National Health
and Nutrition
Examination Survey

DENTAL RECORDERS PROCEDURES MANUAL

Revised January 2001

TABLE OF CONTENTS

Chapter			Page
1	OVERVIEW TO THE ORAL HEALTH COMPONENT		1-1
	1.1 Introduction		1-1
	1.2 Data Collection		1-2
	1.3 Operations Overview		1-3
	1.4 Conducting the Oral Examination and Recording Oral Examination Data		1-4
		1.4.1 Exclusion for Medical Conditions	1-5
		1.4.2 Documenting Incomplete and Omitted Examinations	1-5
		1.4.3 Report of Dental Exam Findings and Referral Letters	1-7
		1.4.4 Returning the SP to the Coordinator's Area	1-7
2	EQUIPMENT AND SUPPLIES		2-1
	2.1 Dental Examination Area in the MEC		2-1
3	GENERAL INTERVIEWING TECHNIQUES		3-1
	3.1 The Role of the "Interviewer"		3-1
	3.2 Using the Questionnaire		3-1
		3.2.1 Using Different Types of Questions	3-1
		3.2.2 General Rules for Asking Questions	3-3
		3.2.3 General Rules for Recording Answers	3-4
	3.3 Probing		3-5
	3.4 Clarification of Questions		3-9
	3.5 Explanatory Comments		3-9
	3.6 Handling Refusals		3-11
4	ORAL EXAMINATION METHODS		4-1
	4.1 Sequence of Oral Examination Components		4-1
	4.2 Before the Examination		4-1
	4.3 Guide to the Integrated Survey and Information System (ISIS)		4-3
		4.3.1 General Data Entry Guidelines	4-5
		4.3.2 Editing the Examination Record	4-6
		4.3.3 Section Status Screens	4-7
		4.3.4 Examination Breakoffs	4-9
		4.3.5 Exiting an Examination	4-11

TABLE OF CONTENTS (CONTINUED)

Chapter			Page
4.4	Medical Exclusion Questionnaire		4-13
4.5	Orofacial Pain Assessment		4-17
	4.5.1	Introduction	4-17
	4.5.2	Recording Procedures	4-17
	4.5.3	Orofacial Pain Screens	4-20
4.6	Tooth Count		4-27
	4.6.1	Introduction	4-27
	4.6.2	Recording Procedures	4-27
	4.6.3	Screens	4-28
4.7	Dental Caries Assessment Methods		4-31
	4.7.1	Coronal Caries Assessment	4-31
	4.7.2	Root Caries Assessment	4-37
4.8	Sealant Assessment		4-39
	4.8.1	Introduction	4-39
	4.8.2	Recording Procedures	4-39
	4.8.3	Dental Sealant Screen	4-40
4.9	Dental Fluorosis Assessment		4-41
	4.9.1	Introduction	4-41
	4.9.2	Recording Procedures	4-41
	4.9.3	Fluorosis – Dean's Index Screen	4-42
4.10	Incisor Trauma Assessment		4-43
	4.10.1	Introduction	4-43
	4.10.2	Recording Procedures	4-43
	4.10.3	Incisor Trauma Screen	4-44
4.11	Periodontal Assessment		4-45
	4.11.1	Participant Eligibility for the Periodontal Assessment	4-45

TABLE OF CONTENTS (continued)

Chapter			Page
	4.12	Recommendation For Care and Referrals.....	4-51
	4.12.1	Recommendation For Care Recording Procedures	4-51
	4.12.2	Recommendation for Care Screen.....	4-55
	4.13	Post-examination Procedures.....	4-57

List of Exhibits

Exhibit		
3-1	Standard Probes	3-8
3-2	Clarifications and Comments.....	3-10
4-1	Guide to oral examination components	4-2
4-2	Medical Exclusion Questionnaire	4-14

1. OVERVIEW TO THE ORAL HEALTH COMPONENT

1.1 Introduction

The oral health component of NHANES is sponsored by the following organizations:

- National Institute of Dental and Craniofacial Research (NIDCR);
- The Division of Oral Health of the Center for Chronic Disease Prevention and Health Promotion of the Centers for Disease Control and Prevention (CDC); and
- The National Center for Health Statistics (NCHS).

The component was developed by the NIDCR, the Division of Oral Health, and the NCHS, with input from nationally recognized research scientists and public health leaders from the NIDCR, CDC, other U.S. Public Health Service agencies, universities, and state health departments.

The purpose of the NHANES oral health component is to assess the prevalence of dental caries, periodontal disease, edentulism, sealants, fluorosis, traumatic injury, and temporomandibular joint and other facial pain in a national sample. Saliva samples will be collected to determine the prevalence of dry mouth and to examine the constituents of saliva.

Over the past four decades, oral and dental health characteristics collected in national surveys supported by the Federal Government have been critical for monitoring health status, risk factors for disease, access to preventive and treatment services, and other health characteristics among the general population and special subpopulations. These studies include the National Health and Nutrition Examination Surveys (NHANES), National Health Interview Surveys (NHIS), National Medical Expenditure Surveys (NMES), and special surveys such as the Hispanic Health and Nutrition Examination Survey.

Oral and dental diseases affect many in the United States and constitute a major burden on the Nation. Dental caries, periodontal disease and tooth loss are significant problems affecting the Nation's oral health. Although average dental caries scores for school-aged children have declined, 50 percent of children still have caries. In addition, 94 percent of adults in the United States have experienced caries. Dental sealants, an effective means of preventing caries, are underutilized in the United States, with only 19 percent of children aged 5-17 having them. In addition to caries, 15 percent of Americans have severe periodontal destruction and 11 percent have lost all their teeth.

The oral health component of the current NHANES will meet a critical need by accomplishing the objectives listed below. The NHANES oral health component will:

- Evaluate trends in oral and dental diseases;
- Estimate the burden of oral and dental diseases in the population as a whole;
- Estimate the burden of oral and dental diseases in subgroups of the population; and
- Assess progress in meeting national health objectives.

NHANES will be the first national survey to assess orofacial pain. Although never formally assessed on a national survey, orofacial pain is a condition frequently reported by Americans.

This section provides a general overview of the oral health component and the Mobile Examination Center (MEC) operations. Specific procedures for conducting the oral examination are described in Chapter 4 of the Examiner's Manual while specific procedures for recording data are described in Chapter 4 of the Recorder's Manual.

