# DENTAL HOME& ANTICIPATORY GUIDANCE

# WHEN SHOULD BE THE FIRST DENTAL VISIT?

# INFANT ORAL HEALTH

Professional intervention within 6 months after the eruption of the first primary tooth or no later than 12 months of age directed at factors affecting the oral cavity, counselling on oral disease risks and delivery of anticipatory guidance.

***-AMERICAN ACADEMY OF PEDIATRIC DENTISTRY***

# Goals of infant oral health care

- To ***identify, intercept and modify*** the potentially harmful parenting practices that may adversely affect the infants oral health
- ***Parent education*** right from the perinatal period highlighting the importance of their role in prevention of dental disease for their child
- ***Parent/caregiver orientation*** to perceive dental services as an integral part of infants overall health program.
- ***Periodic Evaluation*** of oro-facial development and oral health by clinician.

# SIX STEP INFANT ORAL HEALTH CARE PROTOCOL

- Caries risk assessment
- Proper positioning of the child ;
- Age-appropriate toothbrushing prophylaxis;
- Clinical examination of the child's oral cavity and dentition;
- Fluoride varnish treatment; and,
- Assignment of risk, anticipatory guidance , self-management goals and counseling

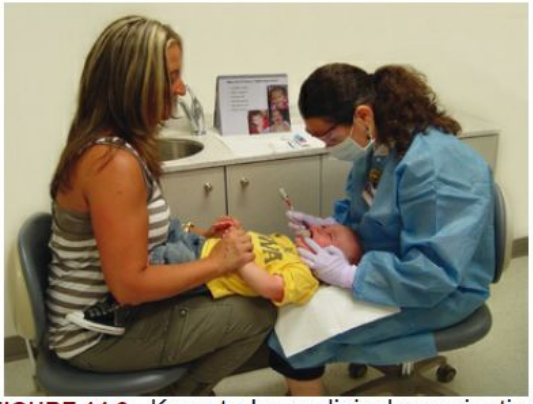

**FIGURE 14.2** Knee-to-knee clinical examination position for dentist, child, and parent. Parent and dentist face each other with knees touching while parent holds child on lap with child facing parent. Parent carefully lays child in dentist's lap while holding child's hands.

# Knee to Knee Oral Exam

1. Child is held facing care giver in a straddle position

2. Child leans back onto examiner while caregiver holds child's hands

3. Provider performs exam while caregiver holds child's hands and legs

Photos: Mark Deutchman MD

# ELEMENTS OF INFANT ORAL HEALTH CARE

- Break the Cycle of Early Childhood Caries.
- Disrupt the Acquisition of Harmful Microflora.
- Manage the Risk/Benefit of Habits.
- Establish a Dental Home for Health or Harm.
- Impart Optimal Fluoride Protection.
- Use Anticipatory Guidance to Arm Parents in the Therapeutic Alliance.

# CONCEPTS OF INFANT ORAL HEALTH

- RISK ASSESSMENT
- ANTICIPATORY GUIDANCE
- HEALTH SUPERVISION

# RISK ASSESSMENT

- Risk can be defined as the probability that a harmful or unwanted event will occur.

- Risk assessment is defined as identification of factors known or believed to be associated with a condition or disease for purposes of further diagnosis, prevention, or treatment.

# OBJECTIVES OF CARIES RISK ASSESSMENT

- Fosters the treatment of the disease process instead of treating the outcome of the disease.
- Allows an understanding of the disease factors for a specific patient and aids in individualizing preventive discussions.
- Individualizes, selects, and determines frequency of preventive and restorative treatment for a patient.
- Anticipates caries progression or stabilization

- ***Risk factors are determined by interviews with parents and a clinical assessment***.

- Caries risk assessment form: 3 major categories:

- **Biological risk factors**:
  -Those factors that contribute to the development or progression of caries

- **Protective factors**
  - Biological or therapeutic factors, measures and behaviors that when used consistently, could reduce a child's risk for ECC.

