**Xerostomia (Dry Mouth) Care Management Plan**

Xerostomia is the medical word for dry mouth due to decreased or absent saliva. This problem is quite common and is most often caused by the decreased saliva production (hyposalivation) resulting from medication use and some medical conditions such as diabetes and HIV infection.

Failure to properly deal with xerostomia in students places them at greater risk for oral health problems. Unmanaged xerostomia can lead to increased caries (enamel decalcification or cavitated lesions), periodontal disease, candidiasis and other oral lesions. This chronic care management plan is designed to give a practical and evidence-based approach to diagnosis and treatment of xerostomia and its likely complications in a population 16 – 24 years of age.

**Diagnosis:** Self-report of dry mouth; signs of dry mouth

**Education:** Students need to be educated regarding the cause of their condition; what, if any, measures they can take to reduce xerostomia; and what actions oral health providers will be taken to minimize its consequences. For example, most students don’t drink enough fluids and this often contributes to the problem. Drinking more water may be a sufficient solution.

**Treatment**: Most students can be successfully managed via lifestyle/habit changes alone. Treatment is geared toward improving saliva flow, relieving symptoms, and preventing complications. Students who have chronic conditions that require long-term medication may also benefit from therapeutic mouth rinses and a tooth paste with a higher concentration of fluoride.

* **Therapeutic Mouth Rinses**—Therapeutic mouth rinses have all of the benefits of mouthwashes. In addition, they kill the bacteria that cause plaque and gingivitis. Some therapeutic mouth rinses contain an added active ingredient such as chlorohexidine gluconate that kills the bacteria that cause plaque and gingivitis. Other mouth rinses contain sodium fluoride to make the teeth more resistant to plaque acids. Since plaque plays a role in the caries-causing cycle, reduction of plaque can assist in caries prevention. Therapeutic mouth rinses are labeled to indicate whether or not they contain alcohol. The alcohol-free mouth rinses are equally therapeutic and are recommended instead of those containing alcohol.
* **Prescription Dentrifice (toothpaste)**—The active ingredient in these prescription dentrifices is 1.1% Neutral Sodium Fluoride (5000 ppm F). Frequent application of preparations containing high concentrations of fluoride improves tooth resistance to acid dissolution and increases fluoride ion in tooth enamel.

| **Yes** | **No** |  |
| --- | --- | --- |
|  |  | **Assessment of Student’s Complaint of Dry Mouth*** Is the student unable to chew a saltine cracker and swallow it without taking a drink of water?
* Does the student have thin, foamy saliva?
* Is the student taking any of these medications on a continuing basis?
	+ anticholinergics such as oxybutynin (Ditropan), dicyclomine (Bentyl)
	+ anticonvulsants such as lamotrigene (Lamicatal), gabapentin (Neurontin), carbamazepine (Tegretol)
	+ antihistamines such as diphenhydramine (Benadryl), loratadine (Claritin)
	+ antihypertensives such as furosemide (Lasix), hydrochlorothiazide (Dyazide), atenolol (Tenormin)
	+ anxiolytics such as alprazolam (Xanax), lorazepam (Ativan), diazepam (Valium)
	+ antidepressants such as amitriptyline (Elavil), paroxetine (Paxil), venlafaxine (Effexor), mirtazapine (Remeron)
	+ major tranquilizers such as olanzapine (Zyprexa), clozapine (Clozaril), quetiapine (Seroquel)
	+ bronchodilators such as albuterol (ProAir, Ventolin), ipratropium (Atrovent)
	+ medication-assisted treatment (MAT) to treat opioid use disorders (Buprenorphine, Buprenex, Butrans, Probuphine, Belbuca, Suboxone, Sublocade, Zubsolv, Bunavail)