1.2 Data Collection

The MEC contains an automated computer system referred to as ISIS, the Integrated Survey and Information System. This automated system is used to:

- Direct the flow of SPs through the MEC, keeping track of which parts of the examination have been completed;
- Record interview and examination data;

- Perform edits on collected data; and
- Enter quality control data for each component.

The dental examiner "calls" his/her observations (codes for oral health indices) during the oral examination and the recorder enters these calls into ISIS.

1.3 Operations Overview

This section summarizes the flow in the MEC and the responsibilities of the dental examiner and dental recorder.

- The dental examiner arrives at the MEC prior to the session start. He/she needs to arrive early enough to complete the following tasks prior to the start of session:
  - Print and post the session schedule for the number of study participants (SPs) and their ages;
  - Set-up the oral health work area (details will be provided later in this chapter);
  - Check all equipment;
  - Make sure enough supplies are available for the session. A full session is quite busy and there will be no time to resupply;
  - Complete the quality control for set-up in ISIS (details will be provided later); and
- At the start of the session, each SP will check in with the coordinator at the workstation, just inside the MEC entrance. The coordinator will provide each SP with a bracelet with the SPs name, ID number, and corresponding bar code.
- The examiner notifies the coordinator that the room set-up is complete and the examiner is ready to receive SPs.
- The examiner or recorder checks the daily appointment schedule and goes to the coordinator station to meet the SP and bring him/her to the oral health room.
- The recorder opens the SP's record in ISIS and wands the bar code on the SP's bracelet.
- The examiner asks SPs 16 years and older medical exclusion questions, and responds to SP questions. SPs aged 13 to 15 years will have a proxy form that the MEC manager completed with the SP's parent or guardian.
- The recorder asks the pain questions.

- The examiner completes the oral health subcomponents while the recorder enters the data in the ISIS system.
- The SP is escorted to the reception area or next examination by the dental examiner or recorder.
- The examiner sets up the room for the next SP.
- At the end of a session, the examiner does the following:
  - Cleans the oral health room;
  - Takes the biohazard trash bag to the collection area; and
  - Completes the End of Session quality control in ISIS.

1.4 Conducting the Oral Examination and Recording Oral Examination Data

Data for this component will be collected using a visual-tactile examination. This examination has several sections. The specific section a study participant receives is dependent on their age and medical exclusions. The specific examinations, with the appropriate age range are listed below.

Medical Exclusions and Orofacial Pain

- Medical exclusion questions (13 years and older);
- Pain questions (10 to 69 years); and
- Physical examination (13-69 years).

Dentition

- Tooth count (2 years and older);
- Coronal caries (2 years and older);
- Root caries (18 years and older);
- Dental sealants (2 to 34 years old);
- Dental fluorosis (6 to 49 years); and
- Incisor trauma (6 to 29 years old).

Periodontal Assessment

- Loss of attachment (13+)
- Bleeding from probing (13+)

Recommendation for Care

- Report of Findings (2 years and older); and
- Referral letter (as needed).

1.4.1 Exclusion for Medical Conditions

SPs with certain medical conditions will not be permitted to participate in some components of the dental exam. The examiner must ask each SP 16 years or older if he/she has any of the conditions listed on the Medical Exclusion screen. The MEC manager obtains medical exclusion information for SPs 13 to 15 years old from the SP's parent or guardian. The MEC manager records the answers on a hard copy proxy questionnaire. The questionnaire accompanies the SP to the oral health room and is reviewed by the dental examiner. This information is then entered in ISIS by the dental recorder at the beginning of the examination. The responses to the medical exclusion questions along with the SP's age determine which dental examination components can be performed.

1.4.2 Documenting Incomplete and Omitted Examinations

If a scheduled examination is partially completed or not done at all, the reason must be recorded in ISIS. The NHANES dental examination has several subcomponents and not every SP receives every subcomponent. The primary reasons SPs do not receive certain subcomponents relate to age and medical exclusions. However, there may be occasions when SPs are prevented from receiving the dental examination, or the dental examination begins but must be terminated prior to completion. Medical exclusions and these other unusual circumstances are recorded ISIS. The age-dependent components are already accounted for by the system.

Medical exclusions are recorded by a "yes" response to any of the medical conditions or circumstances listed in ISIS. This causes the system to automatically skip the excluded subcomponents.

Specific reasons for terminating an examination or a subcomponent of an examination are recorded in ISIS, on the status screen for the whole examination or for the particular section of the examination. Section status screens are summary screens that appear at the end of each subcomponent section: orofacial pain, saliva, dentition, periodontal, and recommendation for care. If the subcomponent is partially complete or not done, the following reasons are programmed into the ISIS system and appear at the status screen:

- **SP refused or uncooperative.** An "uncooperative" SP is one who is unwilling to cooperate, e.g., an infant or small child who cannot be persuaded to get through the examination.

- **No time.**

- **Physical limitation.** An SP may complete part of the examination because of a physical limitation, e.g., the examiner may not be able to do part of an examination because an SP has braces.

- **SP unable to comply.** SP who is willing but faces a barrier in complying with the protocol, e.g., a person who cannot sit in a position conducive to conducting the examination.

- **Equipment failure.** A piece of equipment is not working, or the examiner does not have the supplies necessary to complete an exam.

- **Medical reasons.** A circumstance where the SP's safety or medical condition is of concern to the examiner due to pain, fainting, seizure, bleeding, etc.

For example, if the SP experienced pain or fainted and the examiner elected not to complete certain exam portions, this would be treated as an aborted exam for medical reasons.

- **Safety Reasons.** If a SP is excluded from certain subcomponents because of a medical exclusion question, but has otherwise gone through the exam, it is recorded as a partially completed exam for safety reasons **not** a termination for medical reasons.

- **Room not available.**

- **Other reason.** A reason not programmed in the ISIS system requires a comment.

