



Dental Screening Calibration and Data Collection



October 2019



Importance of Data Calibration

Caries diagnosis varies among clinicians

• 10 clinicians – 1 patient = 10 different treatment plans

Purpose of training is to assure consistency

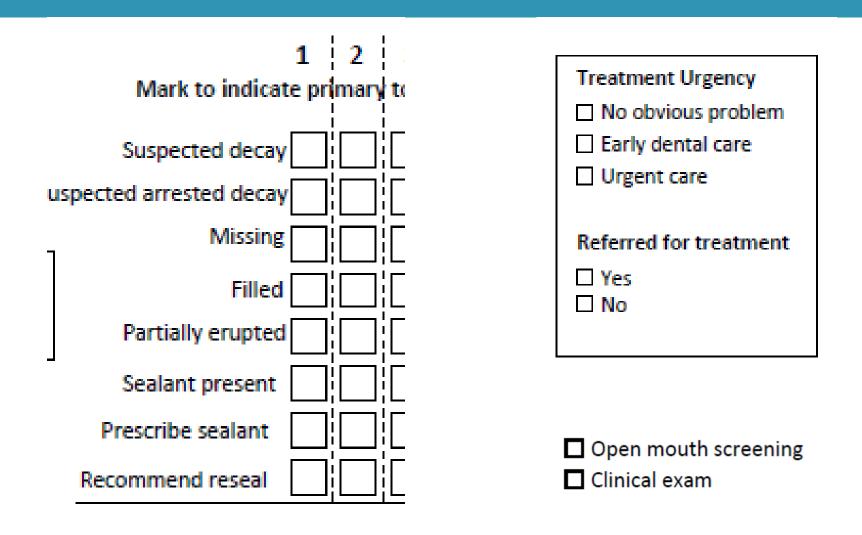


Calibration Acknowledgements

Thank you to...

- The Association of State and Territorial Dental Directors (ASTDD) for developing this slide set, which we adapted slightly.
- Drs. John Warren, Amid Ismail and Eugenio Beltran for providing the clinical photos.

Dental Screening: Primary Indicators

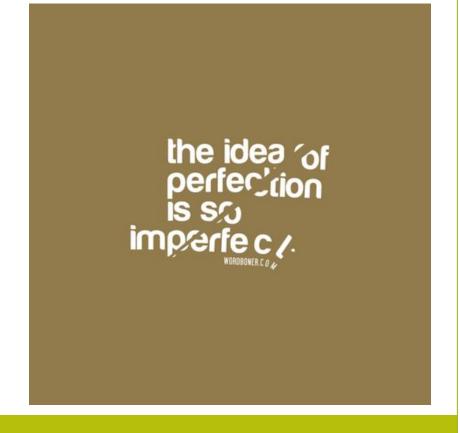


Consistency Versus Perfection

CONSISTENCY

PERFECTION

Consistency
Is The



Consistency Versus Perfection



CONSISTENCY

PERFECTION

Is possible if simple diagnostic criteria are used

Probably not possible Dentists do not agree

Screening Logistics



Set Your Clinical Hat Aside

NOT a clinical exam with diagnosis and treatment planning

The assumption is that you are doing an open mouth screening. If you are a dentist and using this form and doing a clinical exam, there is a spot on the form to mark that under **Screening**:

☐ Open mouth screening

Clinical exam



Put on Your Public Health Hat

Quick screening with recording of obvious findings About 1 minute per child



Good Lighting is Essential





NEVER RELY ON NATURAL LIGHT.

Retraction & Visualization



Removing Food Debris

Toothbrush Toothpick

Sealants or Crackers? Caries or Oreos?



Instrumentation

Dental explorers will NOT be used.



Damaged Enamel From Explorer

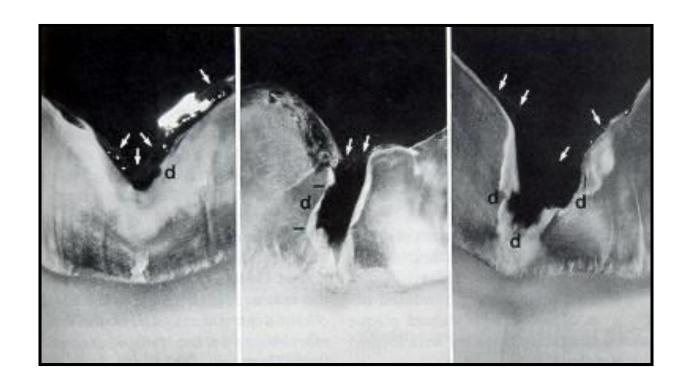


Photo courtesy of Professor Ekstrand.

What About My Loupes?

