بسم الله الرحمن الرحيم

Indices used for dental caries assessment

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Dental Caries:

A progressive irreversible microbial disease affecting the hard parts of the tooth. It is the most prevalent chronic disease affecting the human race. Once it occurs, its manifestations persist throughout life even the lesion is treated. It usually begins soon after the teeth erupted into the oral cavity. So, it is a post eruptive disease. It affects persons both genders, all races, all ages, all socio-economic groups.

1- Indices used for coronal caries.

    A- Permanent teeth.

    B- Primary teeth.

2- Indices used for root caries.

Permanent teeth index

Decayed-Missing-Filled Index (DMF) **which was introduced by Klein, Palmer and Knutson in 1938 and modified by WHO:**

1-DMF teeth index (**DMFT**) which measures the prevalence of dental caries/Teeth.

2- DMF surfaces index (**DMFS**) which measures the severity of dental caries.

Components of DMF

D component:

Used to describe (**D**ecayed teeth) which include:

1. Carious tooth.

2. Filled tooth with recurrent decay.

3. Only the root are left.

4. Defect filling with caries.

5. Temporary filling.

6. Filled tooth surface with other surface decayed.

M component:

Used to describe (**M**issing teeth) **due to caries.**

other cases should be excluded these are:

1. Tooth that extracted for reasons other than caries should be excluded, which include:

      a-Orthodontic treatment.

      b-Impaction.

      c-Periodontal disease.

2. Unerupted teeth.

3. Congenitally missing.

4. Avulsion teeth due to trauma or accident.

F component:

Used to describe (**Filled teeth**) **due to caries**.

Teeth were considered filled without decay when one or more **permanent** restorations were present and there was no secondary (recurrent) caries or other area of the tooth with primary caries.

A tooth with a crown placed because of previous decay was recorded in this category.

Teeth restored for reasons other than dental caries should be excluded, which include:

1. Trauma (fracture).

2. Hypoplasia (cosmetic purposes).

3. Bridge abutment (retention).

4. Seal a root canal due to trauma.

5. Fissure sealant.

6. Preventive filling.

Notes

1- A tooth is considered to be erupted when just the cusp tip of the occlusal surface(post. Teeth) or incisor edge is exposed(ant teeth) .

The excluded teeth in the DMF index are:

a- Supernumerary teeth.

b- The third molar according to **Klein, Palmer and Knutson only.**

2-Limitations - DMF index can be invalid in older adults or in children because index can overestimate caries record by cases other than dental caries.

Principle and rules in recoding

1-DMFT:

1- A tooth may have several restorations but it counted as one tooth, F.

2- A tooth may have restoration on one surface and caries on the other, it should be counted as decayed D .

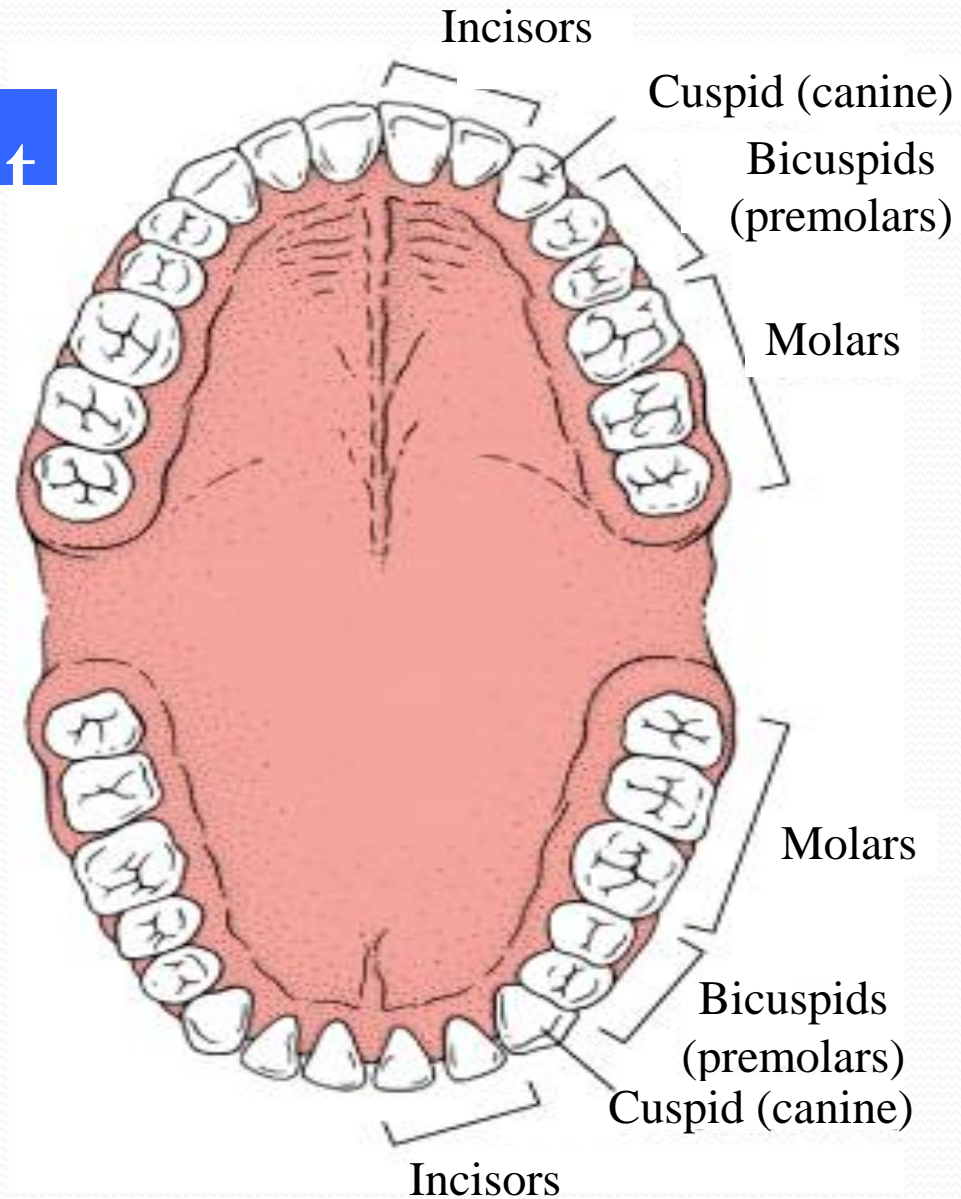3- No tooth must be counted more than once, either D, M, or F.

