life, look, speak, chew, taste food and socialize, as well as their feelings of social well-being." Oral pain and infection affects one's ability to talk, and as such, affects relationships, social interactions and obtaining social support, and the ability to work or develop one's career. 35

Lower QOL is correlated with oral manifestations of autoimmune disease in several key studies. A 2021 study delineated the impact of orofacial symptoms in limited scleroderma on QOL and cites the lowest QOL in those with anxiety, embarrassment, and self-consciousness over their oral condition.³⁶ A 2018 study of 60 Sjögren's and 60 matched healthy controls found a substantial decrease in health-related QOL scores in Sjögren's patients with lower unstimulated salivary flow.³⁷Another study connects repercussions of dry mouth, such as bad breath (halitosis), sense of smell and taste, and burning mouth, with lower quality of life.³⁸

Good nutrition is affected by oral health and the ability to chew, swallow, and digest foods properly.³⁹ Tooth loss and the subsequent need for dentures has been linked to poor nutritive intake,⁴⁰ while obtaining treatment with proper-fitting dentures may improve nutritional status.⁴¹

Quality of life in autoimmune disease patients can be improved substantially through better oral care and limiting systemic repercussions caused by oral involvement in such patients.

Role of the Dentist in Diagnosing Systemic Autoimmune Disease

Systemic autoimmune diseases can be severe and involve life-threatening complications, so obtaining a correct diagnosis of an autoimmune disease is critical to proper care and preventing devastating complications and even death. Hyposalivation, rampant caries, oral ulceration, periodontal disease, swallowing disorders (dysphagia), and temporomandibular joint disorders might be the first sign of an autoimmune, rheumatic disease. Examples of a dentist diagnosing scleroderma are provided in two case reports. The dentist also might be the first to identify the rampant caries and oral infection due to dry mouth, which can lead to referral to medical specialists who can identify whether the patient has Sjögren's disease, SLE, RA, or scleroderma. In the case of Sjögren's, for example, the American Dental Association (ADA) stated that dental professionals often detect Sjögren's disease first due to its oral manifestations. In addition, oral

symptoms were the first symptom experienced as part of their Sjögren's by more than half of patients in one Sjögren's Foundation survey⁴⁴ and cited as the most prevalent symptom in the Sjögren's Foundation 2016 national patient survey.⁴⁵ Painful oral ulcerations (aphthosis) can be a presenting symptom of SLE and jaw claudication^{aw} a presenting symptom of giant cell arteritis.⁵ If a patient does not have access to regular dental care, these diagnoses may be missed and proper care for a patient's autoimmune disease not obtained.

The role of the dentist is critical to diagnosis and subsequently treat oral and systemic aspects of autoimmune disease.

<u>Therapies Used to Treat Autoimmune Disease Can Complicate the Oral Impact on Systemic Disease</u>

Commonly prescribed agents in autoimmune diseases include nonsteroidal anti-inflammatory disease agents (NSAIDs), corticosteroids, and immunosuppressive therapies. Use of these agents can exacerbate oral symptoms and their effects on systemic manifestations of autoimmune disease. Sometimes essential medications are not prescribed because of side effects that include increased oral complications.

NSAIDs can contribute to GERD and its many oral and systemic complications, including damage to teeth, the oral mucosal lining, and the esophagus. The most common treatment for GERD, proton pump inhibitors, can contribute to renal disease (already an issue in lupus and Sjögren's), bone fractures, and intestinal infection. ⁴⁶ Corticosteroids can cause significant bone loss, joint pain in the mouth and damage to the bones of the mouth and jaw as well as increase the risk for gingivitis. ⁴⁷ Patients taking immunosuppressants experience more TMJ impairment and a possible increased risk of oral and other cancers. ⁴⁸ While a mainstay of RA treatment, use of TNF-alpha therapies are discouraged for use in Sjögren's patients unless those patients also have RA or RA features in addition to their Sjögren's because of a potential for increased risk of lymphoma development in those with Sjögren's. ⁴⁹ Autoimmune patients already are at increased risk of developing cancers, with Sjögren's, of all autoimmune diseases, having the highest risk of lymphoma and other cancers. ⁵⁰

Immunosuppression is a broadly shared condition by individuals with autoimmune diseases since many require disease modifying drugs to manage symptoms. Pharmaceuticals generally include cautionary guidance about the heightened risk of infection-related complications when on immunosuppressive therapies. Because dental caries and periodontal diseases are bacterial infections, they can seed complications such as sepsis, dissecting facial space abscesses, Ludwig's angina, and cellulitis – especially when individuals are immunocompromised. Physicians across the medical specialties involved in treating colitis, Crohn's, lupus, multiple sclerosis, RA, and Sjogren's have acknowledged that dental treatment to resolve dental infections can therefore be integral to improving outcomes among patients requiring long-term use of immunosuppressive medications.

Additional medications taken by some autoimmune disease patients can have oral ramifications as well. For example, therapies to prevent osteoporosis can cause necrosis of the jaw,^{51,52} increasing jaw and facial bone issues already underlying autoimmune diseases. Bone health is

critical for success of dental implants.^{ax} Finally, use of anticoagulants when lupus and Sjögren's patients are positive for antiphospholipid antibodies calls for dental care.

