INTEGRATED ORAL DISEASE PREVENTION AND MANAGEMENT

MODULES FOR PRIMARY HEALTH CARE WORKERS

2nd edition

Good health begins with a healthy mouth

MODULE III

ADOLESCENTS 13–18 YEARS OLD
INTEGRATED ORAL DISEASE
PREVENTION AND MANAGEMENT

Also published in Spanish (2013) with the title:
Prevención y manejo integral de las enfermedades orales: módulos para profesionales de atención primaria. La buena salud empieza en una boca sana. Módulo III: adolescentes 13-18 años de edad.

PAHO HQ Library Cataloguing-in-Publication Data

Pan American Health Organization.


(NLM Classification: WU 113)

The Pan American Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full. Applications and inquiries should be addressed to the Department of Knowledge Management and Communications (KMC), Pan American Health Organization, Washington, D.C., U.S.A. (pubrights@paho.org). The Office of the Assistant Director (AssistantDirector@paho.org) will be glad to provide the latest information on any changes made to the text, plans for new editions, and reprints and translations already available.

© Pan American Health Organization, 2013. All rights reserved.

Publications of the Pan American Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. All rights are reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the Pan American Health Organization concerning the status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers’ products does not imply that they are endorsed or recommended by the Pan American Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the Pan American Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the Pan American Health Organization be liable for damages arising from its use.
<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>2</td>
</tr>
<tr>
<td>Oral health: a gateway to general health</td>
<td>3</td>
</tr>
<tr>
<td>Soft tissue diseases of the mouth and face</td>
<td>4</td>
</tr>
<tr>
<td>Hard tissue diseases of the teeth</td>
<td>5</td>
</tr>
<tr>
<td>Malformations, anomalies and neoplasms of the face and mouth</td>
<td>6</td>
</tr>
<tr>
<td>Trauma to the mouth and teeth</td>
<td>7</td>
</tr>
<tr>
<td>Habits and behaviors relating to the mouth and teeth</td>
<td>8</td>
</tr>
<tr>
<td>Oral hygiene - key messages</td>
<td>9</td>
</tr>
<tr>
<td>Hand washing</td>
<td>10</td>
</tr>
<tr>
<td>Healthy eating recommendations</td>
<td>11</td>
</tr>
<tr>
<td>Oral health recommendations (poster)</td>
<td>12</td>
</tr>
<tr>
<td>Fluoride varnish (fv) application</td>
<td>13</td>
</tr>
<tr>
<td>Pain medications</td>
<td>14</td>
</tr>
<tr>
<td>Oral antibiotics</td>
<td>15</td>
</tr>
<tr>
<td>Antifungal medications</td>
<td>16</td>
</tr>
<tr>
<td>Antiviral medications</td>
<td>16</td>
</tr>
<tr>
<td>Anatomy of the mouth and tooth</td>
<td>17</td>
</tr>
<tr>
<td>Eruption schedule of adult teeth</td>
<td>18</td>
</tr>
<tr>
<td>Picture chart to distinguish between similar oral conditions</td>
<td>19</td>
</tr>
</tbody>
</table>
Foreword

The Pan American Health Organization (PAHO), under its Community Free of Caries Initiative, is proud to present the Integrated Oral Disease Prevention and Management (IODPM) modules as a practical solution to facilitate the integration of oral health within primary health care. Integrating oral health prevention and management into the delivery of primary health care services is now one of the cornerstones of PAHO’s oral health program.

The IODPM modules are geared to assist primary health care workers in the prevention of oral diseases and non-communicable diseases (NCDs) through various promotional activities. The resulting benefits serve to increase awareness of protective factors, such as appropriate oral self-care practices, the effective use of fluorides, and healthy lifestyle choices related to diet, nutrition, personal hygiene, and smoking and alcohol consumption. This integrated approach is a “best practice” model and reorients oral health care toward prevention, tackles common risk factors for NCDs and oral health and, facilitates early intervention.

I wish to take this opportunity to recognize the work of the oral health team at PAHO, particularly the strong support of Dr. Nancy Valencia, and the technical contributions of Dr. Gustavo Cruz, Dr. Dan Altman, Dr. Maritza Sosa, Dr. Yilda Rivera, Dr. Heriberto Vera, Ms. Dariene Lazore, Ms. Joan Lazore, Ms. Mary Beedle, MAMA Project Inc., and the Cleft Palate Foundation.

PAHO particularly acknowledges the support of Colgate-Palmolive Inc., which is renowned for its long-standing commitment to improving the oral health of the peoples of the Americas.

Dr. Saskia Estupiñán-Day
Regional Advisor, Oral Health
Pan American Health Organization
ORAL HEALTH: A GATEWAY TO GENERAL HEALTH

The mouth consists of teeth, gums, mucous membranes, salivary glands, and bone. The mouth is the entrance to the body for nutrients, bacteria, viruses, and fungi. It is a part of the body’s immune system and plays an important role in primary health. Taking care of the mouth and maintaining good oral hygiene is a part of being healthy. Poor oral health affects your ability to eat, speak, and be happy.