2-DMFS

Each tooth was recorded scored as 4 surfaces for anterior teeth and 5 surfaces for posterior teeth. Permanent Teeth, Outer Surfaces of Teeth

- Retained root was recorded as 4 D for anterior teeth, 5 D for posterior teeth.

- Missing tooth was recorded as 4 M for anterior teeth, 5 M for posterior teeth.

- Tooth with crown was recorded as 4 F for anterior teeth, 5 F for posterior teeth.

Permanent Teeth

Incisors

Cuspid (canine)

Bicuspids (premolars)

Molars

Molars

Bicuspids (premolars)

Cuspid (canine)

Incisors

Outer Surfaces of Teeth

Labial Surface

-parts of the teeth that meet when the mouth is closed

Buccal Surface

-sides of teeth nearest the cheek

Lingual Surface

-inside surface nearest the tongue

Mesial Surface

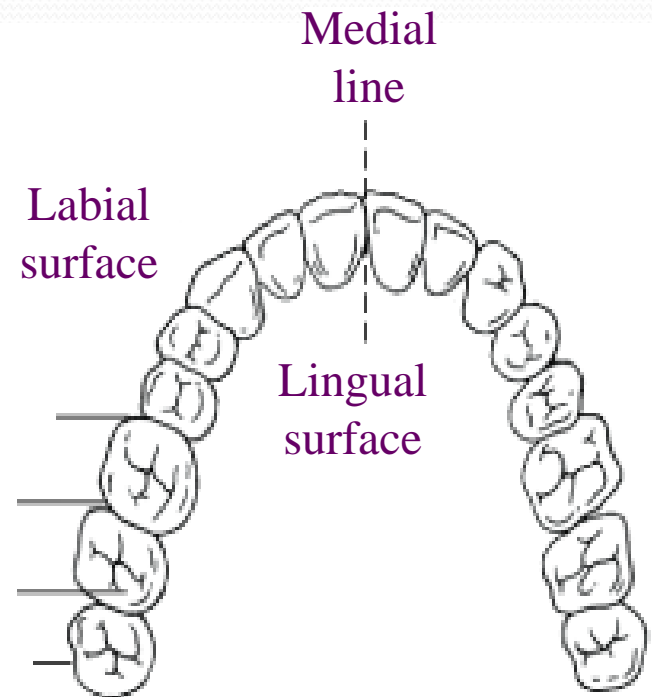-short side of the tooth nearest the median of the jaw line

Distal Surface

-short side of tooth farthest from the median of the jaw line

Medial line

Labial surface

Mesial surface

Distal surface

Occlusal surface

Buccal surface

Lingual surface

Calculation of DMFT \ DMFS

1- For individual

$$DMF = D + M + F$$

2- For population

$$\text{Mean DMF} = \frac{\text{Total DMF}}{\text{Total No. of the subjects examined}}$$

Maximum score:

1- DMFT =   **28 or** 32

2- DMFS =   (12 * 4) +(20 * 5)

          = 48 + 100 = 148 or 128

Minimum score = Zero