- **Disease indicators**
  -Are findings obtained during clinical examination of the child, that are proven to have a strong correlation to the presence of the disease.

## Table 1. Caries-risk Assessment Form for 0-5 Years Old

| Factors | High risk | Moderate risk | Low risk |
|---|---|---|---|
| *Risk factors, social/biological* | | | |
| Mother/primary caregiver has active dental caries | Yes | | |
| Parent/caregiver has life-time of poverty, low health literacy | Yes | | |
| Child has frequent exposure (>3 times/day) between-meal sugar-containing snacks or beverages per day | Yes | | |
| Child uses bottle or non-spill cup containing natural or added sugar frequently, between meals and/or at bedtime | Yes | | |
| Child is a recent immigrant | | Yes | |
| Child has special health care needs | | Yes | |
| *Protective factors* | | | |
| Child receives optimally-fluoridated drinking water or fluoride supplements | | | Yes |
| Child has teeth brushed daily with fluoridated toothpaste | | | Yes |
| Child receives topical fluoride from health professional | | | Yes |
| Child has dental home/regular dental care | | | Yes |
| *Clinical findings* | | | |
| Child has non-cavitated (incipient/white spot) caries or enamel defects | Yes | | |
| Child has visible cavities or fillings or missing teeth due to caries | Yes | | |
| Child has visible plaque on teeth | Yes | | |

Circling those conditions that apply to a specific patient helps the practitioner and parent understand the factors that contribute to or protect from caries. Risk assessment categorization of low, moderate, or high is based on preponderance of factors for the individual. However, clinical judgment may justify the use of one factor (e.g., frequent exposure to sugar-containing snacks or beverages, more than one decayed missing filled surfaces [dmfs]) in determining overall risk.

**Overall assessment of the child's dental caries risk: High ❒ Moderate ❒ Low ❒**

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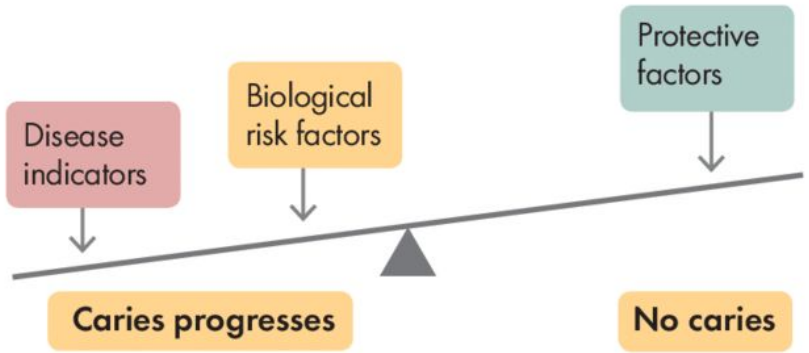
**Overall assessment of the child's dental caries risk: High ❒ Moderate ❒ Low ❒**

**Determining the caries risk as low, moderate, high or extreme**

Add up the number of "yes" checks for each of the disease indicators (Column 1) and risk factors (Column 2). Offset this total by the total number of "yes" checks for protective factors (Column 3). Use these numbers to determine whether the patient has a higher risk-factor score than a protective-factor score or vice versa. Use the caries balance to visualize the overall result and determine the risk level:




This enables a determination of low, moderate or high risk determined by the balance between disease indicators/risk factors and protective factors. The "yes" indications are also used to modify behavior or determine additional therapy.

In addition to counting the "yes" checks as described above, the following three modifiers apply:

**1. High and extreme risk**. One or more disease indicators signals at least high risk. If there is also hyposalivation, the patient is at extreme risk. Even if there are no positive disease indicators the patient can still be at high risk if the risk factors definitively outweigh the protective factors. Think of the caries balance: Visualize the balance diagram as illustrated above.