NOT recommended

 Use only if your eyesight is so bad that you absolutely can't see the teeth without them



Infection Control





Infection Control



Avoid touching the child Don't let the flashlight touch the child

Infection Control Protocol

Wear gloves

- Not required by CDC but good for public relations
- Change gloves between each child good for public relations

If you do not touch the child

No need to wash hands

If you do touch the child

Use antiseptic agent

NOT necessary ...

Masks, gown, eye protection

Criteria



Suspected Untreated Decay

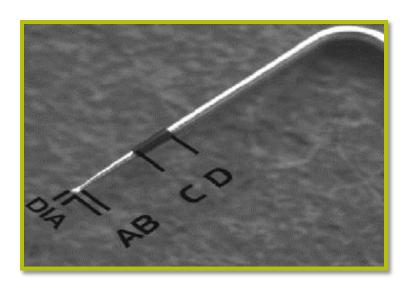
A measure of untreated disease Does this child have any cavities that have not been treated?

A tooth has untreated decay when you can easily see breakdown of the enamel surface

Only <u>cavitated</u> lesions are considered untreated decay



Reference – detectable using PSR/CPI perio probe If you gently moved the PSR/CPI perio probe over a lesion, the probe would "catch" a cavitated lesion.



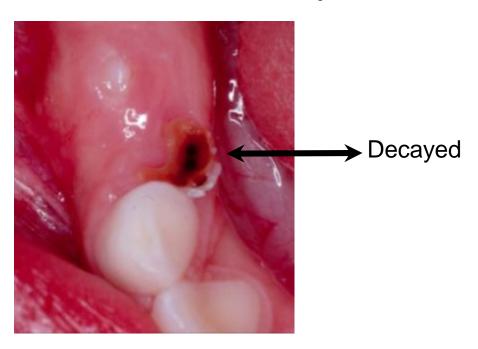


Pits & Fissures

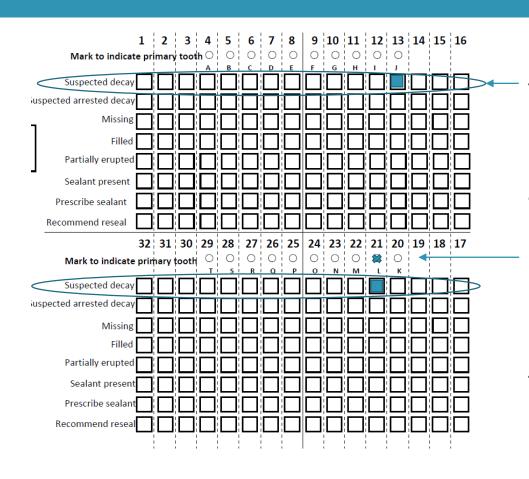


Smooth Surface

Retained roots = untreated decay



Suspected untreated decay = Suspected decay



Mark the appropriate teeth that have suspected untreated decay.

The default for these boxes is permanent teeth. If there are primary teeth, be sure to mark the circle for the corresponding primary teeth.

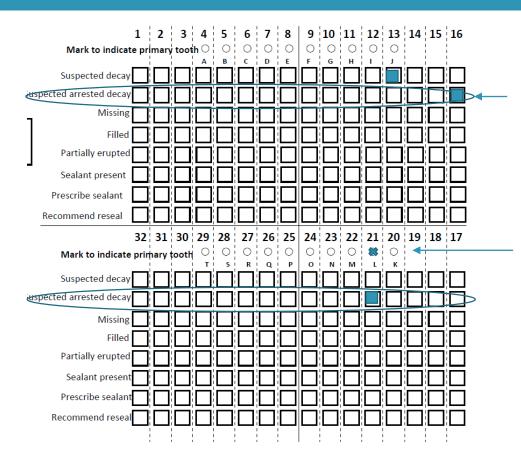
Vermont Department of Health 26

Suspected Arrested Decay





Marking Arrested Decay

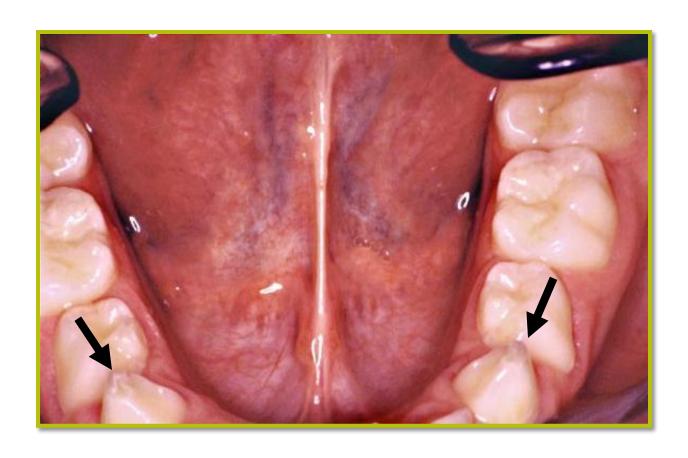


Mark the appropriate teeth that have arrested decay.