1.4.3 Report of Dental Exam Findings and Referral Letters

The last portion of the examination is the Recommendation for Care screen. The information on this screen is used to create the Report of Oral Exam Findings and an Oral Health Referral Letter, if needed. The information on this screen is partially automated – based on the examination data, and partially examiner driver – based on information the examiner gives the recorder. The Report of Findings will be handed to the SP when he/she leaves the MEC. It will indicate whether the SP should continue his/her usual dental care, see a dentist at his/her earliest convenience, see a dentist within 2 weeks, or see a dentist immediately. The Referral Letter is handed to those SPs whose oral health warranted a concern that they see a dentist within the next 2 weeks or earlier. The report, Referral Letter, and related procedures will be discussed in depth in Chapter 5.

1.4.4 Returning the SP to the Coordinator's Area

After examination data are recorded and the examiner completes the Recommendation for Care screen, the examiner or recorder will escort the SP to the coordinator station or to another examination room. The examiner will then prepare the oral health room for the next SP.

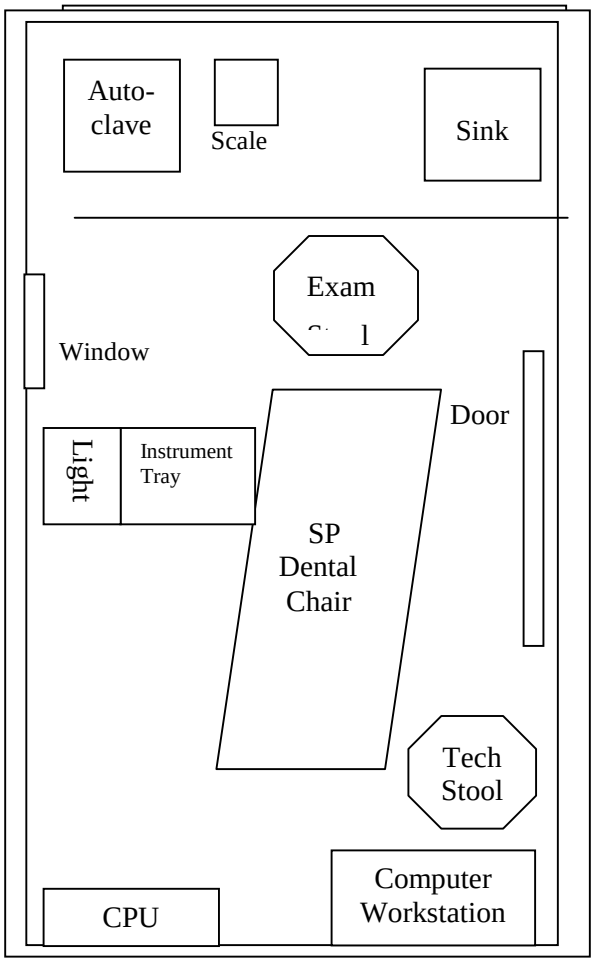
This page intentionally left blank.

2. EQUIPMENT AND SUPPLIES

2.1 Dental Examination Area in the MEC

One room of the MEC has been designated for dental examinations and contains all of the equipment and supplies needed for the component. The room is 9' x 4' 9" and includes cabinets for storage, a counter top, and a sink with running water as shown below.

The dental examiner is responsible for taking an inventory of the supplies and maintaining all equipment needed to conduct the dental examinations.



This page intentionally left blank.

3. GENERAL INTERVIEWING TECHNIQUES

3.1 The Role of the "Interviewer"

The dental recorder is responsible for conducting the Orofacial Pain Questionnaire prior to the orofacial pain examination conducted by the dental examiner. Therefore, it is imperative that the dental recorder understands basic interviewing guidelines when conducting this interview. This chapter briefly describes those interviewer techniques relevant to the pain questionnaire being administered.

The interviewer serves as a link between the researchers who seek the information and the SPs who provide it. Indeed, to the SP, the interviewer is the survey. The interviewer's job is twofold: (1) to make sure that each SP hears the questions in exactly the way they are written in the questionnaire, and (2) to make sure the SP's answers are faithfully and accurately recorded.

3.2 Using the Questionnaire

The interviewer's goal is to collect accurate information by using the survey questionnaire according to sound interviewing practice. To fulfill this goal, the interviewer needs to understand the questionnaire and the principles for using it.

3.2.1 Using Different Types of Questions

This section provides examples of the types of questions the recorder will ask in the Orofacial Pain Questionnaire. In its simplest form, a questionnaire contains a series of questions and an area to record the answers received. But there are different types of questions used in questionnaires, and as this section indicates, each has special requirements to consider.

NOTE: There is one important convention that applies to all question types: <u>WORDS PRINTED IN ALL CAPITAL LETTERS ARE INSTRUCTIONS TO YOU AND SHOULD NOT BE READ TO SPs.</u>

Precoded Questions

Most questionnaires contain questions that actually list the possible answers that the SP is expected to give. The interviewer simply enters the answer code that corresponds best to what the SP says in reply to the question. The simplest example of this type of question is one that requires a "yes" or "no" answer, while other precoded questions may offer several possible answers as in the example shown below:

In general, would you say that your health is excellent, good, fair, or poor?

EXCELLENT	*1*
GOOD.....	*2*
FAIR.....	*3*
POOR.....	*4*

For questions requiring one response, care is taken to avoid overlapping answer categories that could confuse the SP and create problems for the interpretation of the data. Clearly, there is no overlap between response categories of "yes/no" or "excellent/good/fair/poor." In the question below, the response options you read to the SP do not overlap but are less distinct and could invite the SP to answer in terms other than the categories provided. If the SP gives an answer that does not match one of the answer categories, you will need to probe to obtain an answer you can code. Probing will be discussed in Section 3.3.

On average, how often do you exercise? Would you say:

Daily, ...	*1*
A few times a week,.....	*2*
Once a week, or	*3*
Less than once a week?.....	*4*

Open-Ended Questions

Open-ended questions are used when researchers do not want to restrict an SP's answer to predesignated categories or when they do not feel as though they know the full range of possible answers. For a question like the one below, the SP's answer would be recorded "verbatim" or exactly as it is given to you. Although there are no open-ended questions in the Orofacial Pain Questionnaire, you will be responsible for entering the examiner's verbatim responses to the Recommendation for Care referrals provided to certain SPs at the end of the examination (discussed in detail in Chapter 4).

Please describe the special training or instructions the students received as part of this program.