There is a link between oral health and general health. When general health is impaired, oral health will also be affected. For example, signs of diabetes, HIV/AIDS, hepatitis, and arthritis can be seen in the mouth. And when oral health suffers, there is an increased risk for poor general health, including cardiovascular disease.

The risk factors contributing to poor general and oral health are very similar, as illustrated in the diagram below. Tobacco use, excessive alcohol use, and poor diet/nutrition are common risk factors for different systemic and oral diseases. Tobacco use and poor diet/nutrition, especially, are both risk factors for diabetes, cardiovascular disease, respiratory disease, dental decay (caries), cancer including oral cancer, and periodontal disease (gum disease). Eliminating these common risk factors will improve general and oral health.
**SOFT TISSUE DISEASES OF THE MOUTH AND FACE**

<table>
<thead>
<tr>
<th>SIGNS/SYMPTOMS</th>
<th>CLASSIFY AS</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widespread or localized swelling of the face</td>
<td>FACIAL CELLULITIS</td>
<td>Administer antibiotics (see chart)</td>
</tr>
<tr>
<td>If caused by dental infection or tooth abscess; severe tooth pain accompanied by red, swollen gums that may contain pus</td>
<td></td>
<td>Administer pain medication IF needed (see chart)</td>
</tr>
<tr>
<td>If caused by trauma; presence of burns, bruises, cuts and scratches, or puncture wounds</td>
<td></td>
<td>Refer URGENTLY to emergency hospital</td>
</tr>
<tr>
<td>Fever, swollen lymph nodes, difficulty speaking/eating/drinking</td>
<td>PERIODONTITIS</td>
<td>Clean mouth by rinsing with warm salt-water solution</td>
</tr>
<tr>
<td>Loss of gum tissue, possible pus between teeth and gums</td>
<td>STREP THROAT OR TONSIL INFECTION</td>
<td>Administer antibiotics if pus present on tonsils (see chart: antibiotics)</td>
</tr>
<tr>
<td>Swollen, tender, red gums that bleed easily</td>
<td></td>
<td>Administer pain medication IF needed (see chart)</td>
</tr>
<tr>
<td>Heavy plaque build-up on teeth</td>
<td></td>
<td>Refer to hospital if sore throat lasts longer than 48 hours and/or difficulty breathing/swallowing</td>
</tr>
<tr>
<td>Loose teeth or early tooth loss</td>
<td>FEVER BLISTERS OR COLD SORES (Herpes Simplex Virus)</td>
<td>Advice on how to prevent transmission of herpes (see picture chart)</td>
</tr>
<tr>
<td>Tonsils are red, swollen and have white spots or pus</td>
<td></td>
<td>Administer antiviral medications IF extensive blisters are present, high fever, and inability to eat</td>
</tr>
<tr>
<td>Severe throat pain and swollen lymph nodes on neck</td>
<td></td>
<td>Administer pain medication IF needed (see chart)</td>
</tr>
<tr>
<td>Small red spots on the soft or hard palate</td>
<td></td>
<td>Place ice on area to help reduce swelling and pain</td>
</tr>
<tr>
<td>Fever</td>
<td></td>
<td>Advise about oral hygiene and nutrition</td>
</tr>
<tr>
<td>Painful blisters on lip or outer edges of mouth</td>
<td>ORAL CANDIDIASIS (Thrush)</td>
<td>If white patches can easily be wiped away to reveal a red area:</td>
</tr>
<tr>
<td>Blister might be broken open or crust over with a scab</td>
<td></td>
<td>Administer antifungal (see chart)</td>
</tr>
<tr>
<td>Tingling, burning, or itching feeling before blister became visible</td>
<td></td>
<td>Advise about oral hygiene and nutrition</td>
</tr>
<tr>
<td>White patches on inside of cheeks or lips, or on the surface of tongue or palate</td>
<td>CANKER SORES OR STOMATITIS</td>
<td>Apply Debacterol only to ulcers, not surrounding tissues</td>
</tr>
<tr>
<td>Single to multiple painful ulcers inside the mouth with whitish centers and red borders</td>
<td></td>
<td>If Debacterol is unavailable, administer pain meds IF needed</td>
</tr>
<tr>
<td>Burning, tingling, and slight swelling of the mucous membrane</td>
<td></td>
<td>Advise patient use salt-water or baking soda rinses until ulcer heals, and to avoid irritating foods (salty, spicy, etc)</td>
</tr>
<tr>
<td>Small, ball-shaped, swelling that can form in salivary glands or mucosa, may contain clear fluid</td>
<td>MUCOSAL CYST</td>
<td>Advise about oral hygiene and nutrition</td>
</tr>
<tr>
<td>Usually painless. Can rupture, disappear, and reappear</td>
<td></td>
<td>Apply fluoride varnish every 6 months (for prevention of dental caries)</td>
</tr>
<tr>
<td>Swollen, soft, puffy, red gums that bleed easily accompanied by dental plaque build-up on the teeth</td>
<td>GINGIVITIS</td>
<td>Advise about oral hygiene and nutrition</td>
</tr>
<tr>
<td>Swollen, tender, red gums that bleed easily</td>
<td></td>
<td>Apply fluoride varnish every 6 months (for prevention of dental caries)</td>
</tr>
<tr>
<td>Encourage a dental visit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**LOOK AND FEEL**