**2. Low risk.** If there are no disease indicators, very few or no risk factors and the protective factors prevail, the patient is at low risk. Usually this is obvious.

**3. Moderate risk.** If the patient is not obviously at high or extreme risk and there is doubt about low risk, then the patient should be allocated to moderate risk and followed carefully, with additional chemical therapy added. An example would be a patient who had a root canal as a result of caries four years ago and has no new clinical caries lesions, but has exposed tooth roots and only uses a fluoride toothpaste once a day.

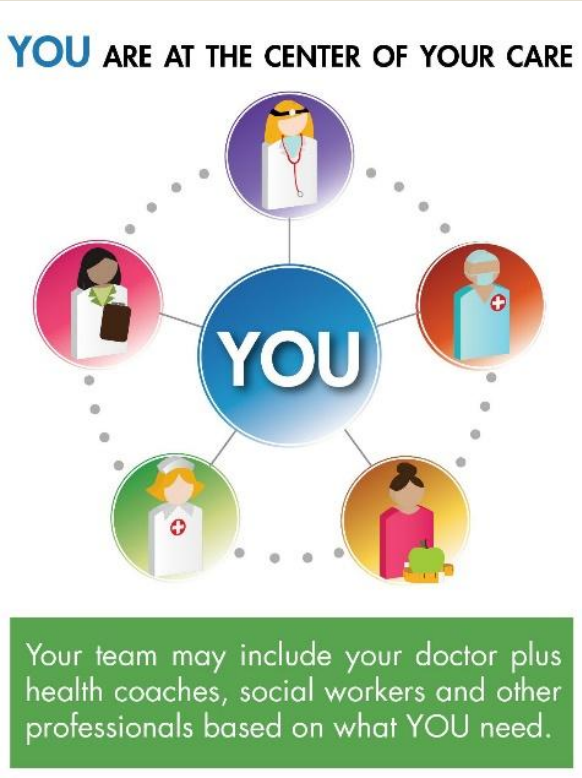
# CHARACERISTICS OF CAT

- **Classifies dental risk at a point of time and should be applied periodically to assess changes in an individual's risk status.**
- **Is intended to be use when clinical guidelines call for caries risk assessment**
- **Allows the assessor to obtain reliable clinical, environmental, and general health information**
- **Cannot render a diagnosis.**
- **Can be used by clinicians with various levels of skill.**

# AAPD Caries Risk Assessment Tool (CAT)

| Caries Risk Indicators | Low Risk | Moderate Risk | High Risk |
|---|---|---|---|
| **Clinical Conditions** | - No carious teeth in past 24 months<br>- No enamel demineralization (enamel caries "white-spot lesions")<br>- No visible plaque; no gingivitis | - Carious teeth in the past 24 months<br>- 1 area of enamel demineralization (enamel caries "white-spot lesions")<br>- Gingivitis | - Carious teeth in the past 12 months<br>- More than 1 area of enamel demineralization (enamel caries "white-spot lesions")<br>- Visible plaque on anterior (front) teeth<br>- Radiographic enamel caries<br>- High titers of mutans streptococci<br>- Wearing dental or orthodontic appliances<br>- Enamel hypoplasia |
| **Environmental Characteristics** | - Optimal systemic and topical fluoride exposure<br>- Consumption of simple sugar or foods strongly associated with caries initiation primarily at mealtimes<br>- Regular use of dental care in the established dental home | - Suboptimal systemic fluoride exposure with optimal topical exposure<br>- Occasional between meal exposures to simple sugar or foods strongly associated with caries<br>- Mid-level caregiver socioeconomic status (ie, eligible for school lunch program or SCHIP)<br>- Irregular use of dental services | - Suboptimal topical fluoride exposure<br>- Frequent (ie, 3 or more) between-mea exposures to simple sugars or foods associated strongly with caries<br>- Low-level caregiver socioeconomic status (ie, eligible for Medicaid)<br>- No usual source of dental care<br>- Active caries present in the mother |
| **General Health Conditions** | | | - Children with special health care needs<br>- Conditions impairing saliva composition/flow |

- Concept evolved from MEDICAL HOME



DENTAL HOME –Nowak 1999

***A dental home is defined as the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously accessible, coordinated and family-centered way***

**-**Nowak and Casamassimo.

FIRST DENTL VISIT

# Why a Dental Home?

- It is a **cost effective measure**.
- It also serves as a **higher quality health care alternative** in orofacial emergency care situations.