Dentists must have a collaborative role in autoimmune disease treatments, as oral repercussions of therapies can occur and oral treatment can impact the autoimmune disease.

Access to treatment

Patients with autoimmune diseases face extremely difficult challenges from a systemic health, quality of life, and financial perspective. These patients often face barriers in obtaining proper care — especially oral care — to ensure their autoimmune conditions are diagnosed, monitored properly and controlled, and oral damage and systemic repercussions mitigated. Collaboration among all medical specialists is critical to good care and must include dentists and oral medicine specialists who are in communication with the rheumatologist and family care physician, oncologist, gastroenterologist, neurologist, pulmonologist, nephrologist, dermatologist, and gynecologist to develop and follow a plan of care together for autoimmune disease patients.

Autoimmune disease patients already face difficulty with finding knowledgeable dentists and those willing to treat the oral manifestations of their systemic disease. A study by Leader *et al* in 2014 surveyed 269 Massachusetts dentists and found that slightly more than half stated that their knowledge of systemic sclerosis was too low to safely treat these patients. As mentioned earlier, difficulty with self and professional care of the oral cavity is increased in scleroderma patients with tightened skin and a small mouth. RA patients also face exceptional difficulties with oral hygiene practice because of joint swelling in the hands and wrists, and professional oral care can prove difficult for these patients because of the supine positioning in a dental care setting. Because lower QOL is shown to be associated with oral issues in autoimmune disease, our hope is that patients' QOL would increase when they can obtain access to the proper care for improving the oral health components of their autoimmune disease.

Lower socioeconomic status (SES) has been linked to worse outcomes overall and worsening symptoms. For example, an increased risk of orofacial pain has been associated with lower SES.⁵⁵ Lupus patients have demonstrated worse outcomes with all disease manifestations when of lower SES and subsequent lack of optimal care.^{56,57} The risk for severe periodontitis is increased in those of lower SES, lower education, and persons of Hispanic or African American descent,^{58,59} leading to a greater systemic impact in this population and especially when they also have autoimmune disease.

CMS inclusion of oral care for all seniors with autoimmune disease will increase necessary access to an integral part of these patients' autoimmune disease and prevent the higher risk of systemic complications in this particularly vulnerable population.

Age 65+ as a Highly Vulnerable Population

While autoimmune diseases overall can affect people of any age, sex, ethnicity and race, persons aged 65 and older are particularly vulnerable to developing complications from oral manifestations of their disease. For example, compounded complications may occur due to older age and Sjögren's disease. Sjögren's is most frequently diagnosed in persons who are middle aged although the disease can be manifested at any age. Increased oral complications already are increased in an older population 42,63,64,65 and further exacerbate a complex, systemic medical situation.

Seniors tend to take more medications than others, and many medications have anticholinergic properties, meaning that they increase the chronic dry mouth found in many autoimmune diseases and therefore the many complications from dry mouth both in the oral cavity and systemically. ⁶⁶ Antihypertensives, antidepressants, angiotensin-converting enzyme inhibitors, calcium channel blockers, beta blockers, and diuretics contribute to the worsening of dry mouth. Autoimmune patients often suffer from coexisting conditions for which these medications are prescribed, such as hypertension, depression and anxiety. As the incidence of cancer increases with age and autoimmune disease, the radiation that is often prescribed reduces salivary gland function even further. Head and Neck Cancer patients (HNC) have an increased risk of hyposalivation similar to that in Sjögren's, contributing to dental caries and loss of teeth following radiotherapy (RT). Also, for these patients, lack of regular visits to the dentist in the past 12 months were identified as a risk factor for tooth failure. Osteoradionecrosis (ORN) is an avoidable complication for those who receive RT, and it is not surprising that approximately 50% of all ORN cases are associated with post-RT dental extractions. Therefore, fluoride and routine access to dental care are significant in reducing the caries burden in HNC after radiotherapy, just as it is in the hyposalivation that can occur in autoimmune disease. 67,68

A 2011-2016 National Health and Nutrition Examination Survey⁶⁹ found that persons older than 50 years of age were more likely to lack a functional dentition (i.e., with fewer than 20 teeth remaining) and severe tooth loss (less than eight teeth remaining). Persons who had chronic conditions in addition to older age were much more likely to suffer from severe tooth loss, elucidating an increased need for better oral care and physician-dentist collaboration⁷⁰ in management and treatment. As mentioned previously, tooth loss affects the ability to eat and can lead to malnutrition and weight loss.