- Swelling of the face
- Loss of gums, dead or dying tissue
- Pus, redness, warmth, pain in mouth (signs of dental infection)
- Red, swollen tonsils with pus
- Blisters on the lips
- White patches inside the mouth
- Ulcers in the mouth
- Red, swollen gums that bleed easily

**ASK**

- Difficulty speaking, eating or drinking?
- Fever?
- Does the teen smoke either tobacco or marijuana? This increases risk for periodontitis
- Pain in throat or mouth?
- Blisters or ulcers in the mouth or lips?
- How long have symptoms been present?
- Does the teen take long-term medicines to treat systematic diseases or birth control pills? These might increase risk of gingivitis

---

**ADOLESCENTS AGE 13-18 YEARS OLD**

- Difficulty speaking, eating or drinking?
- Fever?
- Does the teen smoke either tobacco or marijuana? This increases risk for periodontitis
- Pain in throat or mouth?
- Blisters or ulcers in the mouth or lips?
- How long have symptoms been present?
- Does the teen take long-term medicines to treat systematic diseases or birth control pills? These might increase risk of gingivitis

---

**SIGNS/SYMPTOMS CLASSIFY AS TREATMENT**

- Swollen, soft, puffy, red gums that bleed easily accompanied by dental plaque build-up on the teeth
- Swollen, tender, red gums that bleed easily
- Heavy plaque build-up on teeth
- Loose teeth or early tooth loss
- Tonsils are red, swollen and have white spots or pus
- Severe throat pain and swollen lymph nodes on neck
- Small red spots on the soft or hard palate
- Fever
- Painful blisters on lip or outer edges of mouth
- Blister might be broken open or crust over with a scab
- Tingling, burning, or itching feeling before blister became visible
- White patches on inside of cheeks or lips, or on the surface of tongue or palate
- Single to multiple painful ulcers inside the mouth with whitish centers and red borders
- Burning, tingling, and slight swelling of the mucous membrane
- Small, ball-shaped, swelling that can form in salivary glands or mucosa, may contain clear fluid
- Usually painless. Can rupture, disappear, and reappear
- Swollen, soft, puffy, red gums that bleed easily accompanied by dental plaque build-up on the teeth
- Widespread or localized swelling of the face
- If caused by dental infection or tooth abscess; severe tooth pain accompanied by red, swollen gums that may contain pus
- If caused by trauma; presence of burns, bruises, cuts and scratches, or puncture wounds
- Fever, swollen lymph nodes, difficulty speaking/eating/drinking
### HARD TISSUE DISEASES OF THE TEETH

**ASK**
- Is toothache spontaneous or long-lasting?
- Consume sugary foods or drinks often?

**LOOK AND FEEL**
- Pus, redness, warmth, pain in mouth (signs of infection)
- Holes in teeth or white, brown, black spots on teeth
- Irregular enamel
- Plaque build-up

### SIGNS/SYMPOTOMS
- Spontaneous tooth pain that is severe
- Long lasting tooth pain that is intense
- Sensitivity to hot, cold, sweets, and/or chewing
- Red, swollen gums near the hurting tooth with a possible abscess that contains pus
- Visible holes in teeth, or partial loss of tooth structure
- White, brown, or black spots on teeth
- Tooth pain or sensitivity to hot, cold, or sweets
- Abnormal enamel that is soft, thin, pitted, or grooved and fractures easily
- Teeth appear discolored
- Tooth sensitivity to thermal or chemical stimuli
- Plaque build-up but no dental decay
- Frequent eating of starchy and sugary snacks, sweets, artificial juices, and soft drinks

### CLASSIFY AS
- **DENTAL INFECTION OR TOOTH ABSCESS**
  - Administer antibiotics (see chart)
  - If abscess is observed, a prick with a disinfected needle may allow pus to drain helping to relieve some of the pain
  - Administer pain medication IF needed (see chart)
  - Refer URGENTLY to dental clinic for treatment

- **DENTAL CARIES**
  - Advise about oral hygiene and nutrition
  - Apply fluoride varnish every 6 months (Do NOT apply on large cavities)
  - Refer to dental clinic for treatment

- **AMELOGENESIS IMPERFECTA**
  - Educate about disease (see picture chart)
  - Advise about oral hygiene and nutrition
  - Apply fluoride varnish every 6 months (for prevention of dental caries)
  - Refer to dental clinic if: tooth appearance and sensitivity are severe

- **TEETH AT RISK FOR CAVITIES**
  - Advise about oral hygiene and nutrition
  - Apply fluoride varnish every 6 months (for prevention of dental caries)

### TREATMENT
- Severe
- Moderate
- Soft
# MALFORMATIONS, ANOMALIES AND NEOPLASMS OF THE FACE AND MOUTH

## LOOK AND FEEL
- Sore, lesion, ulcer inside the mouth that isn't healing
- Facial asymmetries or other changes
- Difficulty chewing, swallowing, speaking, or moving the jaw or tongue
- Hole or slit in the lip and/or palate
- Misaligned teeth

## ASK
- Is there a sore that doesn't heal inside the mouth?
- Tobacco use?
- Does the teen have recent facial changes?
- Is it difficult for the teen open and close mouth?
- Does the teen have pain, swelling, numbness, or changes in bite?
- Does food come out of the nasal passage?
- Has the teen seen a surgeon?
- Was the abnormality present at birth?