_____

_____

_____

The typical open-ended question requires at least a sentence or two to answer and often more. However, there is a special type of short open-ended question that may best be described as a hybrid of precoded and open-ended questions. This is a question that simply asks the SP to name an amount, a date, or a place. These short questions are followed by a

short data entry space to record the answer. They are all questions which, in theory, could have been followed by answer categories, but for one reason or another (for instance, one can't list all possible weights for an SP) do not include these categories.

In the last 30 days how many times did you exercise for 20 minutes or longer?

|__|__|
TIMES

Although there are a variety of different survey questions, only those types of questions present in the oral health component are discussed in this section. Other components of the current NHANES examination use more complicated formats that build upon these basics. You will be trained in special training sessions on each questionnaire you will use for each component.

As you might suspect, SPs do not always answer questions as clearly and obligingly as the SPs in the example questions do. The information in some of the following sections of the manual will help you with that.

3.2.2 General Rules for Asking Questions

Now that you have seen the types of questions and the formats found in the Orofacial Pain Questionnaire, it is time to consider some of the basic principles of asking questions during an interview.

1. **Always read the question as it is written.** Every SP should hear the same questions, read in exactly the same way. Even small changes to a question, magnified by the large number of SPs, could affect the final results.

2. **Ask the questions in the way they are ordered in the questionnaire.** Questions are ordered in a certain way to obtain information in the easiest, most systematic way possible. If you change the order, your SP will have received a stimulus different than that received by other SPs, and his/her responses could be influenced. You are there to ask questions and record answers, not to influence them in any way. Do not skip over a question because you think the SP has answered it already. Most SPs will understand that you are working with a standardized questionnaire and not be annoyed by some repetition. You may be able to head off a negative reaction by saying something like: We *may have touched on this before, but let me read this question just to be sure I've got the right answer.*

   There is only one exception to the rule of reading questions in the order given in the questionnaire. If, during the interview, you discover that you have accidentally skipped one or more questions, you may go back to the omitted questions.

3. **Read questions in a natural conversational tone, following the punctuation in the question.** Only emphasize words that are underlined or appear in bold. When answer

categories are to be read, put a brief pause between the options so the SP knows what the choices are. Your reading of the questions should reflect your overall neutrality about the subject matter and encourage the SP to talk freely about the issue. Many questionnaires today obtain information about social issues that touch on deep personal convictions. You do not want to unconsciously transmit your attitude about an issue by the way you read the question.

4. **Read the questions at a slow even pace.** Research has shown that the proper pace encourages more thoughtful answers. If the pace is not even, the message you are giving to the SP is that the questions you read faster are less important. A slow even pace, however, should not lapse into a monotonous lifeless reading of the question.

5. **Do not show the questionnaire to the SP.** SPs can be influenced by knowing what questions are coming next or by seeing the answer categories that are not included in the spoken part of the questions. For this reason, you will want to arrange the seating so that the SP cannot read the items on the screen, whenever possible.

3.2.3 General Rules for Recording Answers

When recording questionnaire answers in the Integrated Survey and Information System (ISIS), simply enter the letter and/or numbers that correspond to the answer the SP gave. The program will automatically move the cursor to the next question whenever a valid entry is made. Specific keystrokes required to move within the ISIS screens are discussed in Chapter 4 as well as the MEC System Overview Manual. When recording answers, remember there are a number of general principles and specific techniques you need to keep in mind. The two items pertinent to this survey are:

1. **Be familiar with the study's rules for rounding numeric entries**. The basic rule for rounding in the oral health component of the current NHANES is that all fractions should be rounded up. Therefore, 3 ¼ = 4; 7 ½ = 8; 14 ¾ = 15.

2. **The key word in recording answers to open-ended questions is "verbatim."** This means recording relevant answers the SP gives in his/her own words. In the oral health component, the one open-ended response category appears on the Recommendation for Care screen (discussed in Section 4.13). It is extremely important that you record the examiner's description accurately since the entry you

make is printed on a Referral Letter received by the SP and the SP's dentist. Here are some points that should help.

- Be ready to write. Start typing as the examiner begins to speak. Otherwise, you'll be behind from the start.

- Slow the examiner down. Become familiar with the techniques that will enable you to slow down the examiner to capture everything that is said. For example, prompt the examiner with the following statement: *"Let me be sure I've got this all down (repeat examiner's statement)."*

- Use standard abbreviations, such as "DK" for "don't know," "gov't" for "government," and "SP" for "sample person."

3.3 Probing

Probing is a technique used by interviewers to refocus and redirect the SP's attention to the question. It requires the interviewer to find a way to get the SP to elaborate or reconsider an incomplete or inappropriate answer without influencing the content of the answer. Knowing when to probe is as important as knowing how to probe. Of course, to probe at all the right times, you will need to listen carefully to the SP throughout the interview and probe whenever the SP gives an answer that seems unclear, irrelevant, or incomplete.

I. Probing Precoded Questions

Sometimes the answer SPs provide to precoded questions is not given in the exact words of the answer categories, which may make it difficult, if not impossible, to interpret accurately where to code the response. Sometimes, the best probes for a precoded question is to repeat the original question or to give the nondirective probe *"Well, which comes closest?"* and read the answer categories again.

Occasionally an SP feels that more than one of the precoded responses fit or that under certain conditions, he/she would choose one answer and under different conditions, another answer. In this situation, you should try to get the SP to generalize by repeating the question and probing, *"Just generally speaking,…"* or "*Most of the time,…"* or *"In most cases, …"* etc.

II. Probing Open Ended Questions

Frequently the initial answers given by an SP will fall far short of being specific, clear, and complete and must be probed. For example, an answer such as "a few" or "a couple" might be given to a question asking for the SP to provide a specific number. Probes such as *"Could you be more specific?"* or *"What do you mean exactly?"* are good probes to use in these situations.

All answers given in ranges (i.e., 2 to 5) should be probed until the SP provides you with one number. Probes such as *"Is it close to… or closer…?"* or *"Can you give me one number?"*

are good probes to use. If the SP cannot narrow the range to one number, record the midpoint. (Remember to use the rounding rule on page 3-4 when the midpoint is a fraction.)

III. Types of Probes

It is very important to always use neutral probes so that you do not imply to the subject that you expect a specific answer or that you are dissatisfied with an answer. Remember: the reason for probing is to motivate the SP to respond more fully or to focus other answers without introducing bias. There are several different neutral probes that appear as part of everyday conversation that can be used to stimulate a fuller, clear response.