One in 10 Americans aged 65 years and older experience severe periodontitis, ⁷¹ and coupled with the fact that periodontitis is increased in autoimmune diseases, these patients are at much higher risk of the systemic impact of periodontitis. Gingival recession and attachment loss increases with age and increases the risk for tooth loss and periodontal disease. ⁷²

Greater susceptibility to infection and inflammation brought on by periodontal disease and autoimmune processes along with other increased risks cited for those aged 65 and older pose a significant public health problem for older Americans with autoimmune disease.⁷³

Summary

We urge CMS to offer critical aid to persons with systemic autoimmune disease by covering their medically necessary dental care and procedures so they can live life with better health outcomes and reduce the disease burden on these patients and their families. The oral manifestations experienced by autoimmune disease patients are caused by a systemic disease process, and poor oral health contributes to a higher risk of autoimmune disease features developing and/or worsening. Access to regular dental appointments and proper oral care are critical for older Americans with autoimmune disease for improved systemic health outcomes.

Sincerely,

Katherine M. Hammitt, MA Vice President of Medical and Scientific Affairs Sjögren's Foundation

For additional information please contact: Katherine M. Hammitt: khammitt@sjogrens.org

Table 1: 2023 ICD-10 Codes for Dental Manifestations of Autoimmune Disease

Reference Letter	ICD Code	Code Description
a	<u>M35.0</u>	Sjögren syndrome
b	<u>M32.9</u>	Systemic lupus erythematosus, unspecified
c	M32.10	Systemic lupus erythematosus, organ or system
		involvement unspecified
d	<u>M05.9</u>	Rheumatoid arthritis with rheumatoid factor,
		unspecified
e	<u>M34</u>	Systemic sclerosis [scleroderma]
f	M35.0C	Sjögren syndrome with dental involvement
g	<u>K02.7</u>	Primary dental caries, root surface origin
h	<u>K02.5</u>	Dental caries on chewing surface of tooth
i	<u>K03.2</u>	Erosion of teeth due to drugs, medicaments,
		diet and vomiting
j	<u>K03.81</u>	Cracked tooth
k	<u>Z98.811</u>	Dental crown and filling status
1	<u>M27.69</u>	Other endosseous dental implant failure
m	<u>K08.431</u>	Partial loss of teeth due to caries, class I

n	V09 422	Destinations of teath due to series along II
n	<u>K08.432</u>	Partial loss of teeth due to caries, class II
0	<u>K08.433</u>	Partial loss of teeth due to caries, class III
p	K08.434	Partial loss of teeth due to caries, class IV
q	<u>K08.439</u>	Partial loss of teeth due to caries, unspecified class
r	<u>K08.491</u>	Partial loss of teeth due to other specified cause, class I
S	<u>K08.492</u>	Partial loss of teeth due to other specified cause, class II
t	<u>K08.493</u>	Partial loss of teeth due to other specified cause, class III
u	<u>K08.494</u>	Partial loss of teeth due to other specified cause, class IV
V	<u>K08.499</u>	Partial loss of teeth due to other specified cause, unspecified class
W	<u>K12.39</u>	Other oral mucositis (ulcerative)
X	<u>K13.79</u>	Other lesions of oral mucosa
у	K14.4	Atrophy of tongue papillae
Z	K13.29	Other disturbances of oral epithelium, including tongue
aa	<u>B37.83</u>	Candidal cheilitis
ab	K08.421	Partial loss of teeth due to periodontal diseases, class I
ac	K08.422	Partial loss of teeth due to periodontal diseases, class II
ad	K08.423	Partial loss of teeth due to periodontal diseases, class III
ae	K08.424	Partial loss of teeth due to periodontal diseases, class IV
af	K08.429	Partial loss of teeth due to periodontal diseases due to unspecified class
ag	F44.4	Conversion disorder with motor symptom or deficit
ah	<u>G52.2</u>	Disorders of vagus nerve
ai	Q18.5	Microstomia
ak	K06.011	Localized gingival recession, minimal
al	K06.012	Localized gingival recession, moderate
am	K06.013	Localized gingival recession, severe
an	K06.020	Localized gingival recession, unspecified
ao	K06.021	Generalized gingival recession, minimal
ap	K06.022	Generalized gingival recession, moderate
aq	K06.023	Generalized gingival recession, severe
ar	R68.84	Jaw pain
as	M27.2	Inflammatory conditions of jaws
at	M26.641	Arthritis of right temporomandibular joint

au	M26.642	Arthritis of left temporomandibular joint
av	M26.643	Arthritis of bilateral temporomandibular joint
aw	<u>S03.0</u>	Dislocation of jaw
ax	M27.61	Osseointegration failure of dental implant

Autoimmune Disease Patient Advocacy Groups represented on this proposal:

Sjögren's Foundation

Arthritis Foundation

Autoimmune Association

International Foundation for Autoimmune & Autoinflammatory Arthritis (AIArthritis)

Lupus and Allied Diseases Association, Inc.