*The AAPD encourages parents and other care providers to help every child* ***establish a dental home by 12 months of age.***

# Objectives of dental home

AAPD 2001

1. An accurate assessment for dental diseases and conditions
2. An individualized preventive dental health program based upon a risk assessment
3. Anticipatory guidance about growth and development issues (i.e. teething, digit or pacifier habits)
4. A plan for emergency dental trauma
5. Information about proper care of the child's teeth and gingiva

6. Information about proper nutrition practices

7 Comprehensive dental care in accordance with accepted guidelines and periodicity schedules for pediatric dental health

8. Referrals to other dental specialists whenever necessary

1. It should be accessible
2. It should be family centered
3. It should be continuous
4. It should be comprehensive
5. It should be coordinated
6. It should be compassionate
7. It should be culturally competent

# STEPS AT A DENTAL HOME

## HISTORY

Prenatal, birth,postnatal history

Demographic and socioeconomic details

## EXAMINATION

General examination

Oro facial examination

## RISK ASSESSMENT

Dietary factors,Amount of plaque present,Feeding practices

Customization of preventive protocol

# IDEAL CHARACTERISTICS & PRACTICAL ADVANTAGES OF A DENTAL HOME

| CHARACTERISTIC | DESCRIPTION | PRACTICAL ADVANTAGES |
|---|---|---|
| **Accessible** | -Care provided in the child's community<br>-All insurance accepted and changes in coverage accommodated | -source of care close to home and accessible to family<br>-Minimal hassle encountered with payment<br>-Office ready for treatment in emergency situations<br>-Office non biased in dealing with children with special health care needs<br>-Dentists knows community needs and resources(like fluoride in water) |
| **Family centered** | -Recognition of centeredness of | -Low parent child anxiety improves care<br>-Care protocols are |

| | | |
|---|---|---|
| Continuous | -Same primary care provider from infancy through adolescence<br>Assistance provided with transitions(for example, to school) | Appropriate recall intervals are<br>based on child's needs<br>Continuity of care is better owing to the recall system<br>Coordination of complex dental treatment is possible(traumatic injury) |
| Comprehensive | Health care available 24hrs a day 7 days a week<br>Preventive primary and tertiary care provided | Emergency access is ensured Care manager and primary care dentist are in the same place. |
| Coordinated | Families linked to support education and community services<br>Information centralized | Records certified<br>School, workshop, therapy linkages established and known(cleft palate care) |

| Compassionate | Expressed and demonstrated concern for child | Dentist child relationship is established<br>Family relationship is established<br>Children less anxious owing to familiarity |
|---|---|---|
| Culturally competent | Cultural background recognised, valued and respected | Mechanism is established for communication of ongoing care Specialised resources are known and proven if needed<br>Staff may speak different languages and know dental terminology |