- An Expression of Interest and Understanding. By saying such things as *"uh-huh"* or *"I see"* or *"yes,"* the interviewer indicates that the response has been heard, that it is interesting and that more is expected.

- An Expectant Pause. The simplest way to convey to the SP that you know he/she has begun to answer the question, but has more to say is to be silent. The pause – often accompanied by an expectant look or a nod of the head—allows the SP time to gather his or her thoughts.

- Repeat the Question. When the SP does not seem to understand the question or misinterprets it, seems unable to decide, or strays from the topic, it is often useful to repeat the question. Many SPs, when hearing the question for the second time, realize what kind of answer is needed.

- Repeating the SP's Reply. Simply repeating what the SP has said is often an excellent probe. Hearing the response just given often stimulates the SP to further thought.

- A Neutral Question or Comment. Neutral questions or comments are often used to obtain clearer and fuller responses. Some suggestions for probing questions that may help you explore many types of insufficient answers are provided in Exhibit 3-1.

IV. Probing "Don't Know" Responses

Always try to obtain a reply to a "don't know" response at least once before accepting it as the final answer. "Don't know" responses are typically used when the SP does not want to admit that he/she does not understand the question; the SP is thinking the question over and the "DK" fills the silence while allowing him/her time to think; the SP may be trying to avoid the subject because he/she feels uninformed, afraid to answer, or the question is too personal; or the SP really does not know the answer.

V. Other Probing Tips

There are a number of other hints that will help you in probing.

- When repeating a question or part of a question, emphasize a word or a phrase that you feel the SP missed.

- If the SP didn't understand the question, the best probe is to simply read it again, perhaps more slowly.

- If the SP has given you an answer that doesn't clearly fall in one of the answer categories of a precoded question, don't repeat <u>all</u> of the categories again -- just repeat the ones that the SP has not eliminated.

There are also a number of things you should <u>not</u> say when probing.

- If an SP's response is unclear, don't ask the SP if he/she meant a particular thing or make assumptions about what the SP meant. If you're not sure, use a neutral probe to clarify.

- Don't ask the SP to choose between two alternative interpretations of what he/she has said, like "Did you mean *this* or *that*?" Use neutral probes to find out what the SP meant.

- Don't try to "sum up" an SP's answer. It may save time, but it will almost certainly lead the SP. If the SP has given a long rambling answer, use one of the standard probes to draw out the relevant answer.

VI. When to Stop Probing

If you have probed a response once and still don't have a satisfactory answer, you will need to use your judgment about whether you should probe again. If you detect that the SP is becoming irritated or annoyed, you should probably stop probing and go on to the next question. It is better to let the question stand with an unsatisfactory answer than to negatively affect rapport with the SP and possibly lose his/her cooperation for the rest of the interview.

NOTE: There are certain questions in the Orofacial Pain Questionnaire where a "don't know" response is not acceptable. Be careful not to antagonize SPs while probing for an acceptable response. In instances where "don't know" is acceptable, probe once or twice, without antagonizing the SP, before accepting the response.

Exhibit 3-1. Standard Probes

General Probes

REPEAT THE QUESTION.

REPEAT PART OF THE QUESTION. (ex. Give the frame of reference again.)

Which would be closer: (REPEAT ANSWER CATEGORIES)?

So would you say that it is: *(REPEAT ANSWER CATEGORIES)*?

Probes to Clarify

What do you mean exactly?

What do you mean by…?

Could you please explain that a little? I don't think I quite understand.

Probes for Specificity

What in particular do you have in mind?

Could you be more specific about that?

Tell me about that. What/who/how/why would…?

Probes for Relevance

I see. Well let me ask you again…(REPEAT EXACT QUESTIONS).

Would you tell me how you mean that?

Probes for Completeness

What else?

What else can you think of ?

What other reasons/things/examples can you think of?

Probes for "Don't Know" Responses

Take a minute to think about it. (REPEAT QUESTION IF NECESSARY.)

Your best estimate would be fine.

3.4 Clarification of Questions

Sometimes SPs will ask you to clarify a question or a term used in a question. This is one situation in which the possibility for influencing the SP's answer is great. In order to understand the data we collect, we need to know that every SP has heard the same question in the same way. If you interpret the question for one SP, you may change the meaning of that question so that the SP is no longer answering the same question that other SPs are answering.

The only situation in which you should provide a definition of a word or phrase in the question is if your question-by-question specifications (see Chapter 4) instruct you to do so and provide you with the study definition. Otherwise, you should use phrases similar to those provided in Exhibit 3-2.

3.5 Explanatory Comments

There are a number of situations in which the interviewer may find that he/she can keep the interview flowing more smoothly if he/she makes an explanatory comment about the task he/she is performing. Probes for handling these situations are also provided in Exhibit 3-2. Examples of situations that may require an explanatory probe are as follows:

- An SP speaks more quickly than the interviewer can write, or in this case, the examiner speaks more quickly than the recorder can type.
- An SP gives information in response to one question that pertains to a later question in the questionnaire. This can be awkward because you need to ask the questions in order and exactly as written but the SP thinks that he/she has already answered the question you're about to ask.
- An SP may want to know why certain questions are being asked.

Exhibit 3-2. Clarifications and Comments

Clarification Comments (When no study definition is provided for a term)

Whatever _____means to you.

I'm not supposed to define that for you, so just interpret it however it seems best to you.

Explanatory Comments

Let me be sure I've got this all down (repeat answer).

I need to be sure I've got your answer completely recorded (repeat answer).

We may have talked about this before, but they want me to ask each question just as it's written.

We may have touched on this before, but let me read this question just to be sure I've got the right answer.

I know it may be a little hard to understand why, but they want me to ask it this way.

I'm not sure I can explain the reason, but they trained me to ask it this way.

They must have had a good reason for asking it that way. I'm not sure I can explain it right now.

3.6 Handling Refusals

Occasionally, an SP may be reluctant to answer a particular question or may "break-off" (or discontinue) the interview altogether. There are a variety of reasons for these events such as:

- The SP feels that a question is too personal, is embarrassed to answer the question, or feels that the answer is none of the government's business.
- The interview could be longer than anticipated, possibly running into other time commitments.
- There could be an unanticipated interruption, like a visit from another family member in the MEC.
- The SP could be bothered by the content of the overall interview. The SP might find it tedious to be asked to recall specific events or might have a negative reaction to the subject matter.