Lupus Foundation of America

National Scleroderma Foundation

Physician supporters and representatives:

Rheumatology:

Alan Baer, MD, Director of the Jerome L. Greene Sjögren's Syndrome Center, Johns Hopkins University; Chair, Sjögren's Foundation Medical and Scientific Advisory Council

Richard M. Silver, MD, Rheumatologist and Director of the Scleroderma Center, Medical University of South Carolina: Member, Medical and Scientific Advisory Board of the National Scleroderma Foundation

Senada Arabelovic, DO, Rheumatology, Brigham and Women's Hospital, Boston

Matthew Basiaga, DO, MSCE, Division of Pediatric Rheumatology, Mayo Clinic School of Medicine, Minnesota

Cassandra Calabrese, DO, Rheumatology, Cleveland Clinic Foundation

Nancy Carteron, MD, Rheumatology-Immunology, University of California, Berkeley & San Francisco; UC Berkeley Sjögren's Clinic

Robert Fox, MD, PhD, Chief of Rheumatology, Scripps Memorial Hospital & Research Foundation, La Jolla

Arthur I Grayzel, MD, MACR, Rheumatologist; formerly, University Hospital for Albert Einstein College of Medicine, New York; Past Chair, Sjögren's Foundation

Janet Lewis, MD, Chief, Division of Rheumatology, University of Virginia Health System Scott M Lieberman, MD, PhD, Rheumatologist and Associate Professor of Pediatrics, Carver

College of Medicine, University of Iowa

Sara S. McCoy, MD, PhD, Rheumatology, University of Wisconsin

Chokkalingam Siva, MD, Division of Rheumatology, University of Missouri School of Medicine Daniel Small, MD, Faculty, Alix Medical School of Mayo Clinic, Mayo Clinic Family Medicine Residency Program, Minnesota

Donald Thomas, MD, FACP, FACR, RhMSUS, Rheumatology practice and Clinical Associate

Professor of Medicine, Uniformed Services University of the Health Sciences, Bethesda Edward L. Treadwell, MD, Professor of Medicine/Rheumatology-Immunology, Department of Internal Medicine, Brody School of Medicine-East Carolina University

Elizabeth Volkmann, MD, MS, Division of Rheumatology, David Geffen School of Medicine, University of California Los Angeles

Daniel J. Wallace, MD, FACP, MACR, Associate Director, Rheumatology Fellowship Program; Board of Governors, Cedars-Sinai Medical Center; Professor of Medicine, Cedars-Sinai Medical Center and David Geffen School of Medicine at University of California Los Angeles

Neurology:

Brent P. Goodman, MD

Neurology, Mayo Clinic, Arizona

Eduardo Adonias De Sousa, MD

Neurology, Mercy Neurology Clinic Moore, Oklahoma City

Steven Mandel, MD, Clinical Professor of Neurology, Donald and Barbara Zucker School of Medicine, Hofstra/ Northwell School of Medicine, and Adjunct Professor of Medicine, New York Medical College

Oral Medicine Proposal Team:

Athena Papas, DMD, PhD, Tufts University School of Dental Medicine

Ava Wu, DDS, University of California San Francisco School of Dentistry and University of California Berkeley Sjogren's Clinic

Domenica Giovanna Ciaglia Sweier, DDS, PhD, Clinical Professor. Director of Predoctoral Clinical Education. Director of Geriatric Dentistry, University of Michigan School of Dentistry

Michael Brennan, DDS, MHS, Carolinas Medical Center

Vidya Sankar, DMD, MHS, Tufts University School of Dental Medicine

References

¹ Nair, Soumya et al. "Role of autoimmune responses in periodontal disease." *Autoimmune Diseases*, vol. 2014 (2014): 596824. doi:10.1155/2014/596824

² Griffin, Susan O et al. "Burden of oral disease among older adults and implications for public health priorities." *American Journal of Public Health*, vol. 102,3 (2012): 411-8. doi:10.2105/AJPH.2011.300362

³ Kotronia, Eftychia et al. "Oral health and all-cause, cardiovascular disease, and respiratory mortality in older people in the UK and USA." *Scientific Reports*, vol. 11,1 16452. 12 Aug. 2021, doi:10.1038/s41598-021-95865-z

⁴ Sanz, Mariano et al. "Periodontitis and cardiovascular diseases: Consensus report." *Journal of Clinical Periodontology*, vol. 47,3 (2020): 268-288. doi:10.1111/jcpe.13189

⁵ D'Aiuto, Francesco et al. "Evidence that periodontal treatment improves biomarkers and CVD outcomes." *Journal of Periodontology*, vol. 84,4 Suppl (2013): S85-S105. doi:10.1902/jop.2013.134007

⁶ Holmlund, Anders et al. "Number of teeth as a predictor of cardiovascular mortality in a cohort of 7,674 subjects followed for 12 years." *Journal of Periodontology*, vol. 81,6 (2010): 870-6. doi:10.1902/jop.2010.090680

⁷ Zhang S, Yang F, Wang Z, Qian X, Ji Y, Gong L, et al. (2020) Poor oral health conditions and cognitive decline: Studies in humans and rats. *PLoS ONE*, 15(7): e0234659. https://doi.org/10.1371/journal.pone.0234659

⁸ Manger, D et al. "Evidence summary: the relationship between oral health and pulmonary disease." *British Dental Journal*, vol. 222,7 (2017): 527-533. doi:10.1038/sj.bdj.2017.315