## SIGNS/SYMPTOMS
- Sore, lesion, or ulcer in the mouth that does not heal-usually seen on side of tongue
- White or red patch inside the mouth that cannot be wiped off
- Lumpiness or thickening of the cheek
- Numbness, bleeding, tingling, and burning sensation in the mouth
- Swelling in mouth that causes problems with bite or misplaces teeth
- Swelling that causes problems opening and closing the jaw
- Very slow or very fast growth of a mass inside the mouth
- Hole or slit in the lip and/or palate, immediately noticeable at birth
- Difficulty eating or speaking due to abnormal oral anatomy
- Poor growth and development
- Recurrent ear infections and/or ear pain
- Lower anterior teeth are positioned significantly behind, edge-to-edge, or just in front of, the upper anterior teeth when biting down
- Uncomfortable bite
- Headache and/or neck pain
- Worn down teeth/chipped teeth
- Painful jaw joint
- Clicking/popping of the jaw joint
- Restorations that continue to fail

## CLASSIFY AS
- ORAL CANCER
- BONE TUMOR
- CLEFT LIP/CLEFT PALATE
- MALOCCLUSION

## TREATMENT
- Advise about oral hygiene and nutrition:
- Refer URGENTLY to hospital for evaluation
- If fever present, than refer to soft tissue infections
- Advise about oral hygiene and nutrition
- Refer URGENTLY to hospital for evaluation
- Administer *RUTF if teen is malnourished
- Administer antibiotics ONLY if ear infection present (see chart)
- Advise about oral hygiene and nutrition
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- Refer URGENTLY to hospital for evaluation by surgeon
- Advise about oral hygiene and nutrition:
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- Refer to dental clinic IF malocclusion causes functional or aesthetic concern
# Trauma to the Mouth and Teeth

**Signs/Symptoms**
- Severe mouth or face trauma
- Broken or displaced bones
- Multiple broken teeth
- Difficulty moving the mouth

**Classify As**
- **Severe Trauma**
  (Jaw Fracture, Open Facial Wounds)

**Treatment**
- Remove any debris from the soft tissue
- Clean the wounds and cover them
- Administer pain medication if needed (see chart)
- Administer antibiotics (see chart)
- Determine if tetanus shot is needed and administer if possible
- Refer urgently to emergency hospital

- **Moderate Trauma**
  (Broken Tooth, Luxation, Intrusion, Avulsion)

**Treatment**
- Rinse with clean water
- Use ice packs to reduce any swelling
- Determine if tetanus shot is needed and administer if possible
- Administer pain medications only if needed (see chart)
- First Aid:
  - Broken Tooth: Cover tooth with gauze
  - Luxation: Gently push tooth back into place
  - Intrusion: Do not try to pull the tooth out. Inform patient that the tooth is generally allowed to re-erupt on its own
  - Avulsion: Handle the tooth only by the crown. Rinse with clean water. Do not scrub, dry, or wrap the tooth in tissue. Irrigate the tooth socket with saline. Gently reinsert the tooth into the socket. If tooth cannot be re-inserted, place the tooth in a transport liquid (milk, saline, saliva, cold water). Reach the dental clinic during the next 6 hours.
  - Refer all patients urgently to dental clinic for treatment

- **Moderate Trauma**
  (Enamel Fracture, Subluxation)

**Treatment**
- Rinse with clean water
- Use ice packs to reduce any swelling
- Administer pain medication if needed (see chart)
- Refer to dental clinic immediately for treatment

- **Mild Trauma of Tooth**
  (Dental Concussion)

**Treatment**
- Rinse mouth with clean water
- Use ice packs to reduce any swelling
- Administer pain medication if needed (see chart)
- Inform that tooth may become discolored
- Recommend that patient have soft diet for 1 week and avoid chewing on tooth

- **Mild Trauma of Soft Tissues**

**Treatment**
- Clean external wounds with hydrogen peroxide
- Clean mouth wounds by having patient gargle salt water then rinse with clean water
- Advise that patient use ice packs to reduce swelling
- Administer pain medication if needed (see chart)
- Determine if tetanus shot is needed and administer if possible

---

**Look and Feel**

- Injury to face or mouth
- Redness, warmth, or swelling around the injury
- Tooth pushed into or out of gum
- Broken, loose, or displaced teeth
  (Have patient bite down and assess each tooth if needed)

**Remember:**
- Have patient bite down to assess teeth for injury
- The main causes of dental trauma are:
  - Sports and related injuries
  - Falls and collisions
  - Automobile accidents
  - Child physical abuse (50% of injuries are to face and mouth)

Children repeatedly presenting with facial injuries may be victims of child abuse

**Report** suspicions to the authorities if you suspect the child was intentionally harmed

**Adolescents age 13-18 years old**

- Severe
- Moderate
- Soft

---

**Ask**

- How was the teen injured?
- When did it happen?
- Where did it happen?
- Date of last tetanus shot?
### ASK
- Does teen grind teeth?
- Tobacco, drugs, or alcohol use?
- Engaging in oral sex?
- Force vomiting after eating?
- How many soft drinks or sugary drinks daily?
- Headaches or jaw pain?
- Any piercings inside the mouth?