If any of these answers are affirmative, the center dentist should develop a Xerostomia (Dry Mouth) Care Management Plan. If these answers are negative, the student should be advised to drink more water. |
|  |  | **Establish a Xerostomia Care Plan for Student**The center dentist should note in the Student Health Record on the Chronological Record of Medical Care Standard Form 600 that a xerostomia care plan has been established for the student and that it is located in the oral health section of the student health record (SHR). Xerostomia needs to be added to the problem list in the SHR. |
|  |  | **Educate students about potential xerostomia complications*** Increased risk of developing dental caries
* Increased risk of periodontal disease
* Increased risk of candidiasis

Emphasize adherence to the prescribed medications to treat their medical conditions despite the potential Xerostomia complications |
|  |  | **Educate students about lifestyle choices*** Chew sugar-free gum or sucking on sugar-free candy (sweetened with xylitol) has been shown to help make teeth resistant to caries
* Sip cool water throughout the day
* Let ice chips melt in the mouth (don’t chew ice)
* Drink milk with meals. Whole or 2% milk has moisturizing properties to help the person swallow food better.
* Restrict caffeine intake as it also has a drying effect. Use caffeine-free tea, coffee and sodas.
* Lip balm to relieve dry lips during the day and at night
* Avoid acidic candies and foods as they can cause a sore mouth. Tart candy like sour cherry and lemon candy lowers the pH and causes enamel erosion.
* Avoid smoking tobacco or marijuana
* Avoid illicit drug use, e.g. methamphetamine (meth)
* After Buprenorphine tablets or film are completely dissolved in the oral mucosa: take a sip of water, swish gently around the teeth and gums, and swallow. Wait for at least one hour after taking Buprenorphine tablets dissolve sublingually or film dissolves buccally before brushing teeth
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|  |  | **Educate students about oral hygiene*** Recommend over-the-counter products for the students where possible such as anti-cavity fluoride mouth rinses. Teach students how to read tooth paste labels. They should select a tooth paste free of sodium lauryl sulfate, a detergent used as a foaming agent in most commercial toothpastes Biotene ® products are recommended for the treatment of dry mouth. Oralbalance ® moisturizing gel is an excellent dry mouth product.
* Recommend an alcohol-free mouth rinse
* Review oral hygiene techniques.
* Recommend Ultra Suave ® toothbrushes.
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|  |  | **Perform Caries Management by Risk Assessment (CAMBRA)*** Perform a Caries Risk Assessment (CRA)
* Assign a caries risk level
* Complete the CAMBRA Caries Risk Assessment Form
* Formulate an individualized treatment plan based upon the caries risk
* Place the student on periodic recall schedule and update the caries risk level as it changes
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|  |  | **Regular Dental and Dental Hygiene Visits*** Inform the student of conditions or symptoms that require a dental visit. These include: oral yeast infections, any oral soreness or burning sensations
* Emphasize visits to the dental hygienist as necessary to manage or prevent periodontal disease
* Emphasize visits ntist for restorative care, recall oral examinations, and fluoride varnishes
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|  |  | Perform with the student’s (or minor student guardian’s) informed consent necessary dental treatment as minimally invasive as possible to treat cavitated and noncavitated lesions |

**References:**

<http://www.nidcr.nih.gov/Health-Information/DiseasesAndConditions/DryMouthXerostomia/DryMouth.htm>

<http://www.niams.nih.gov/HI/topics/sjogrens/indez.htm>

<http://www.laclede.com>

[Buprenorphine Sublingual - FDA prescribing information, side effects and uses (drugs.com)](https://www.drugs.com/pro/buprenorphine-sublingual.html) accessed on 2/09/2022

Featherstone J, Crystal YO, Alston P, Chaffee B, Doméjean S, Rechmann P, Zhan L, Ramos-Gomez F, Evidence-Based Caries Management for All Ages-Practical Guidelines, Fontiers in Oral Health, April 2021/Volume 2 (available to download for free at <https://pubmed.gov>)

Academy of General Dentistry Fact Sheet for the Patient: [www.agd.org](http://www.agd.org)