⁹ Aquino-Martinez, Ruben, and Scarlette Hernández-Vigueras. "Severe COVID-19 Lung Infection in Older People and Periodontitis." *Journal of Clinical Medicine* vol. 10,2 279. 14 Jan. 2021, doi:10.3390/jcm10020279

¹⁰ Al-Beltagi, Mohammed et al. "COVID-19 disease and autoimmune disorders: A mutual pathway." *World Journal of Methodology*, vol. 12,4 200-223. 20 Jul. 2022, doi:10.5662/wjm.v12.i4.200

- ¹¹ Maddur, Mohan S et al. "Autoimmunity as a predisposition for infectious diseases." *PLoS Pathogens*, vol. 6,11 e1001077. 4 Nov. 2010, doi:10.1371/journal.ppat.1001077
- ¹² Julkunen, Anna et al. "Autoimmune Diseases and Oral Health: 30-Year Follow-Up of a Swedish Cohort." *Dentistry Journal*, vol. 6,1 1. 22 Dec. 2017, doi:10.3390/dj6010001
- ¹³ Rowen, Robert Jay. "Remission of aggressive autoimmune disease (dermatomyositis) with removal of infective jaw pathology and ozone therapy: review and case report Autoimmunity Highlights." *Autoimmunity Highlights*, 30 June 2018, https://autoimmunhighlights.biomedcentral.com/articles/10.1007/s13317-018-0107-z#citeas. Accessed 5 January 2023.
- ¹⁴ Olsen, Ingar, and Kazuhisa Yamazaki. "Can oral bacteria affect the microbiome of the gut?." *Journal of Oral Mmicrobiology*, vol. 11,1 1586422. 18 Mar. 2019, doi:10.1080/20002297.2019.1586422
- ¹⁵ Clemente, Jose C et al. "The role of the gut microbiome in systemic inflammatory disease." *BMJ* (Clinical research ed.) vol. 360 j5145. 8 Jan. 2018, doi:10.1136/bmj.j5145
- ¹⁶ Martínez-García, Mireya, and Enrique Hernández-Lemus. "Periodontal Inflammation and Systemic Diseases: An Overview." *Frontiers in Physiology*, vol. 12 709438. 27 Oct. 2021, doi:10.3389/fphys.2021.709438
- ¹⁷ Fragkioudaki, Sofia et al. "Predicting the risk for lymphoma development in Sjogren syndrome: An easy tool for clinical use." *Medicine*, vol. 95,25 (2016): e3766. doi:10.1097/MD.0000000000003766
- ¹⁸ Ekström Smedby, Karin et al. "Autoimmune disorders and risk of non-Hodgkin lymphoma subtypes: a pooled analysis within the InterLymph Consortium." *Blood*, vol. 111,8 (2008): 4029-38. doi:10.1182/blood-2007-10-119974
- ¹⁹ Goulabchand, Radjiv et al. "Cancer incidence in primary Sjögren's syndrome: Data from the French hospitalization database." *Autoimmunity Reviews*, vol. 20,12 (2021): 102987. doi:10.1016/j.autrev.2021.102987
- ²⁰ Hernández-Molina, Gabriela et al. "Characterization and outcomes of 414 patients with primary SS who developed hematological malignancies." *Rheumatology (Oxford, England)*, keac205. 6 Apr. 2022, doi:10.1093/rheumatology/keac205
- ²¹ Panchbhai, Arati et al. "Review of orofacial considerations of systemic sclerosis or scleroderma with report of analysis of 3 cases." *Indian Journal of Dentistry*, vol. 7,3 (2016): 134-139. doi:10.4103/0975-962X.186702

²² Stathopoulos, Panos, and Marinos C Dalakas. "Autoimmune Neurogenic Dysphagia." *Dysphagia*vol. 37,3 (2022): 473-487. doi:10.1007/s00455-021-10338-9