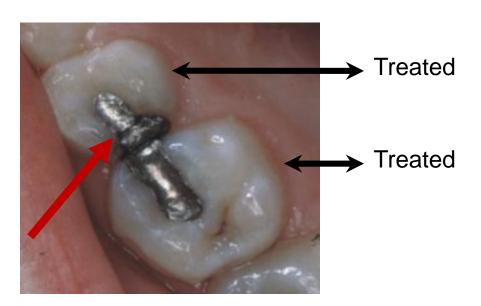
The default for these boxes is permanent teeth. If there are primary teeth, be sure to mark the circle for the corresponding primary teeth.

Vermont Department of Health 28

Proximal Surface Caries



Broken fillings without recurrent decay are coded as treated not untreated decay



Teeth with stained pits & fissures and NO enamel break are considered sound



This tooth has stain but NO enamel break so it is SOUND.

"White spot" lesions are not untreated decay



These teeth have "white spots" but no break in the enamel surface. Do not code as untreated decay.

Arrested decay is <u>not</u> untreated decay



This tooth has black-brown staining, suggestive of SDF treatment; the caries lesion is no longer active. Do not code as untreated decay.

Rule of Thumb

When in doubt, be conservative. That means that if you are not sure if a cavity is present, assume it is not.

A Few Examples – UniViSS Handout

Second step: Discoloration Assessment	Universal Visual Scoring System for pits and fissures (UniViSS occlusal) First step: Lesion Detection & Severity Assessment					
	First visible signs of a caries lesion Score F	Established caries lesion Score E	Microcavity and/or localised enamel breakdown Score M	Dentin exposure Score D	Large cavity Score L	Pulp exposure Score P
White (Score 1)						
White-brown (Score 2)			T and		(3)	
(Dark) Brown (Score 3)						
reyish translucency (Score 4)		(2)				

Source: www.univiss.net

White Discoloration



Not visible without prolonged air drying Untreated caries = NO



May be visible without drying, fissures appear wider but no "break" in enamel integrity

Untreated caries = NO



Has definitive break in enamel surface
Untreated caries = YES

Source: www.univiss.net

White-Brown Discoloration



Not visible without prolonged air drying Untreated caries = NO



Visible without drying, fissures appear dark & wider but no "break" in enamel integrity

Untreated caries = NO



Has definitive break in enamel surface
Untreated caries = YES

Source: www.univiss.net

Dark Brown Discoloration



Visible without air drying, stain
Untreated caries = NO



Visible without air drying, stain
Untreated caries = NO



Has definitive break in enamel surface
Untreated caries = YES

Source: www.univiss.net

Treated Decay

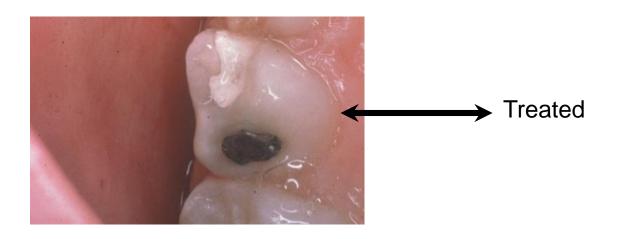
Has the child had dental treatment because of decay? Includes

- Amalgam and composite restorations
- Glass ionomer restorations
- Temporary restorations
- Crowns placed because of decay
- Extractions because of decay



Treated Decay

Teeth with temporary fillings are classified as filled This includes glass ionomers places for palliative reasons



Be AWare of Composites!