It is your responsibility to be on the alert for any sign that the SP may not be able or willing to finish the interview. Then actively listen to the SP's response to determine the underlying cause for the refusal. Oftentimes, the SP's tone of voice will indicate something about the reluctance--suspicion, genuine indecisiveness, hostility, etc.

Your reaction, of course, depends on the specific circumstances. However, some refusal-conversion responses you may give include:

- Remind the SP of the importance of the interview/question and that he/she represents many others with similar beliefs and experiences. He/She cannot be substituted with any other person.
- Point out the brevity of the questionnaire and, if you are near the end, state that it won't take much longer.
- Allow the SP to take care of the interruption before returning to the questionnaire.

Above all, do not argue with an SP. Arguing with an SP is almost always a sure way to lose the interview. It is better to acknowledge that you understand how the SP feels and that you know that many other people feel that way.

This page intentionally left blank.

4. ORAL EXAMINATION METHODS

The oral examination component consists of a questionnaire and multiple clinical examination subcomponents. The dental examiner and dental recorder work as a team in conducting this examination for each study participant (SP).

Questionnaire and clinical examination data are entered by keyboard directly into computer terminals at the examination sites. This chapter details procedures for recording into this Integrated Survey and Information System (ISIS). The examination procedures are discussed in the Examiner's Manual.

4.1 Sequence of Oral Examination Components

Exhibit 4-1 lists the oral examination components in the sequence in which they are conducted. Included on the table are the eligible ages of the SP for each examination component and whether the component triggers a referral.

The assessment sequences of the examination follow the order shown on the corresponding ISIS screen which is usually arranged by quadrants in the mouth. Each examination component has its own pattern sequence and order within the sequence. At the end of each dental component, a component status screen appears which indicates whether that component is complete, partially complete, or not done. Reasons for partially completed or omitted exams are to be defined on these screens. (Details are provided in Section 4.3.3.)

4.2 Before the Examination

1. The examiner or recorder will select the Dental Examination icon from the introductory window of the automated system at the start of a session.

2. The examiner will enter his/her password when prompted.

3. The recorder will open a new examination when a SP has been assigned to the room.

4. The recorder will enter his/her tech password when prompted.

5. The recorder will then pass the optical scan wand across the SP's identification bracelet and verify the SP's name and identification number displayed on the screen.

Exhibit 4-1. Guide to oral examination components

Assessment	Age	Referral Match
1 – ELIGIBILITY AND PAIN		
Medical Exclusion Questions	12+	No
Orofacial Pain	10-69	No
2- SALIVA		
Saliva Flow Rate	40+	No
Saliva Collection	40+	No
3 - DENTITION		
Tooth Count	2+	No
Caries: Coronal Surface	2+	Yes
Caries: Root Surface*	18+	Yes
Sealants	2-34	No
Fluorosis - Dean's Index	6-49	Yes
Incisor Trauma	6-29	Yes
4 – PERIODONTAL		
Gingival Bleeding*	12-49	Yes
Loss of Attachment*	18+	Yes
5 – RECOMMENDATION FOR CARE		
Instrument Packs		
Mirror #23 Explorer Perioprobe Endodontic Ruler		

*Not to be performed if there is a medical exclusion.

6. The examiner will explain the process to the SP in his/her own words and include the following facts:

   - This dental examination is not a substitute for examinations performed by the SP's dentist.

   - He/she will be looking at and lightly touching the SP's teeth.

   - He/she will be calling out numbers and letters to the technician that only have meaning for the research project.

   - Some results will be provided when they leave the MEC.

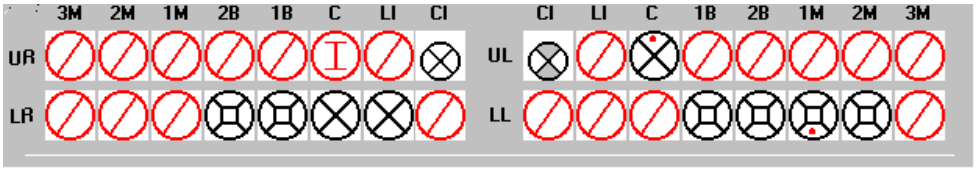
In conducting the examinations, each SP will be examined in the same manner. An examiner should avoid the temptation of examining a SP who appears to be highly susceptible to a condition more thoroughly than a SP who appears less susceptible.

4.3 Guide to the Integrated Survey and Information System (ISIS)

The dental recorder is responsible for entering the dental "calls" directly into ISIS during the examination. Detailed instructions for proceeding through each screen are provided in this chapter. The ISIS screens are organized as follows:

Demographic Information: On the bar located at the top of the screen, the SP ID, name, age, and gender are provided in addition to the examination date and session time.

Heads Up Display: This is a summary screen that is displayed in the upper portion of the screen after the Tooth Count is completed.



Space for each surface of each tooth is provided and conditions, such as caries and restorations, are indicated with different symbols as the recorder enters them.

The mouth diagram is shown as if the examiner is facing the SP with the central incisors of each quadrant in the middle of the diagram and the third molars at each end. Tooth surfaces are displayed in the pattern commonly used in diagnostic charts and are defined as follows:

Occlusal - top or biting surface
Lingual - surface toward the tongue
Facial (Buccal) - surface outside, toward the lips and cheeks
Mesial - interproximal surface towards the midline of the arch
Distal - interproximal surface away from the midline of the arch

Tooth condition symbols are as follows:

Circle, black	=	Permanent tooth
Circle, small, black	=	Primary tooth
Circle with slash, red	=	Missing tooth
Circle with "I", red	=	Implant

Surface condition symbols are:

Bullet, red	=	Caries
Shading, gray	=	Restoration

Examination Data Entry: The various examination data entry screens have the following similarities:

- Each row represents a quadrant or portion of a quadrant.
- The quadrants are displayed in the following order: upper right, upper left, lower left, and lower right.
- The data entry spaces correspond to the teeth being examined in that quadrant for that assessment.
- The teeth are identified with codes along the top of the row to identify the teeth as follows:

CI	=	Permanent Central Incisor/Primary Central Incisor
LI	=	Permanent Lateral Incisor/Primary Lateral Incisor
C	=	Permanent Cuspid/Primary Cuspid
1B/1PM	=	1st Bicuspid/1st Primary Molar
2B/2PM	=	2nd Bicuspid/2nd Primary Molar
1M	=	1st Permanent Molar
2M	=	2nd Permanent Molar
3M	=	3rd Permanent Molar

4.3.1 General Data Entry Guidelines

A summary of the key data entry guidelines that are used to move within and between screens is provided in this section. Detailed instructions on the general ISIS are available in the MEC Subsystem Overview Manual. Detailed instructions on the allowable codes, acceptable ways to move through a screen, allowable shortcuts, and mandatory QC checks **by screen** are provided in this chapter.