- ²⁴ Jackowski, J., Strietzel, F.P., Hunzelmann, N. *et al.* Dental implants in patients suffering from systemic sclerosis: a retrospective analysis of clinical outcomes in a case series with 24 patients. *Int J Implant Dent* 7, 118 (2021). https://doi.org/10.1186/s40729-021-00398-9
- ²⁵ Tiwari, Manjul. "Science behind human saliva." *Journal of Natural Science, Biology, and Medicine*, vol. 2,1 (2011): 53-8. doi:10.4103/0976-9668.82322
- ²⁶ Benli, Merve, et al. "Orofacial Manifestations and Dental Management of Systemic Lupus Erythematosus: A Review." *Oral Diseases*, vol. 27, no. 2, 2020, pp. 151–167. https://doi.org/10.1111/odi.13271.
- ²⁷ Risso, Davide et al. "Alteration, Reduction and Taste Loss: Main Causes and Potential Implications on Dietary Habits." *Nutrients*, vol. 12,11 3284. 27 Oct. 2020, doi:10.3390/nu12113284
- ²⁸ Goodman, Brent P et al. "Spectrum of Autonomic Nervous System Impairment in Sjögren Syndrome." *The Neurologist*, vol. 22,4 (2017): 127-130. doi:10.1097/NRL.000000000000134
- ²⁹ Brunetta, Enrico et al. "Autonomic Abnormalities in Patients With Primary Sjögren's Syndrome Preliminary Results." *Frontiers in Physiology*, vol. 10 1104. 27 Aug. 2019, doi:10.3389/fphys.2019.01104
- ³⁰ Tarn, Jessica et al. "The Effects of Noninvasive Vagus Nerve Stimulation on Fatigue and Immune Responses in Patients With Primary Sjögren's Syndrome." *Neuromodulation: Journal of the International Neuromodulation Society*, vol. 22,5 (2019): 580-585. doi:10.1111/ner.12879
- ³¹ Nota, Alessandro et al. "Correlation between Bruxism and Gastroesophageal Reflux Disorder and Their Effects on Tooth Wear. A Systematic Review." *Journal of Clinical Medicine*, vol. 11,4 1107. 19 Feb. 2022, doi:10.3390/jcm11041107
- ³² Kellerman, Rick, and Thomas Kintanar. "Gastroesophageal Reflux Disease." *Primary Care*, vol. 44,4 (2017): 561-573. doi:10.1016/j.pop.2017.07.001
- ³³ Eversole, L R et al. "Oral and gingival changes in systemic sclerosis (scleroderma)." *Journal of Periodontology*, vol. 55,3 (1984): 175-8. doi:10.1902/jop.1984.55.3.175
- ³⁴ Sheiham, Aubrey. "Oral health, general health and quality of life." *Bulletin of the World Health Organization*, vol. 83,9 (2005): 644.

²³ Gualtierotti, Roberta et al. "Main Oral Manifestations in Immune-Mediated and Inflammatory Rheumatic Diseases." *Journal of Clinical Medicine*, vol. 8,1 21. 25 Dec. 2018, doi:10.3390/jcm8010021

³⁵ Bowman, Simon J et al. "Estimating indirect costs in primary Sjögren's syndrome." *The Journal of Rheumatology*, vol. 37,5 (2010): 1010-5. doi:10.3899/jrheum.090734

- ³⁷ Fernández-Martínez, Gladyz et al. "Oral health-related quality of life in primary Sjögren's syndrome." "Calidad de vida oral en pacientes con síndrome de Sjögren primario." *Reumatologia Clinica*, vol. 16,2 Pt 1 (2020): 92-96. doi:10.1016/j.reuma.2018.04.001
- ³⁸ Rusthen, Shermin et al. "Oral disorders, saliva secretion, and oral health-related quality of life in patients with primary Sjögren's syndrome." *European Journal of Oral Sciences*, vol. 125,4 (2017): 265-271. doi:10.1111/eos.12358
- ³⁹ Touger-Decker, Riva et al. "Position of the Academy of Nutrition and Dietetics: oral health and nutrition." *Journal of the Academy of Nutrition and Dietetics* vol. 113,5 (2013): 693-701. doi:10.1016/j.jand.2013.03.001
- ⁴⁰ Papas, A S et al. "The effects of denture status on nutrition." *Special Care in Dentistry: official publication of the American Association of Hospital Dentists, the Academy of Dentistry for the Handicapped, and the American Society for Geriatric Dentistry vol.* 18,1 (1998): 17-25. doi:10.1111/j.1754-4505.1998.tb01354.x
- ⁴¹ Moynihan, P, and R Varghese. "Impact of Wearing Dentures on Dietary Intake, Nutritional Status, and Eating: A Systematic Review." *JDR Clinical and Translational Research*, vol. 7,4 (2022): 334-351. doi:10.1177/23800844211026608
- ⁴² Dixit, Shantanu et al. "Scleroderma and dentistry: Two case reports." *Journal of Medical Case Reports*, vol. 10,1 297. 24 Oct. 2016, doi:10.1186/s13256-016-1086-1
- ⁴³ Department of Scientific Information, Evidence Synthesis & Translation Research, ADA Science & Research Institute, LLC. "Sjögren Disease." *American Dental Association*, 19 Oct. 2021, www.ada.org/resources/research/science-and-research-institute/oral-health-topics/sjogren-disease.
- ⁴⁴ Fox, Philip C et al. "Oral involvement in primary Sjögren syndrome." *Journal of the American Dental Association (1939)* vol. 139,12 (2008): 1592-601. doi:10.14219/jada.archive.2008.0101
- ⁴⁵ McCoy, Sara S et al. "A comprehensive overview of living with Sjögren's: results of a National Sjögren's Foundation survey." *Clinical Rheumatology* vol. 41,7 (2022): 2071-2078. doi:10.1007/s10067-022-06119-w
- ⁴⁶ Kellerman, Rick, and Thomas Kintanar. "Gastroesophageal Reflux Disease." *Primary Care* vol. 44,4 (2017): 561-573. doi:10.1016/j.pop.2017.07.001
- ⁴⁷ Beeraka, Swapna Sridevi et al. "Clinical and radiological assessment of effects of long-term corticosteroid therapy on oral health." *Dental Research Journal*, vol. 10,5 (2013): 666-73.