### LOOK AND FEEL
- Dental decay
- Red, swollen tonsils or sores inside the mouth
- Ulcers, blisters, and/or white patches in the mucosa
- Worn down enamel
- Redness, swelling, pus around dental piercing

### SIGNS/SYMPTOMS

<table>
<thead>
<tr>
<th>DRUG ABUSE</th>
<th>ORAL SEX</th>
<th>TOBACCO/SMOKING</th>
<th>BULIMIA</th>
<th>FREQUENT CONSUMPTION OF SOFT AND ENERGY DRINKS</th>
<th>TEETH GRINDING (BRUXISM)</th>
<th>ORAL PIERCING</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Severe tooth decay, especially around the neck of tooth&lt;br&gt;• Loss of gum tissue, loose teeth (periodontal disease)&lt;br&gt;• Gray/black plaque build up on teeth&lt;br&gt;• Dry mouth with red, swollen gums&lt;br&gt;• Red eyes, irritability, paranoia</td>
<td>• Engaging in unprotected oral sex&lt;br&gt;• Sores inside the mouth that may contain pus&lt;br&gt;• Dry, cracked corner of the mouth</td>
<td>• Bad breath, dry mouth, stained teeth&lt;br&gt;• Loss of gum tissue, loose teeth (periodontal disease)&lt;br&gt;• Canker sores and inflammation of oral mucosa</td>
<td>• Worn down enamel, especially on the tongue side of the upper front teeth&lt;br&gt;• Chronic sore throat and mouth, possible trauma to the palate including bruising or small red spots&lt;br&gt;• Swollen, red, puffy gums and swollen salivary glands in the cheeks&lt;br&gt;• Dry, cracked corners of the mouth</td>
<td>• Worn down enamel, dentin may be visible&lt;br&gt;• Dental decay&lt;br&gt;• Tooth sensitivity</td>
<td>• Worn down enamel, dentin may be visible&lt;br&gt;• Cracked/chipped teeth, tooth sensitivity&lt;br&gt;• Morning headaches&lt;br&gt;• Jaw pain when opening and closing the mouth</td>
<td>• Infection around piercing and/or allergic reaction&lt;br&gt;• Chipped, cracked, or damaged teeth. Injury to the gums&lt;br&gt;• Difficulty chewing, swallowing, or speaking&lt;br&gt;• Possible nerve and blood vessel damage</td>
</tr>
</tbody>
</table>

### TREATMENT
- Inform about the health effects of drug use and encourage patient to quit
- Advise about oral hygiene and nutrition
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- Refer IMMEDIATELY to counseling center and dental clinic
- Inform patient that STIs can be spread to sexual partners even by mouth
- Inform of risk for oral cancer
- Advise on safe sex practices
- Advise about oral hygiene and nutrition
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- If patient appears to have signs/symptoms of an oral STI: Refer IMMEDIATELY to hospital
- Inform patient about periodontal disease (see picture chart) and oral cancer risk
- Encourage patient to quit smoking and refer to tobacco cessation program
- Advise about oral hygiene and nutrition
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- Advise patient to rinse mouth with water or baking soda solution after vomiting
- Advise patient to drink lots of water and keep the mouth moist throughout the day
- Advise about oral hygiene and nutrition
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- Refer to counseling center and dental clinic
- Advise about oral hygiene and nutrition
- Emphasize how sugar leads to dental decay and encourage more water consumption
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- If pain and tooth wear is excessive or dental decay is present: Refer to dental clinic
- Advise about oral hygiene and nutrition
- Encourage patient to identify causes of distress/anxiety and advise relaxation exercises before bedtime
- Advise about oral hygiene and nutrition
- Apply fluoride varnish every 6 months (for prevention of dental caries)
- If tooth wear is excessive: Refer to dental clinic
- Advise about dangers of oral piercing:
  - Jewelry needs to be cleaned after every meal so bacteria doesn’t grow
  - Risk of infection when piercing is dirty and not kept clean
  - “Playing” with the jewelry can cause tooth and gum damage
- Advise about oral hygiene and nutrition
- Apply fluoride varnish every 6 months (for prevention of dental caries)

### SIGNS OF ORAL SEXUALLY TRANSMITTED INFECTIONS (STIs):
- Chlamydia, Gonorrhea, Bacterial Infection
  - Sore throat with red, swollen tonsils<br>• Pus pockets on the tonsils
  - Sore throat with red, swollen tonsils<br>• Sores inside the mouth that may contain pus<br>• Dry, cracked corner of the mouth
- Syphilis
  - Small ulcer that is painful and may heal on its own within 4-6 weeks<br>• Sores inside the mouth that may contain pus<br>• Sore throat with red, swollen tonsils<br>• Pus pockets on the tonsils
- Human Papillomavirus (HPV)
  - Oral warts: cauliflower-like growths in the mouth or on the lips<br>• Swollen, red, puffy gums and swollen salivary glands in the cheeks<br>• Dry, cracked corners of the mouth
- Human Immunodeficiency Virus (HIV)
  - Oral warts: cauliflower-like growths in the mouth or on the lips<br>• Swollen, red, puffy gums and swollen salivary glands in the cheeks<br>• Dry, cracked corners of the mouth

### PIERCING
- Any piercings inside the mouth?
- Headaches or jaw pain?
- How many soft drinks or sugary drinks daily?
- Force vomiting after eating?
- How many soft drinks or sugary drinks daily?
- Headaches or jaw pain?
- Any piercings inside the mouth?