Movement within the dental examination program can be accomplished by using the mouse or the keyboard. In most instances, using the keyboard is easier and more efficient. The following keys are to be used in the program as follows:

TAB	Use this key to move **forward** from data entry field to data entry field within a screen whenever the program does not automatically move from field to field for you.
Shift TAB	Use this key to move **backwards** from data entry field to data entry field within a screen.
Backspace	Use this key within a data entry field to erase an entry backwards, one digit at a time.
Enter	Use this key to move to the next screen once all allowable entries are made on the current screen.
F2	Use this key as a shortcut on two assessments, dental sealants and fluorosis. (See Sections 4.9 and 4.10 respectively.)
F11	Use this key to clear data on a screen and restart the assessment. (See Section 4.3.4.1.)
F12	Use this key to stop in the middle of an assessment and continue with the remainder of the exam. (See Section 4.3.4.2.)

The mouse is used in a variety of ways as follows:

- To move the cursor to any data entry field within a screen;
- To display a list of allowable responses on a "pick list" by clicking on the down arrow (∇) to the right of the data entry field;
- To activate shortcuts by clicking on a box which will trigger fields to be filled or shaded, as appropriate;
- To activate transfers of data from biomedical equipment by clicking on a specific on-screen button; and
- To move to the next screen once all allowable entries are made on the screen by clicking on right arrow button on lower right portion of the screen.

Improper entries will cause the system to beep, display an error message in the lower left portion of the screen (unless otherwise noted), and prohibit movement within the screen until a valid response is entered. If necessary, the recorder should provide the examiner with the explanation of the error as defined in the error message.

In some instances, a "9" will appear in one or more shaded data entry fields on a screen when the screen is initially displayed. This code is termed a "hard 9" and is triggered by specific codes entered on the Tooth Count screen (see Section 4.7). The program does not allow the recorder to overwrite the "9" with any other code. ISIS will skip these data entry fields and the cursor will move to the first blank data entry space on the screen. To change this hard "9," the tooth count code for that tooth must be changed on the Tooth Count Screen.

4.3.2 Editing the Examination Record

ISIS automatically edits responses as they are entered by the recorder. Below are a few of the edits that the system provides.

Range Edit Checks: The system checks to make sure that the value entered by the recorder is valid as specified in this chapter.

Tooth Count Edit Checks: The system checks against the tooth count calls during all subsequent assessments to make sure calls are consistent across assessments, i.e., teeth coded as missing in the tooth count are not assessed in most of the subsequent assessments, primary teeth are not assessed in subsequent assessments which only look at permanent teeth (ex. incisor trauma); etc.

When the system determines that a tooth should not be assessed for a particular component based on the tooth count results, the tooth space on the screen is shaded and "hard coded" with a "9" (cannot be assessed) code.

"Hard" 9 Checks: The system does not allow the recorder to overwrite a "hard" 9 code with another code. "Hard" 9 codes are determined by the system as a result of the tooth count.

4.3.3 Section Status Screens

After each component section (orofacial pain, saliva, dentition, periodontal, and recommendation of care), a section status screen is displayed which is used to document the outcome of that section. The screen consists of two parts: one part is used to record an overall completion code and one part is used to record the reasons for incomplete examinations.

The overall completion code is automatically assigned by the system based on the results entered by the recorder during the course of the dental examination. One of three outcomes is selected:

Complete;