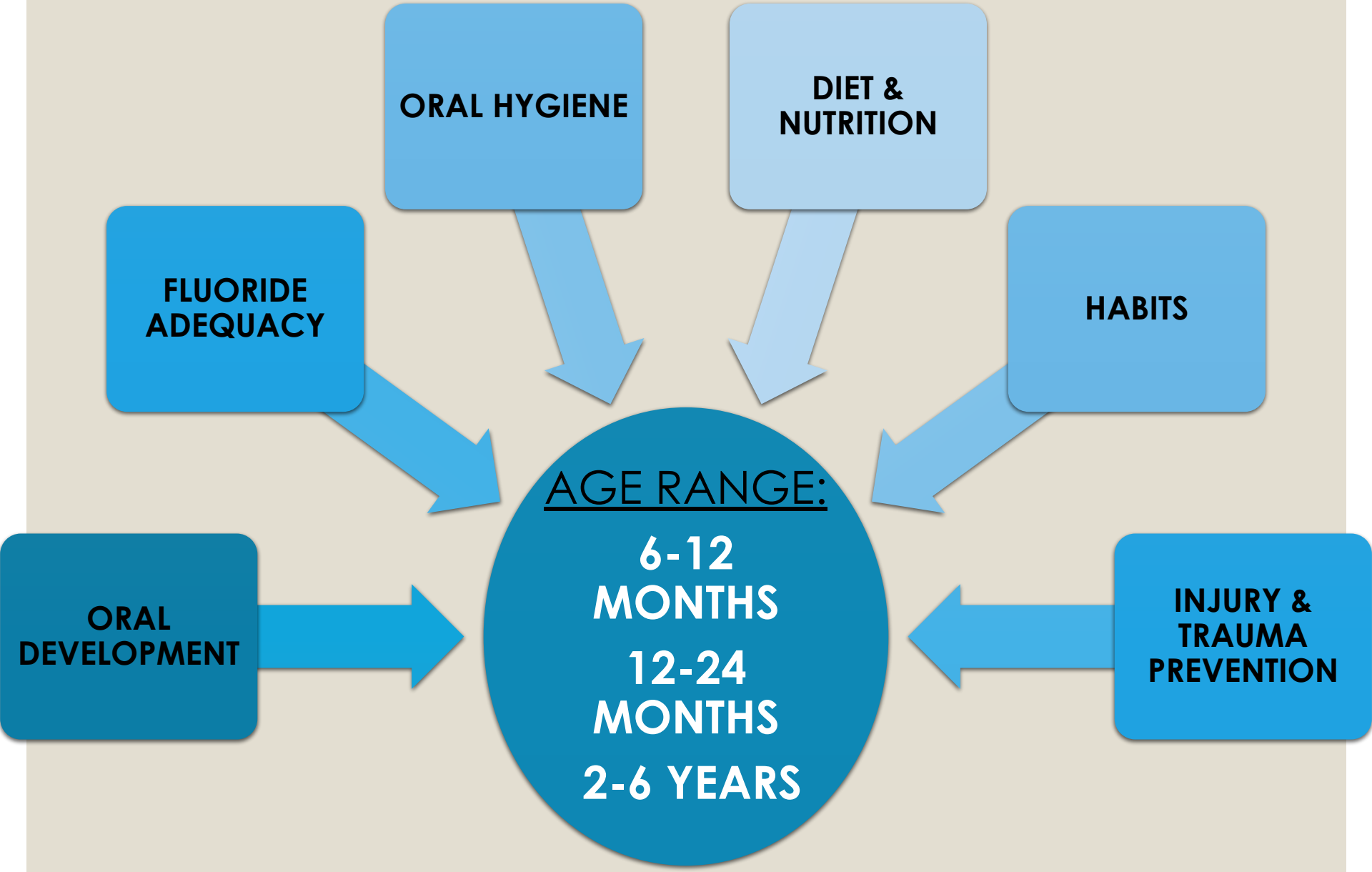
*The dental home A primary care oral health concept ARTHUR J. NOWAK, PAUL S. CASAMASSIMO. JADA, Vol. 133, January 2002*

# ANTICIPATORY GUIDANCE

***Anticipatory Guidance is defined as proactive counselling of parents and patients about developmental changes that will occur in the interval between health supervision visits that includes information about daily care taking specific to that upcoming interval -Nowak (1995)***

- This protocol identifies three developmental age ranges associated with specific milestones.

- Each age range has six specific entities called ‘ **content areas**’.


