WOMEN'S INTERAGENCY HIV STUDY
ORAL PROTOCOL
FORM OP12: ROOT CARIES ASSESSMENT

COMPLETING THE FORM

GENERAL INFORMATION

Affix the Participant ID label in the space indicated.

Record the visit number.

Be sure the form version is the most current version date.

Record your initials.

Record the date.

SECTION A - D :

The remainder of the form is divided into four sections, A, B, C and D. Each section refers to a quadrant of the mouth and is labeled as such; UPPER LEFT, UPPER RIGHT, LOWER LEFT and LOWER RIGHT, respectively.

The teeth in each quadrant are labeled in the columns in the order in which they should be assessed from left to right across the page (CE to M2).

For each tooth, circle the appropriate lettered tooth call (i.e., R, U, M, Y) at line **a**. Circle one code only. The code "SI" (surface code indicated) is separated to differentiate it from the other tooth codes: if "SI" is coded, the examiner should call (and the data management system will expect) one or more surface calls for the tooth.

For each tooth where a surface code is indicated, circle the numbered surface code(s) for each affected tooth surface. Line **b - f** list each of the surfaces (b=lingual; c=buccal; d=mesial; e=distal). The first column (0, 1, 2, 3) indicates caries on the surface; the second column (6, 7, 8, 9) identifies restorations on the surface **Remember, caries codes take precedent over restorations for each surface.** Hence, if a given surface exhibits both caries and a restoration, only the caries is recorded.

If no surface calls are indicated, proceed to the next tooth.

EQUIPMENT

- Dental Mirror
- Number 23 Explorer

PROCEDURE

Root caries is summarized by the DFS Index (Decayed and Filled Permanent Root Surfaces), missing teeth being ignored. By convention, each tooth is considered to have 4 root surfaces: mesial, buccal (labial), distal and lingual.

The sequence of examination is exactly the same as for coronal caries. All exposed portions of a tooth's root surface should be carefully examined. The most difficult areas to examine are interproximal surfaces in posterior teeth, particularly those that contain restorations. Subgingival inspection is not appropriate because few lesions are confined subgingivally and it may produce bleeding.

The tooth and surface codes for root caries are identical to those for coronal caries with the exception of the "R" score, which is equivalent to the "S" score for coronal caries, indicating a tooth for which all root surfaces are sound.

ROOT CARIES SCORING KEY

Tooth Status	Diagnostic Code
Sound (no caries or restoration)	R
Unerupted	U
Missing (for any reason)	M
Exclusion (tooth or roots cannot be scored)	Y
Surface Code Indicated	SI

	Diagnostic Code	
Surface	Caries	Filled
Lingual	0	6
Buccal (Labial)	1	7
Mesial	2	8
Distal	3	9

The diagnosis of root caries requires the examiner to:

- Distinguish between caries and abrasion/erosion
- Decide whether a lesion originated on the root or the crown of the tooth, when both areas are involved
- Decide how many surfaces to score carious (or filled)

GUIDELINES FOR ROOT CARIES ASSESSMENT

The following conventions and notes have been adopted to promote consistency of diagnoses.

In some incipient lesions the carious area of the root surface may merely be discolored without cavitation, but the area will be soft to exploration. Cavitation with jagged margins and a roughened, but soft floor or base usually occurs in advanced lesions. Normal cementum is softer than enamel, and frequently will yield to pressure from the tip of an explorer. Areas of root caries, however, are softer than surrounding cementum; therefore, it is possible to differentiate sound cementum from carious cementum based on tactile sense. In the presence of root caries, an explorer penetrates the tissue but usually can be removed easily. However, if the explorer penetrates but resists withdrawal or "sticks," the surface is usually sound cementum.

Areas of abrasion or erosion in root surfaces rarely become carious because they are generally kept clean and are free of plaque. Root caries frequently occurs beneath plaque, but rarely beneath calculus. Accumulations of plaque which obstruct the examination procedure should be removed. Surfaces covered entirely by calculus are considered sound.

Whenever both a coronal and root surface is affected by a single caries lesion that extends at least 1 mm past the CEJ in both cervical-incisal and cervical-apical directions, both surfaces should be scored as decayed. However, for a lesion affecting both crown and root surfaces that does not meet respective 1 mm extent of involvement, the surface on the side of CEJ that involves more than 50 percent of the area of the lesion should be scored. When it is impossible to apply the ">50% rule," i.e., when both coronal and root surfaces appear equally affected, both surfaces should be scored "decayed." For restorations, the same rules apply. **NOTE**: Retained roots of posterior teeth should be called 0, 1, 2, 3. Retained carious roots of anterior teeth should be called 0, 1, 2, 3.

Because of the constricted anatomy of the root surfaces of lower incisors, few lesions will be confined solely to the lingual surface--only small lesions at the midpoint. Most lingual lesions will also affect the adjacent mesial and/or distal root surfaces. However, lesions of the mesial and distal surfaces which extend lingually but do not reach the midline are only scored as interproximal lesions.

On all other teeth, when root caries appears to wrap around the line angle of the root, the more involved surface is considered the primary site of the lesion and is scored carious, whereas the adjoining surface is only scored as carious when the lesion clearly extends at least 1 mm past the line angle.

Defective margins of fillings should be checked with an explorer for recurrent decay. The criterion for scoring "decayed and filled" root surfaces is the same as for coronal surfaces, that is, decay takes precedence over a filling. Full crown coverage is considered to have been placed for coronal caries even if the margin of the crown extends onto the root surface. Thus, root surface with a crown margin free of recurrent decay should be scored sound or "R" (no caries or restorations).