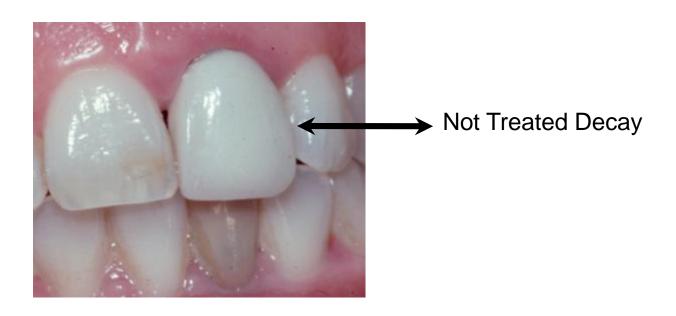
Amalgam Fillings

Composite Fillings



NOT Treated Decay

Crowns placed because of trauma are not treated decay



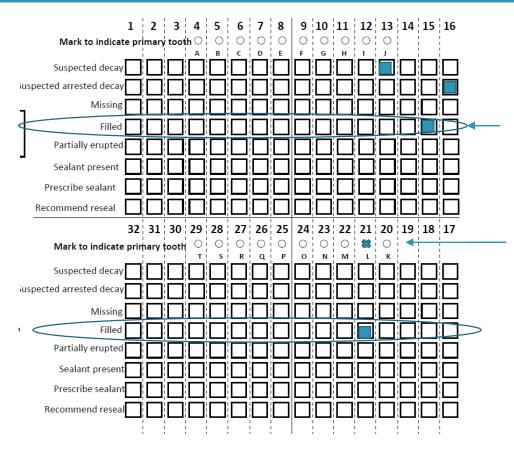
Extracted Teeth

Has a tooth been extracted because of decay?

• Do NOT include teeth extracted for orthodontic reasons



Marking Treated Decay

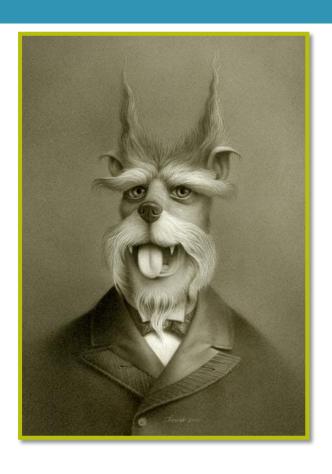


Mark the appropriate teeth that have treated decay.

The default for these boxes is permanent teeth. If there are primary teeth, be sure to mark the circle for the corresponding primary teeth.

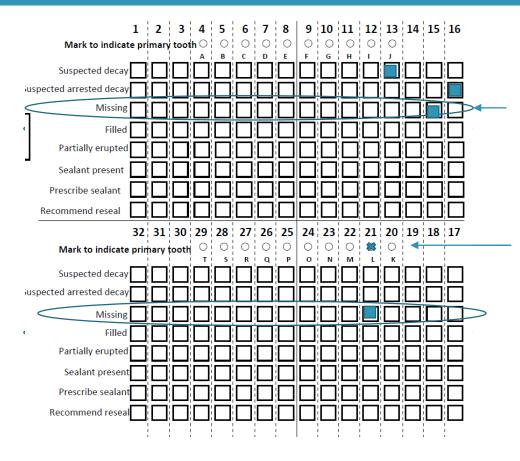
Vermont Department of Health 45

Special Circumstances





Marking Missing



Mark the appropriate teeth that are missing.

The default for these boxes is permanent teeth. If there are primary teeth, be sure to mark the circle for the corresponding primary teeth.

Vermont Department of Health 47

Congenitally Missing Teeth

Ignore congenitally missing teeth



Teeth Extracted for Ortho Reasons

Teeth extracted for orthodontics are not treated decay



This person has missing premolars because of orthodontics so they do NOT have treated decay.

Treated Decay = NO

Injured Teeth

Do not code teeth that are injured or treated because of injury.



Not Untreated Decay

Not Treated Decay

Enamel Hypoplasia



Opaque Defect



Pitted Defect

Also referred to as Developmental Enamel Defects.