ORAL HYGIENE
DIET & NUTRITION
FLUORIDE ADEQUACY
HABITS
AGE RANGE:
6-12 MONTHS
12-24 MONTHS
2-6 YEARS
ORAL DEVELOPMENT
INJURY & TRAUMA PREVENTION

# 6-12 Months
# Milestone:
# The Eruption of the first primary tooth

**ORAL DEVELOPMENT**

-Review pattern of eruption

-Review teething facts

**FLUORIDE**

-Assess fluoride status

-Determine supplements if needed

**ORAL HYGIENE STATUS**

-Review oral hygiene techniques with caregiver

-Plan for next visit based on risk assessment

**HABITS**

-Review pacifier use

-Discuss thumb sucking effects on mouth

-Discuss breastfeeding effects on mouth

**NUTRITION & DIET**

-Encourage weaning at the appropriate age

-Discuss role of sugar in dental caries initiation

**INJURY PREVENTION**

-Review what to do if the patient has traumatic injury

-Provide emergency number

# 12-24 Months

## Milestone:

## Completion of primary dentition, occlusal relationships established, arch length determined

| ORAL DEVELOPMENT | FLUORIDE | ORAL HYGIENE STATUS | HABITS | NUTRITION & DIET | INJURY PREVENTION |
|---|---|---|---|---|---|
| -Discuss importance of space maintenance<br>-Discuss bruxism | -Reassess fluoride status<br>-Discuss toxicity and how to manage accidental ingestion | -Review home oral hygiene procedures and compliance<br>-Plan for next visit based on risk assessment | -Review non nutritive sucking | -Discuss carbohydrates and their role in plaque development<br>-Discuss frequency of carbohydrate intake as caries | -Discuss electric cord safety, child proofing the house and use of car seats<br>-Develop plans for oral trauma management for preschool and child care. |

# 2-6 Years

## Milestone:

## Loss of first primary tooth, eruption of first permanent molar

**ORAL DEVELOPMENT**

-Review patterns of eruption.

Point out permanent molar anatomy

-Describe healthy periodontal tissue

**FLUORIDE**

-Reassess fluoride status

**ORAL HYGIENE STATUS**

-Review home oral hygiene procedures and compliance

-Discuss dental sealants and describe dental radiographs

-Plan for next visit based on risk assessment

**HABITS**

-If child is still sucking the thumb, discuss how to help him discontinue the habut

**NUTRITION & DIET**

-Review diet outside home and its caries potential

-Discourage use of food as behavioural tool.

**INJURY PREVENTION**

-Encourage the use of helmets, mouth guards and car seats

-Develop plans for oral trauma management .

# Anticipatory Guidance for Parents

**Pregnant Women, New Mothers or Intimate Care Givers**

- Brush teeth twice a day with fluoridated tooth paste and floss daily
- Spit excess toothpaste after brushing and do not rinse
- Rinse every night with alcohol free OTC fluoride mouth rinse
- Have a dental visit for an exam and restoration of all active decay as soon as possible
- Educate mother about hormonal changes during pregnancy that can increase women's risk of gingivitis.

**Parents of infants:**

- Make an appointment for the infant's first dental visit within 6 months of eruption of the first tooth and no later than 12 months of age.
- After initial dental visit make future appointments based on the schedule suggested by the dentist, based on the infant's individual needs.
- Clean infant's gums with a clean damp cloth or an infant toothbrush with a small head using plain water after each feeding.

- Brush infant's teeth as soon as the first tooth erupts usually at the age of 6-10months twice a day using a soft bristled tooth brush designed for infants.
- Give infant nothing to eat or drink after brushing at night, except water.
- For infants at increased risk of tooth decay consult a dentist or physician about brushing with fluoridated tooth paste
- Become familiar with the normal appearance of the infant's teeth and gums so problems can be identified if they occur ( check once a month)

- Give the infant 6 months or older fluoride supplements but only as recommended by a dentist or a physician( based on water fluoride level)
- Incase infant has sore gums caused by tooth eruption give infant a clean toothing ring, cool spoon or cold wet wash cloth or even rub his gums with a clean finger.