### WARNING
- Advise about dangers of oral piercing:
  - Jewelry needs to be cleaned after every meal so bacteria doesn’t grow
  - Risk of infection when piercing is dirty and not kept clean
  - “Playing” with the jewelry can cause tooth and gum damage

### REFERENCE
- Refer IMMEDIATELY to hospital
ORAL HYGIENE KEY MESSAGES

Dental Plaque
- Plaque is a layer of bacteria that forms on the teeth. It can develop on any surface of the teeth, especially along the gum line.
- The bacteria produces acid which dissolves the enamel of a tooth and leads to dental decay.
- If dental plaque accumulates and is not removed, it can harden and turn into calculus or tartar which is a risk factor for gum disease.
- Poor oral hygiene make easy large amounts of plaque build-up.
- If have braces, the bands/bonded brackets can create areas where food and plaque can stick more easily. This can also cause permanent white spots from demineralization.

Fluoride Toothpaste
- Always use fluoride toothpaste.
- Toothbrushing with fluoridated toothpaste helps make teeth stronger and protect against dental decay.

Dental Floss
- Use dental floss at least once a day to scrape off dental plaque in between teeth.
- Always keep the pressure of the dental floss against the sides of your teeth; never pull into the gum tissue or you might cause injury.
- Floss teeth gently.

Healthy diet and Teeth
- Avoid of sugary and starchy snacks, soft drinks, especially between meals and sweets. Eat only healthy snacks and encourage more water consumption.
- Eat a balanced diet rich in vegetables, fruits, dairy products, meats and beans.

Toothbrushing
- Place a toothbrush beside your teeth at a 45-degree angle and gently brush teeth in an elliptical motion. Clean the outer surfaces of the upper and lower teeth.
- Clean the inner surfaces of the upper and lower teeth.
- Tooth brushing with fluoridated toothpaste help to make stronger teeth, protects teeth against dental decay.
- Brush teeth with fluoride toothpaste for at least two minutes, twice a day.

How to brush teeth with braces
1. Place a toothbrush beside your teeth at a 45-degree angle and gently brush teeth in an elliptical motion. Clean the outer surfaces of the upper and lower teeth.
2. Clean the inner surfaces of the upper and lower teeth.
3. Clean the chewing surfaces of the upper and lower teeth.
4. Do not forget to brush the tongue.
5. Tooth brushing with fluoridated toothpaste help to make stronger teeth, protects teeth against dental decay.
6. Brush teeth with fluoride toothpaste for at least two minutes, twice a day.
7. Brush teeth with fluoride toothpaste three times a day.
8. Brush after each meal and snack.

Toothbrush
- Use a soft or regular toothbrush.
- Use a regular or orthodontic brush for braces.
- Change the toothbrush every three months or when bristles begin to wear.

Fluoride Mouth Rinse
- Use a fluoride mouth rinse to strengthen enamel to protect against decay, and to repair white spots or small cavities by re-mineralizing the enamel.

Healthy diet and Teeth
- Avoid of sugary and starchy snacks, soft drinks, especially between meals and sweets. Eat only healthy snacks and encourage more water consumption.
- Eat a balanced diet rich in vegetables, fruits, dairy products, meats and beans.

Dentist Visits
- Visit a dentist regularly for check-ups.
WASHING YOUR HANDS WITH SOAP IS THE BEST WAY TO STAY HEALTHY

HAND WASHING

1. Wet your hands
2. Apply any soap to help get rid of bacteria and germs
3. Lather and scrub (20 sec)
   - Between your fingers
   - Under your nails
   - Tops of your hands
4. Rinse (10 sec) to wash away all the soap
5. Dry your hands

Washing hands with any type of soap and clean water is the best way to stop the spread of germs and disease

WHEN SHOULD YOU WASH YOUR HANDS?

BEFORE
- Before, during, and after preparing food
- Before eating food
- Before and after caring for someone who is sick
- Before and after treating a cut or wound

AFTER
- After using the toilet
- After changing diapers
- After cleaning a child who has used the toilet
- After blowing your nose, or sneezing
- After touching an animal
- After touching animal feed or animal waste
- After touching garbage
Healthy Diet and Lifestyle

A healthy diet and lifestyle includes eating right and exercising. Children and teenagers should eat a balanced diet that includes cereals and grains, vegetables, fruits, dairy, and meats and beans. They should also get plenty of daily physical activity.