Generalized Lack of Enamel

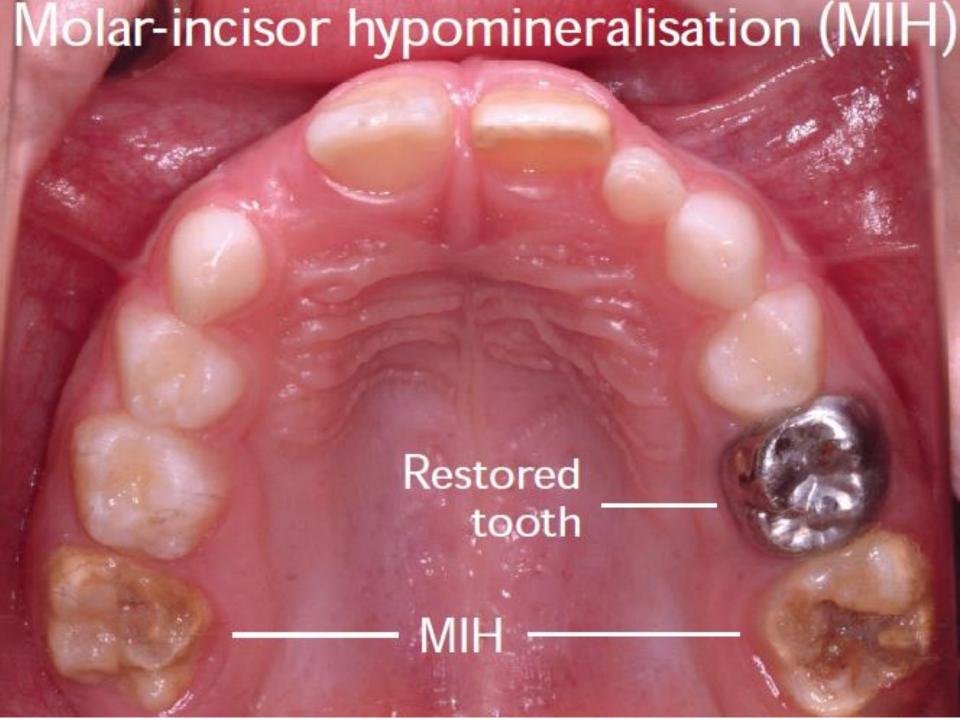


7 year old Untreated Caries = No

Pitted Hypoplasia



8 year old
Untreated Caries = No



Enamel Hypoplasia & Decay



Untreated Decay = Yes

Enamel Hypoplasia & Caries



Linear EHP Untreated Decay = No



Linear EHP plus caries Untreated Decay = Yes

Enamel Hypoplasia & Caries







Untreated Decay = Yes

Dental Sealants

Dental Sealants

Permanent molars only

Can use toothpick to lightly "feel" occlusal surface for sealants



Transparent



Opaque



Glass Ionomer

Dental Sealants

Partially and fully retained sealants



Partially Retained Sealant



Fully Retained Sealant

Sealant present	
Prescribe sealant	
ecommend reseal	

Codes for Sealants

	_
Sealant present	
Prescribe sealant	
Recommend reseal	

Is it a PRR or a Dental Sealant?

It can be difficult to determine if a tooth has a preventive resin restoration (PRR) or a sealant

If you see a definitive cavity preparation, code the tooth as having treated decay. A PRR is treated decay.



Preventive Resin Restorations Treated Decay = Yes

3 levels based on how soon a child should visit the dentist for a clinical diagnosis and any necessary treatment

- Urgent need
- Early care needed
- No obvious problem (None)

Treatment Urgency ☐ No obvious problem ☐ Early dental care ☐ Urgent care

Urgent need

- Needs dental care within the next week because of signs or symptoms that include pain, infection, or swelling
- A child with an abscess should always be coded as urgent
 - Even if the abscess is draining



This child has an abscess so they need URGENT care



This child has a draining abscess and should be coded as URGENT care

Early dental care

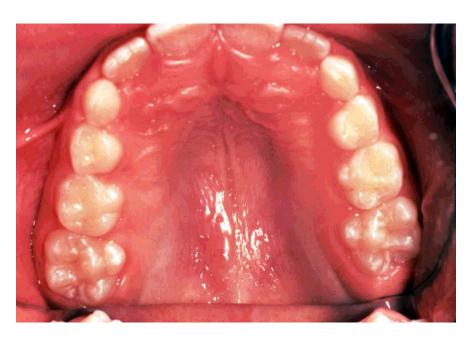
- Needs to see a dentist because of untreated decay or broken restorations but they do not have pain or an infection
- Should see a dentist within the next several weeks or before their next regularly scheduled dental appointment



This child needs EARLY dental care

No obvious problems

- Individuals with no cavitated decay or other dental problems requiring early attention are considered to have no obvious problem, which means that they should receive routine dental checkups
- Decay only on primary teeth about to be exfoliated
 - Child can have decayed teeth but not need treatment



This child has no obvious need for dental care

Codes for Treatment Urgency

Treatment Urgency No obvious problem Early dental care Urgent care Referred for treatment Yes No

Screening Protocol

Arrive at site 30 minutes early

Check-in at school office

Get class rosters

Find out about recess/lunch

Set up screening site & equipment

Screening Protocol

Have child bring consent form to screening

Check for positive consent

Review demographic information & fill in missing items (if possible)

Age, gender, race/ethnicity

Screening Protocol

Complete direct observation portion of screening

Enter results on oral health screening form

Complete referral letter

Give child/teacher letter, toothbrush, etc

Thank staff - remove garbage

Providing services and/or follow-up?

See instructions for completing forms for more information.

Vermont Department of Health

Training Test

Training Test Do These Teeth Have Untreated Decay? No/Yes

#1: Untreated Decay?



#2: Untreated Decay?



#3: Untreated Decay?



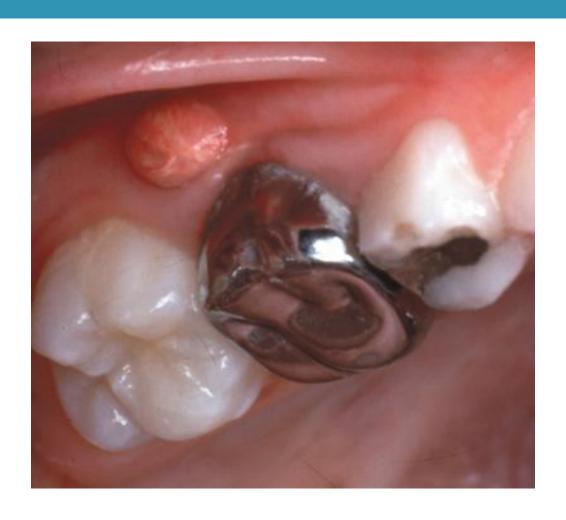
#4: Untreated Decay?