## Parents of young children

- If the child has not yet been for a dental visit make an appointment for the first dental visit.
- After initial dental visit make future appointments based on the schedule suggested by the dentist, based on the infant's individual needs.
- For children under age 2 brush the teeth with plain water twice a day.
- For children with increased risk of tooth decay consult a dentist or a physician about brushing teeth with a fluoridated toothpaste.

- For children ages 2 and above brush twice a day with no more than smear amount of fluoridated tooth paste and make him spit but not rinse.
  - Young children cannot clean teeth without parental help so they need to be helped as brushing requires fine motor skills (around 7-8 years)
- Become familiar with the normal appearance of the infant's teeth and gums so problems can be identified if they occur (check once a month)
  -

- Give the child fluoride supplements but only as recommended by a dentist or physician based on the level of risk and that of fluoride in the drinking water

- Discuss with a dentist or other qualified health professional the need to apply fluoride topically

- Discuss with a dentist or other qualified health professional the need to apply dental sealants

# Anticipatory Guidance for Parents on Good Nutrition

**Pregnant Women, New Mother's or Intimate Care Givers**

- Eat healthy foods during planned meals and snacks and avoid snacking in between
- Include fruits, vegetables, grains and dairy products
- Foods containing sugar should be eaten at mealtimes only and in limited amounts
- Choose fruit rather than fruit juice for recommended daily fruit intake.

- Avoid carbonated beverages during pregnancy and atleast first 30months after delivery
- Drinking of fluoridated water
- Once infant is born avoid transmission of bacteria that cause tooth decay from the parent, like avoid sharing utensils or cleaning pacifier or bottle with saliva

## Parents of Infants:

- Breast feed the infant for approximately the first 6 months of life can be continued for 12 months.

- Prevent transmission of bacteria that cause tooth decay via saliva, avoid sharing utensils, testing the temperature of the bottle with the mouth or cleaning a pacifier or bottle nipple with saliva.

- Do not put infant to sleep with bottle or allow frequent or prolonged feeds with beverages high in sugar.

- Hold infant while feeding, never prop the bottle using pillows or other objects to hold the bottle.

- Never add cereal to the bottle this will cause sugary foods to pool around teeth

- Introduce a small cup when the infant can sit up without support.

- Wean the infant from the bottle when he starts to eat more solid foods and drink from a cup

- Do not introduce juice into an infant's diet before age 6 months and limit to 4-6 oz per day.

- For infants 6 months and older, serve age appropriate healthy foods and avoid snacking between meals.

- Serve foods containing sugar at mealtimes only and limit amount

Parents of Young Children:

- To avoid transmission of bacteria that cause tooth decay from parent via saliva to child, avoid sharing utensils, or cleaning a pacifier or bottle nipple with saliva.
- Continue to encourage a child to drink from a cup wean from bottle 12-14 months
- Do not put a child to sleep with a bottle or sippy cup or allow frequent or prolonged feeds
  - Allow age appropriate healthy planned foods and avoid snacking in between
- Serve fruits, vegetables, grains and dairy products
- Encourage child to eat fruit rather than drink fruit juice
- Serve the child juice in a cup and limit to 4-6 oz per day
- If child drinks beverages between meals encourage drinking water and milk rather than juices and sodas.
- Drink fluoridated water.

# Anticipatory Guidance for Parents on Injury Prevention

- Closely supervise infants on furniture, chairs or any high areas.
- Locks doors and use safety gates at the top and bottom of stairs.
- Supervise children in playgrounds to make they play on developmentally appropriate equipment.
- Avoid use of infant walkers.

- Wear helmets when riding on bicycles or tricycles.
- Wait until children have developed basic motor skills before allowing them to participate in organised sports.
- Do not place infant in a shopping cart, instead use stroller or front pack or back pack.
- Provide infants care giver with a dentist's emergency contact number.