³⁶ Beaty, Krista L et al. "Oral Health Experiences of the Limited Scleroderma Patient." *Journal of Dental Hygiene: JDH*, vol. 95,4 (2021): 59-69.

⁴⁸ Hirai, Hideaki, et al. "Clinical Course of Oral Squamous Cell Carcinoma in Patients on Immunosuppressant and Glucocorticoid Therapy." *Journal of Oral and Maxillofacial Surgery*, vol. 75, no. 9, 2017, pp. 1980-1986, https://www.joms.org/article/S0278-2391(17)30075-7/fulltext#%20.

- ⁴⁹ Carsons, Steven E et al. "Treatment Guidelines for Rheumatologic Manifestations of Sjögren's Syndrome: Use of Biologic Agents, Management of Fatigue, and Inflammatory Musculoskeletal Pain." *Arthritis Care & Research*, vol. 69,4 (2017): 517-527. doi:10.1002/acr.22968
- ⁵⁰ Mackay, I R, and N R Rose. "Autoimmunity and lymphoma: tribulations of B cells." *Nature Immunology*, vol. 2,9 (2001): 793-5. doi:10.1038/ni0901-793
- ⁵¹ Ruggiero, Salvatore L et al. "American Association of Oral and Maxillofacial Surgeons position paper on medication-related osteonecrosis of the jaw--2014 update." *Journal of Oral and Maxillofacial Surgery: official journal of the American Association of Oral and Maxillofacial Surgeons*, vol. 72,10 (2014): 1938-56. doi:10.1016/j.joms.2014.04.031
- ⁵² Ferreira Jr, Luiz H Jr et al. "Bisphosphonate-associated osteonecrosis of the jaw." *Minerva Dental and Oral Science*, vol. 70,1 (2021): 49-57. doi:10.23736/S2724-6329.20.04306-X
- ⁵³ Leader, David et al. "A survey of dentists' knowledge and attitudes with respect to the treatment of scleroderma patients." *Journal of clinical rheumatology: practical reports on rheumatic & musculoskeletal diseases* vol. 20,4 (2014): 189-94. doi:10.1097/RHU.0000000000000102
- ⁵⁴ Chan, Alice Kit Ying et al. "Common Medical and Dental Problems of Older Adults: A Narrative Review." *Geriatrics (Basel, Switzerland)*, vol. 6,3 76. 6 Aug. 2021, doi:10.3390/geriatrics6030076
- ⁵⁵ Riley, Joseph L 3rd et al. "Socioeconomic and demographic disparities in symptoms of orofacial pain." *Journal of Public Health Dentistry*, vol. 63,3 (2003): 166-73. doi:10.1111/j.1752-7325.2003.tb03495.x
- ⁵⁶ Sagy, Iftach et al. "Lower socioeconomic status worsens outcome of patients with systemic lupus erythematosus independently of access to healthcare." *Lupus* vol. 31,5 (2022): 532-540. doi:10.1177/09612033221084518
- ⁵⁷ Walker, Amanda M et al. "Influence of Socio-Demographic Factors in Patients With Cutaneous Lupus Erythematosus." *Frontiers in Medicine* vol. 9 916134. 11 Jul. 2022, doi:10.3389/fmed.2022.916134
- ⁵⁸ Borrell, Luisa N, and Natalie D Crawford. "Social disparities in periodontitis among United States adults 1999-2004." *Community Dentistry and Oral Epidemiology*, vol. 36,5 (2008): 383-91. doi:10.1111/j.1600-0528.2007.00406.x

- ⁶⁰ Donaldson, Mark et al. "Managing the care of patients with Sjögren syndrome and dry mouth: comorbidities, medication use and dental care considerations." *Journal of the American Dental Association* (1939), vol. 145,12 (2014): 1240-7. doi:10.14219/jada.2014.83
- ⁶¹ Patel, Ruchika, and Anupama Shahane. "The epidemiology of Sjögren's syndrome." *Clinical Epidemiology*, vol. 6 247-55. 30 Jul. 2014, doi:10.2147/CLEP.S47399
- ⁶² Enoki, Kaori et al. "Influence of xerostomia on oral health-related quality of life in the elderly: a 5-year longitudinal study." *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*, vol. 117,6 (2014): 716-21. doi:10.1016/j.oooo.2014.03.001
- ⁶³ Thomson, W M et al. "The occurrence of xerostomia and salivary gland hypofunction in a population-based sample of older South Australians." *Special Care in Dentistry: official publication of the American Association of Hospital Dentists, the Academy of Dentistry for the Handicapped, and the American Society for Geriatric Dentistry* vol. 19,1 (1999): 20-3. doi:10.1111/j.1754-4505.1999.tb01363.x
- ⁶⁴ Murray Thomson, W et al. "A longitudinal study of medication exposure and xerostomia among older people." *Gerodontology* vol. 23,4 (2006): 205-13. doi:10.1111/j.1741-2358.2006.00135.x
- ⁶⁵ Locker, David. "Dental status, xerostomia and the oral health-related quality of life of an elderly institutionalized population." *Special Care in Dentistry: official publication of the American Association of Hospital Dentists, the Academy of Dentistry for the Handicapped, and the American Society for Geriatric Dentistry* vol. 23,3 (2003): 86-93. doi:10.1111/j.1754-4505.2003.tb01667.x
- ⁶⁶ National Institutes of Health. "Oral Health in America: Advances and Challenges." *National Institute of Dental and Craniofacial Research*, 6 December 2021, https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf.
- ⁶⁷ Brennan, M T et al. "Dental Caries Postradiotherapy in Head and Neck Cancer." *JDR Clinical and Translational Research*, 23800844221086563. 11 Apr. 2022, doi:10.1177/23800844221086563
- ⁶⁸ Brennan, Michael T et al. "Tooth Failure Post-Radiotherapy in Head and Neck Cancer: Primary Report of the Clinical Registry of Dental Outcomes in Head and Neck Cancer Patients (OraRad) Study." *International Journal of Radiation Oncology, Biology, Physics*, vol. 113,2 (2022): 320-330. doi:10.1016/j.ijrobp.2021.11.021