#5: Untreated Decay?



#6: Untreated Decay?



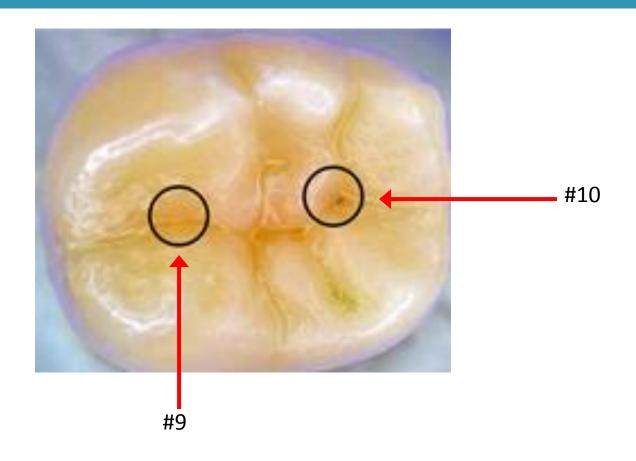
#7: Untreated Decay?



#8: Untreated Decay?



#9 & #10: Untreated Decay?



#11-#14: Untreated Decay?



13





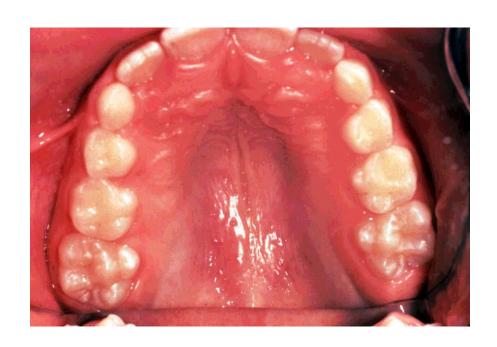
#15: Untreated Decay?



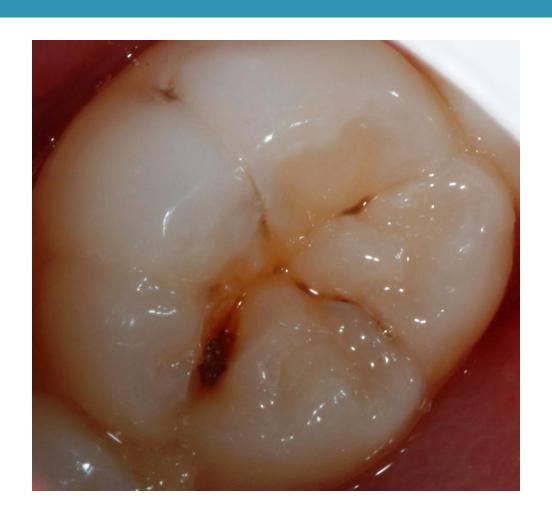
#16: Untreated Decay?



#17: Untreated Decay?



#18: Untreated Decay?



#19: Untreated Decay?



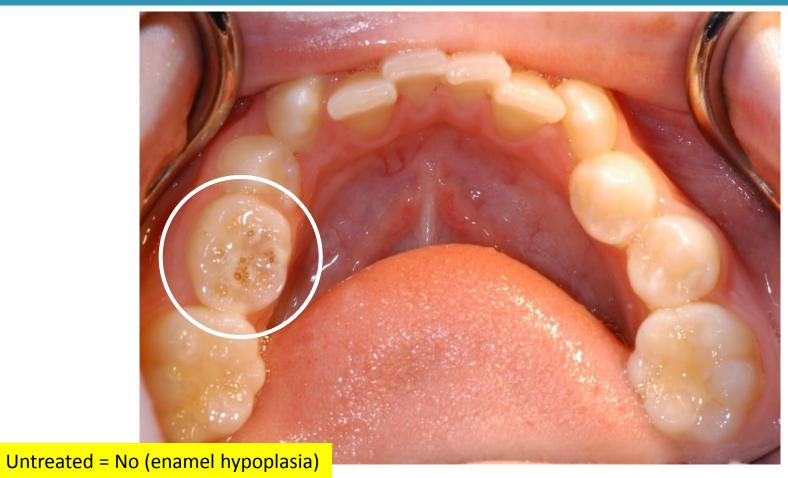
#20: Untreated Decay?