***K Shetty, B Acharya, M Higgins. Anticipatory Guidance in Pediatric Oral Health. The Internet Journal of Pediatrics and***

- ***Neonatology. 2005 Volume 6 Number 1.***

# CHILDREN WITH SPECIAL HEALTH CARE NEEDS

- Like all children, these children should have their first visit within 6 months of eruption of the first tooth or at 12 months of age.
- Future visits may have to be more frequent, maybe at 2-3 month intervals.

# Health supervision

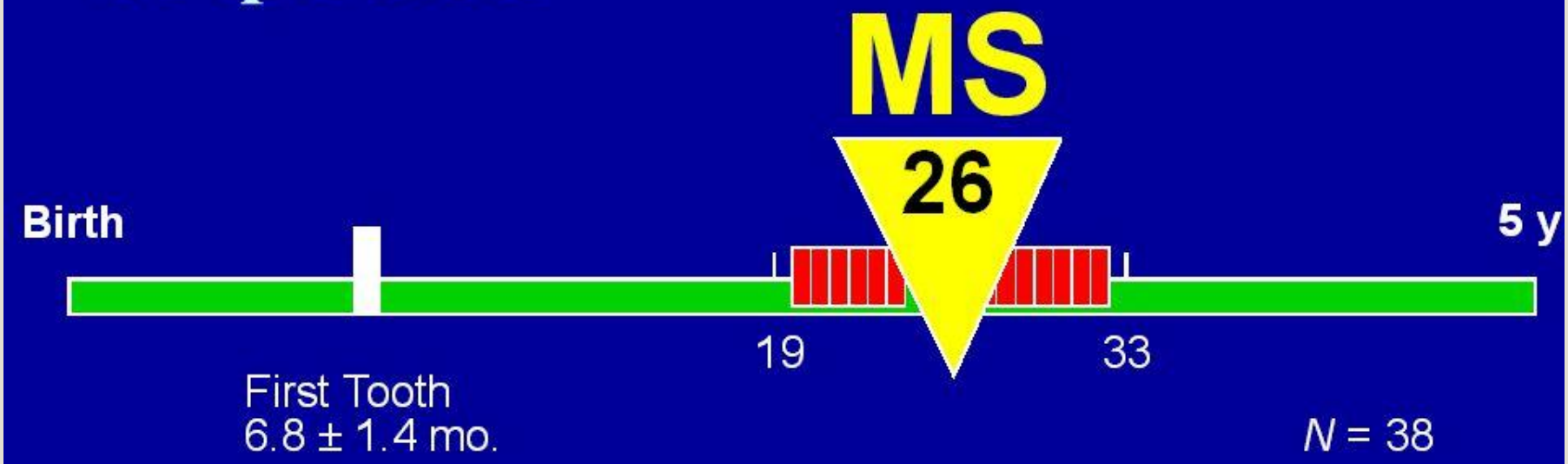
- ***Health supervision is defined as the longitudinal partnership between the dentist and family individualised to focus on health outcomes for that family and child.***

- This is a departure from the "every 6 months" approach that is common to dental practice and that frankly has no strong basis

# WINDOW OF INFECTIVITY

- The "window of infectivity," defined as the time of initial colonization of the infant's oral environment with the cariogenic bacteria mutans streptococci (MS)
- Primary tooth eruption provides a virgin habitat which enables MS to colonise avoiding competition with other indigenous bacteria
- *Earlier the colonization of a young child's mouth, greater is their caries risk*

# The window of infectivity for mutans streptococci




The Window of Infectivity for MS.
(Caufield, Pediatric Dentistry 1997, 19: 491-8)

**Short answer**

- Define dental home

**Short essay**

- Anticipatory guidance
- Infant oral health
- Anticipatory guidance and dental home

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# Thank You