⁵⁹ Eke, Paul I et al. "Periodontitis prevalence in adults \geq 65 years of age, in the USA." *Periodontology* 2000, vol. 72,1 (2016): 76-95. doi:10.1111/prd.12145

⁶⁹ "NHANES - About the National Health and Nutrition Examination Survey." CDC, 2022, https://www.cdc.gov/nchs/nhanes/about_nhanes.htm.

⁷⁰ Parker ML, Thornton-Evans G, Wei L, Griffin SO. Prevalence of and changes in tooth loss among adults aged ≥50 years with selected chronic conditions — United States, 1999–2004 and 2011–2016. MMWR Morbidity and Mortality Weekly Report. 2020;69(21):641–6.

⁷¹ Eke, Paul I et al. "Periodontitis in US Adults: National Health and Nutrition Examination Survey 2009-2014." *Journal of the American Dental Association (1939)* vol. 149,7 (2018): 576-588.e6. doi:10.1016/j.adaj.2018.04.023

⁷² Billings, Monisha et al. "Age-dependent distribution of periodontitis in two countries: Findings from NHANES 2009 to 2014 and SHIP-TREND 2008 to 2012." *Journal of Periodontology* vol. 89 Suppl 1,Suppl 1 (2018): S140-S158. doi:10.1002/JPER.17-0670

⁷³ Barbe, Anna Greta. "Medication-Induced Xerostomia and Hyposalivation in the Elderly: Culprits, Complications, and Management." *Drugs & Aging* vol. 35,10 (2018): 877-885. doi:10.1007/s40266-018-0588-5



December 6, 2022

Centers for Medicare & Medicaid Services Department of Health and Human Services Attention: CMS-1770-P P.O. Box 8016 Baltimore, MD 21244-8016

The National Scleroderma Foundation represents more than 300,000 people in the US impacted by scleroderma, including those living with the disease, their families and support networks, as well as healthcare providers and investigators. The Foundation is pleased to join with the Sjögren's Foundation and other interested parties in petitioning the Centers for Medicare & Medicaid Services (CMS) to revise the now restrictive definition of medically necessary dental coverage provided under Medicare Parts A and B Payment for Dental (Section II.L.).

Scleroderma is an autoimmune connective tissue disease affecting men, women, and children. People with scleroderma face unique challenges while trying to maintain their oral health. People with scleroderma are more likely to have dental conditions such as small mouth, dry mouth, periodontal disease, and temporomandibular joint disease. Many patients with scleroderma have hand involvement that negatively impacts proper dental hygiene. Additionally, gastroesophageal reflux, nutritional issues, and medications to treat scleroderma may impact the oral mucosa.

The combination of these conditions in individuals with scleroderma leads to dental caries, tooth mobility and loss of teeth. There can be resorption of bone in the jaw which can predispose to fracture of the jaw or teeth. Many individuals with scleroderma have tooth resorption (the patient's cells erode the roots of the teeth) resulting in tooth loss. There is high risk for periodontal infection and increased need for dental surgeries to address this. Additionally, a mainstay of prevention of dental complications in scleroderma is dental hygiene which needs to be accomplished by dentists and hygienists due to restriction in





hand mobility in scleroderma patients. As such, the need for expansion of dental services under Medicare Parts A and B for this patient population is paramount.

On behalf of the Medical & Scientific Advisory Board of the National Scleroderma Foundation, we welcome this opportunity to petition for the expansion of access to oral and dental care for vulnerable patient populations including those with systemic sclerosis, in alignment with the Biden-Harris Administration's commitment "to expand access to vital prevention and treatment services."

Richard M. Silver, M.D., M.A.C.R.

Jessica K. Gordon, M.D., MSc

References

- Alhendi FJ, et al. Spec Care Dentist. 2020;40:418–430.
- Puzio A, et al. Adv Clin exp Med. 2019;28(4):547-554.
- Benz K, et al. Int J Environ Res Public Health. 2021;18(10):5238.