Answer Key

1: Enamel hypoplasia	11: No
2: Yes	12: No
3: No	13: No
4: Yes	14: Yes
5: No	15: No
6: No	16: Yes
7: No	
8:Yes	17: No
9:No	18: Yes
10: No	19: No
	20: No

1: Enamel Hypoplasia



Treated = Yes (molars have PRRs)

Tx Urgency = None

2: Obvious Break in Enamel



Untreated = Yes Treated = Yes

Tx Urgency = None (decayed tooth about to exfoliate)

3: Stain but no Break in Enamel



Arrested Decay = Yes
Tx Urgency = None

4: Break in Enamel & Shadow



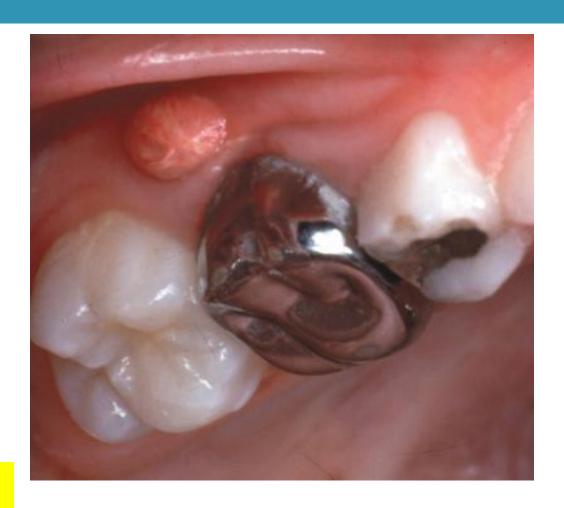
Untreated = Yes
Treated = No
Tx Urgency = Early

5: Fracture Due to Accident - No Caries



```
Untreated = No
Treated = No
Sealants = Yes
Tx Urgency = Early (child is not in pain)
```

6: Abscess but No Caries



Untreated = No
Treated = Yes
Tx Urgency = Urgent

7: "White Spot" but no Break in Enamel

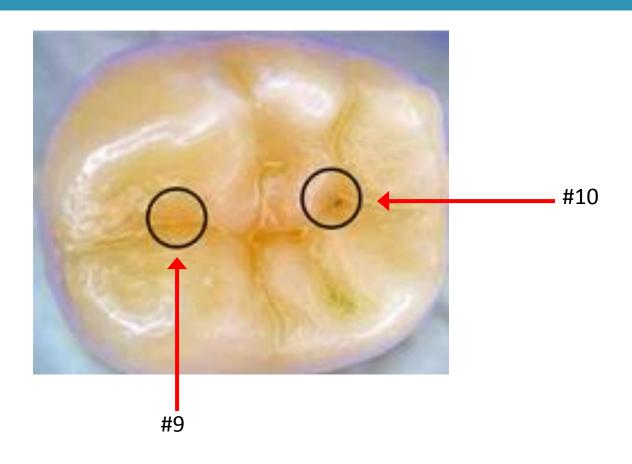


8: Break in Enamel



Untreated = Yes
Tx Urgency = Early

No Break in Enamel



Untreated = No Tx Urgency = None

These are Tricky - Only 14 is Caries



15: Discoloration but No Enamel Break



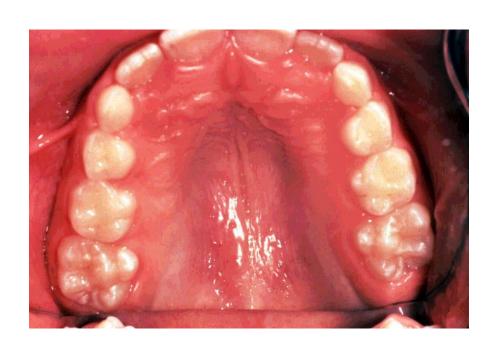
Untreated = No (no enamel break)
Treated = No
Tx Urgency = None