Benefits for Health

How?

- Healthy diet and lifestyle leads to an enhanced immune system. An enhanced immune system means less sickness and disease.
- Good health means less absence from school and improved intellectual capacity.
- Healthy habits lead to increased physical growth and developmental benefits.
- Good health means reduced risk of chronic diseases such as diabetes, obesity, and cardiovascular disease.
- Good health leads to increased athletic performance and physical appearance.

Tips

- Avoid foods high in sugar and starch (candy, potato chips, etc).
- Avoid sticky foods (raisins, taffy).
- Avoid soft drinks, juice, energy drinks or any other type of sugary drink.
- Prepare healthy snacks that are protective against dental caries (cheese, milk, vegetables).
- Avoid oversized portions of food and overeating.
- Use safe practices when playing sports (mouthguard, helmet).

* Refer to your country’s Ministry of Health food guidelines.
ORAL HEALTH RECOMMENDATIONS

- Regular dental visits for teen and family members
- Healthy diet
- Brush with fluoride toothpaste at least 2 times daily
- Use fluoride mouth rinse every day
- Use dental floss every day

Thumbs up for:

- Artificial juices, soft and energy drinks
- Avoid sweets or candies
- Avoid junk foods
- No tobacco products
- No alcohol
FLUORIDE VARNISH (FV) APPLICATION

Fluoride varnish is a highly concentrated form of topical fluoride used to prevent tooth decay.

READ

- FV must be applied every six months to be effective
- Do NOT use if teen has an allergy to pine nuts or colophon/colophonium

APPLY

- Dry the teeth by wiping them with clean, dry cotton. The teeth must stay dry throughout the FV application
- Apply a thin layer of varnish on all surfaces of the teeth according to the manufacturer’s directions. Do NOT apply on large cavities
- Don’t worry about saliva getting on the teeth after the FV is applied. The varnish dries very quickly

ADVISE

- FV must stay on teeth overnight to be effective. The teeth may appear to have a yellow, sticky surface
- Have the teen avoid hard, sticky, or crunchy foods for the rest of the day
- Do not let the teen brush, floss, or use mouth rinse until the next morning. The sticky feeling and yellow color will disappear at this time
# PAIN MEDICATIONS

<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>INDICATIONS</th>
<th>DOSAGE</th>
<th>FREQUENCY</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBUPROFEN</td>
<td>Pain, fever, swelling</td>
<td>200mg - 400mg tablets</td>
<td>Every 4 - 6 hours (Maximum dose 1200mg/day)</td>
<td>Take with food</td>
</tr>
<tr>
<td>ACETAMINOPHEN/PARACETAMOL</td>
<td>Pain, fever</td>
<td>325 mg - 650mg 1000mg</td>
<td>Every 4 - 6 hours&lt;br&gt;Every 6 - 8 hours (Maximum dose 4000mg/day)</td>
<td></td>
</tr>
<tr>
<td>NAPROXEN</td>
<td>Pain, fever, swelling</td>
<td>200mg</td>
<td>Every 8-12 hours (Maximum dose 600mg/day)</td>
<td>Take with food or milk</td>
</tr>
</tbody>
</table>

Note:
Dosages are based on United States standards. Contact your country’s Ministry of Health to find out local regulations. Pain medications are not for long term use.
Antibiotic dosages are per day. The dosage must be divided up into equal parts and administered. Maximum dosage cannot exceed adult dose.

<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>INDICATIONS</th>
<th>DOSAGE</th>
<th>FREQUENCY</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>amoxicillin</td>
<td>Orofacial (mouth/face) infection</td>
<td>250 mg</td>
<td>Every 8 hours X 7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild-to-moderate infection</td>
<td>500 mg</td>
<td>Every 12 hours X 7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Severe infection</td>
<td>500 mg</td>
<td>Every 8 hours X 7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>875 mg</td>
<td>Every 12 hours X 7 days</td>
<td>May be taken with food</td>
</tr>
<tr>
<td>clindamycin</td>
<td>Take if allergic to amoxicillin</td>
<td>150 – 450 mg</td>
<td>Every 6 hours X 7 days</td>
<td>May be taken with food</td>
</tr>
<tr>
<td></td>
<td>(Maximum 1.8 grams/day)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>metronidazole</td>
<td>Anaerobic orofacial infection/abscess</td>
<td>500 mg</td>
<td>Every 6-8 hours X 10 days</td>
<td>Take without food * (if upset stomach occurs than take with food.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
Dosages are based on United States standards. Contact your country’s Ministry of Health to find out local regulations.
ANTIMICROBIAL MEDICATIONS

For Candidiasis or Oral Thrush

NYSTATIN DOSAGE
- Topical: Apply 2-3 times per day
- Oral, Suspension: 4-6 ml x 4 times a day
- The preparation should be retained in the mouth as long as possible before swallowing

GENTIAN VIOLET
- Using a cotton swab, apply only the affected area every 1-2 times daily for 7 days
- Make sure the area is dry before using this medication
- Avoid swallowing any of the medicine

ANTIVIRAL MEDICATIONS

To improve healing time and reduce symptoms of cold sores. Begin treatment when lesions first appear or as early as possible.

<table>
<thead>
<tr>
<th>TOPICAL APPLICATION</th>
<th>ORAL APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACYCLOVIR 5% CREAM</td>
<td>VALCYCLOVIR 1G CAPLETS</td>
</tr>
<tr>
<td>Every 3 hours (6 times per day) x 7 days</td>
<td>2 caplets every 12 hours x 1 day</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PENCICLOVIR 1% CREAM</th>
<th>FAMCICLOVIR 1500MG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every 2 hours x 4 days</td>
<td>One single dose</td>
</tr>
</tbody>
</table>

Contact your country’s Ministry of Health to find out local regulations.
INTEGRATED ORAL DISEASE PREVENTION AND MANAGEMENT

ANATOMY OF THE MOUTH

GUMS

HARD PALATE

SOFT PALATE

UVULA

TONGUE

TEETH

LIP

ANATOMY OF A TOOTH

ENAMEL

DENTINE

PULP CONTAINING BLOOD VESSELS AND NERVES

GUM (GINGIVA)

BONE

PERIODONTAL MEMBRANE

CEMENTUM

OPENING AT TIP OF ROOT

17

ADOLESCENTS AGE 13-18 YEARS OLD
The first adult (permanent) tooth erupts around age 6, and the last erupts around age 12. These teeth will not be lost, thus caring for them is very important. Healthy permanent teeth aid in proper chewing and nutrition, speech, appearance and self esteem.

### Upper Teeth

<table>
<thead>
<tr>
<th>Tooth Type</th>
<th>Erupt/Grow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central incisor</td>
<td>7-8 Years</td>
</tr>
<tr>
<td>Lateral incisor</td>
<td>8-9 Years</td>
</tr>
<tr>
<td>Canine (cuspid)</td>
<td>11-12 Years</td>
</tr>
<tr>
<td>First premolar</td>
<td>10-11 Years</td>
</tr>
<tr>
<td>Second premolar</td>
<td>10-12 Years</td>
</tr>
<tr>
<td>First molar</td>
<td>6-7 Years</td>
</tr>
<tr>
<td>Second molar</td>
<td>12-13 Years</td>
</tr>
<tr>
<td>Third molar</td>
<td>17-21 Years</td>
</tr>
</tbody>
</table>

### Lower Teeth

<table>
<thead>
<tr>
<th>Tooth Type</th>
<th>Erupt/Grow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central incisor</td>
<td>6-7 Years</td>
</tr>
<tr>
<td>Lateral incisor</td>
<td>7-8 Years</td>
</tr>
<tr>
<td>Canine (cuspid)</td>
<td>9-10 Years</td>
</tr>
<tr>
<td>First premolar</td>
<td>10-12 Years</td>
</tr>
<tr>
<td>Second premolar</td>
<td>11-12 Years</td>
</tr>
<tr>
<td>First molar</td>
<td>6-7 Years</td>
</tr>
<tr>
<td>Second molar</td>
<td>11-13 Years</td>
</tr>
<tr>
<td>Third molar</td>
<td>17-21 Years</td>
</tr>
</tbody>
</table>
### Herpes Simplex Virus
Herpes Simplex Virus infection (also called cold sores or fever blisters) causes painful blisters on the lips and outer edges of mouth. Blisters can be spread easily from person to person. They can also be spread to the genitalia. Do not share food, eating utensils, cups, or lipsticks. Do not kiss or perform oral sex.

### Canker Sore
A canker sore is a painful ulcer inside the mouth, usually located on the cheek. The cause of canker sores is unknown but they usually heal within 7-10 days.

### Amelogenesis Imperfecta
Amelogenesis Imperfecta is a disorder of tooth enamel. It can lead to discolored teeth, abnormal anatomy, weakened enamel, and easy breakage.

### Bruxism
Bruxism refers to the grinding of teeth, which is usually caused by stress. This usually occurs at night when patient is sleeping. It can lead to jaw pain, morning headaches, and worn down enamel.

### Strep Throat
Strep throat is a bacterial infection of the tonsils that causes red, swollen tonsils with white patches.

### Oral Candidiasis
Oral Candidiasis (also called thrush) is a yeast infection inside the mouth. The white patches can easily be wiped off to reveal a red area.

### Gingivitis
Gingivitis is a swelling of the gum tissue. The gums might appear red and puffy, and bleed easily when brushed. This condition can lead to periodontitis.

### Periodontitis
Periodontitis is a gum disease caused by bacteria. It causes loss of gum tissue, destruction of bone surrounding teeth, loose teeth and eventually tooth loss. The risk factors for periodontal disease include tobacco, alcohol, and drug use.

### Dental Caries
Dental caries (also called a cavity or tooth decay) is caused by bacteria. The bacteria release acid that demineralizes the enamel of a tooth and leads to decay. Good oral hygiene is important for removing these bacteria.

### Dental Abscess
A dental abscess (also called tooth infection) is caused by a bacterial infection at the root of a tooth. Bacteria and pus build up below the tooth causing an abscess to form on the gum.
PAHO acknowledges the support of Colgate-Palmolive Inc.