16: Enamel Break & Discoloration



Untreated = Yes
Tx Urgency = Early

17: No Caries



Untreated = No Treated = No Tx Urgency = None

18: Enamel Break



Untreated = Yes
Tx Urgency = Early

19: Demineralization But no Enamel Break

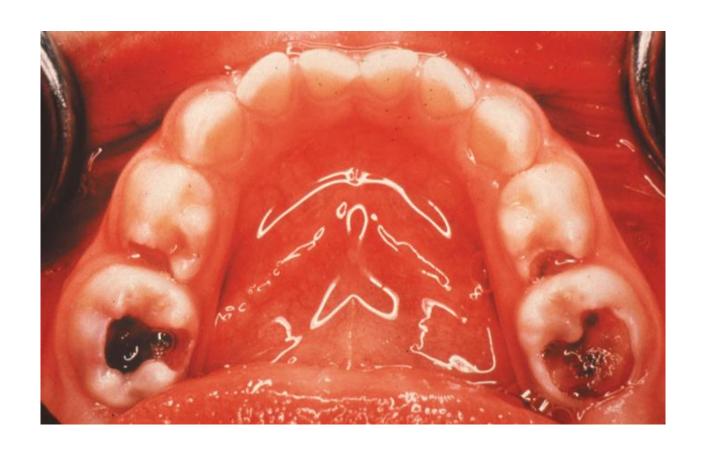


20: Discoloration But no Enamel Break

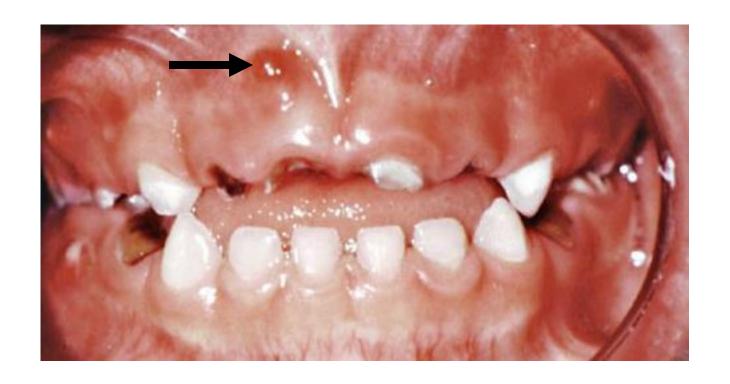


Untreated = No Tx Urgency = None





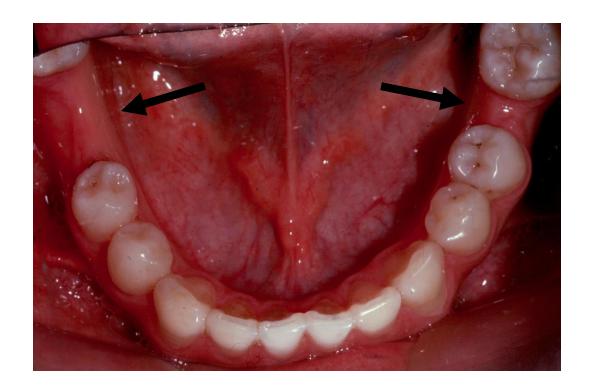
Untreated Decay = Yes
Treated Decay = No
Tx Urgency = ?? (Is child in pain)



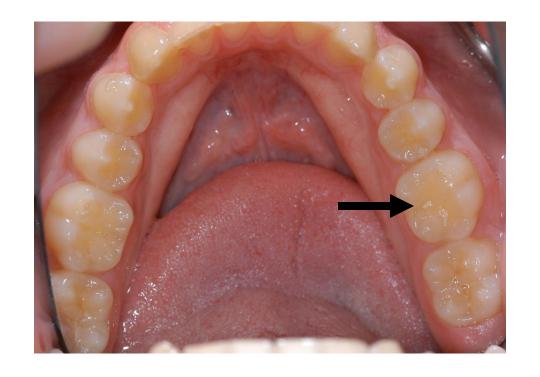
Untreated Decay = Yes
Treated Decay = No
Tx Urgency = Urgent



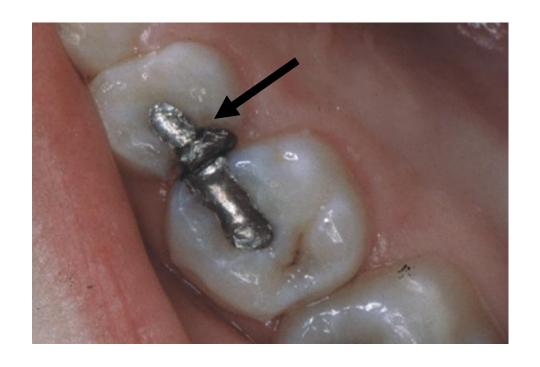
Untreated Decay = No Treated Decay = Yes Tx Urgency = 0



Untreated Decay = Yes (enamel break on 2nd premolar)
Treated Decay = Yes (1st molars extracted)
Sealants = No
Tx Urgency = Early



Untreated Decay = No
Treated Decay = No
Sealants = Yes (partially retained sealant)
Tx Urgency = 0



Untreated Decay = No
Treated Decay = Yes
Sealants = No
Tx Urgency = Early (Broken filling)



Untreated Decay = No
Treated Decay = No
Tx Urgency = None

Individual has dental fluorosis



Untreated Decay = No
Treated Decay = No
Sealants = Yes
Tx Urgency = None

Individual has enamel hypoplasia but no caries