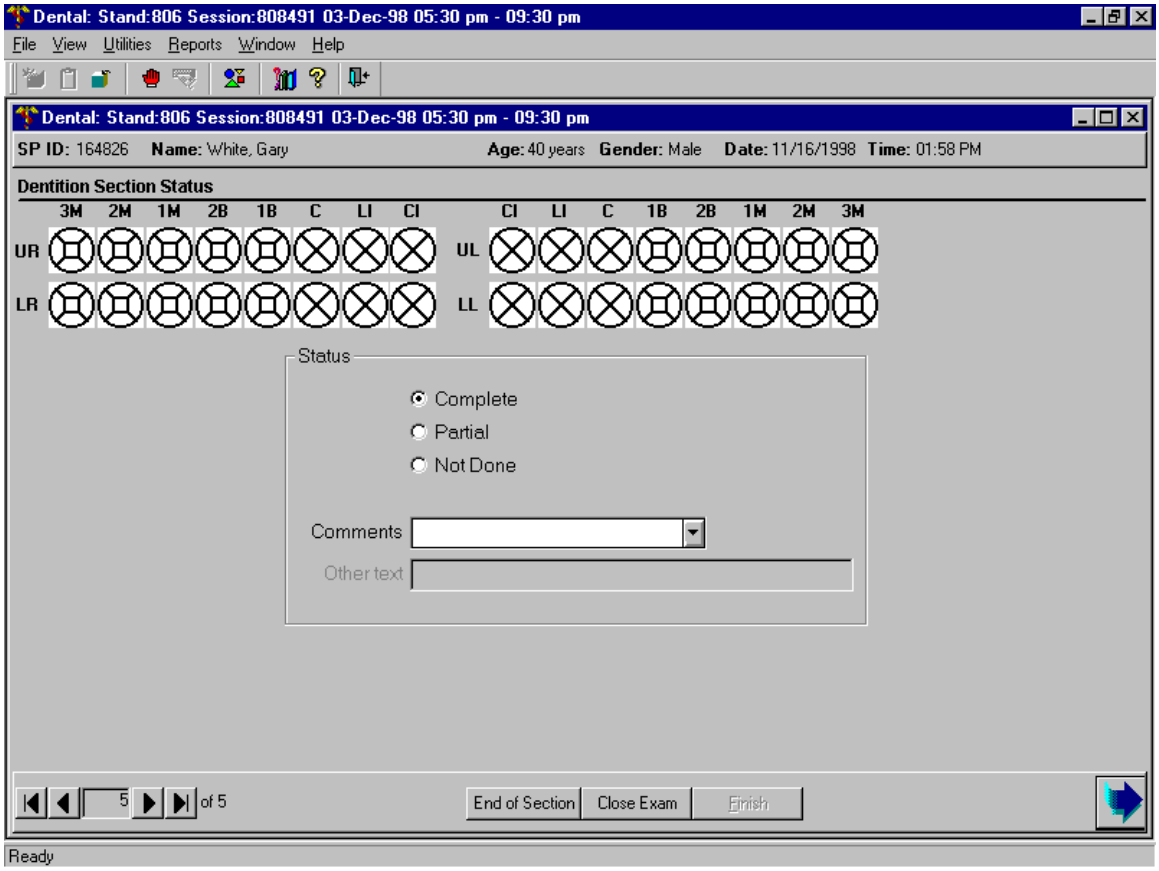
Partial complete; and

Not done.

Whenever a "partial complete" or "not done" outcome is selected, the system prompts the recorder to enter a reason for the incomplete examination. There are eight predefined reasons listed in the drop down box of the screen as well as "Other specify" for circumstances not covered by the predefined list. The predefined codes are standard throughout the survey and are as follows:

1. Safety exclusion;
2. SP refusal;
3. No time;
4. Physical limitation;
5. Communication problem;
6. Equipment failure;
7. SP ill/emergency;
8. Interrupted; and
9. Other (Specify) - If "Other specify" is chosen, the recorder must enter comments in the "Other text" field that is highlighted.

4.3.3.1 Sample Section Status Screen



Allowable Entries:

Status

The system automatically defaults to complete, partial, or not done based on the data that was entered on all screens for that section.

Comments

Use the mouse to click on the down arrow and display the choices. Then use the mouse to highlight the appropriate reason. Allowable entries are:

-Safety exclusion	-Equipment failure
-SP refusal	-SP ill/emergency
-No time	-Interrupted
-Physical limitation	-Other (specify)
-Communication problem	

Other Text

Accepts up to 225 characters. Type examiner's verbatim response.

Move Through Screen: User must use mouse to move from field to field.

Shortcut: None

4.3.4 Examination Breakoffs

There are several types of examination breakoffs. In the first scenario, you may need to clear an assessment and restart it. In the second scenario, you may need to breakoff during a particular assessment but continue with the examination. In the third scenario, you may need to breakoff during a particular assessment and cancel the rest of the examination. The procedures to be followed for these situations are provided in this section.

4.3.4.1 Clearing a Screen

There are various reasons for clearing a screen. For example, the examiner inadvertently calls the codes for one assessment while the recorder is entering data on another screen; the examiner is calling assessments for a particular tooth and the recorder is entering that call for a different tooth; and other similar situations. If the situation cannot easily be resolved, the screen is cleared and the assessment is restarted using the <F11> key.

To clear a screen and restart the assessment:

- Press the <F11> key. Data previously entered on the screen is deleted.
- Move the cursor to the first data entry field on the screen.
- Begin data entry.

NOTE: If the <F11> key is used on any screen other than the Tooth Count screen, only the data on the selected screen is cleared. However, if the <F11> key is used on the Tooth Count screen, all data on the Tooth Count screen as well as all data on the followup screens are cleared. This is because the tooth count calls drive the subsequent assessments.

4.3.4.2 Canceling an Assessment

There are times when an assessment must be interrupted before it is completed but the examination can continue (for example, the SP experiences pain in gingival bleeding but is still eligible for loss of attachment). In these situations the <F12> key is used to end the assessment, regardless of

how much has been completed. The examiner will then continue with the next assessment. Any data entered on the screen before the screen is "cancelled" will be saved.

To cancel an assessment and proceed with the next assessment:

- Press the <F12> key. The screen is closed with the data entered up to this point saved. The next screen in the examination is displayed.
- Begin data entry on the new screen.

4.3.4.3 Canceling an Examination

There are several reasons for terminating an examination prior to finishing it. For example, the SP faints, the session ends, the MEC shuts down for weather reasons, and so on. To cancel an examination before it is finished, the recorder uses the <CLOSE EXAM> button on the navigation bar as follows:

- Select the <CLOSE EXAM> button on the navigation bar.
- A confirmation message is displayed "Are you sure you want to cancel the current exam?" Select "Yes" to exit the examination; select "No" to return to the screen you just left.
- An abbreviated "status screen" is displayed with the "Partial Complete" examination status assigned. Enter the reason for the abbreviated examination and press <ENTER>
- The system returns to the dental menu screen and is ready for the next SP examination.

NOTE: All data entered up until the point you exited is saved.

To reenter an SP examination:

- Use "File, Open" or "Control/O" to reenter the examination once the coordinator assigns the SP.
- The Medical Exclusion Questionnaire is displayed to remind you of the pertinent exclusion information.
- Press <Enter> to continue.

- Use the right arrow on the left side of the navigation bar to move forward through the screens until you reach the first blank screen (or partially blank screen, depending on how you exited). Do **not** use the end-of-section arrow to move forward through the screens because the system recalculates summary section statuses as the user proceeds forward and will assume that any assessment screens that are skipped are not completed.

- Continue the examination from this point forward and exit as described in the next section.

NOTE: Occasionally, the examiner may choose to complete the Recommendation-For-Care screen before terminating an examination to report conditions noted during the partial examination. In these instances, use the end-of-section arrow to proceed to the Recommendation-For-Care section. Complete these screens as instructed by the examiner and click on <CLOSE EXAM> here. Do not click on the <FINISH> button which is discussed in the next section.

4.3.5 Exiting an Examination

The <FINISH> button located on the navigation bar is used to exit an examination once all of the age-appropriate screens that have not been skipped for safety reasons are completed. This button is only enabled on the Recommendation-For-Care Section Status screen (Section 4.13) once the screen is completed; it is not enabled on any other screen. To exit the examination on any other screen, use the <CLOSE EXAM> button as specified in the previous section.

To exit an examination once it is completed:

- Use the mouse to click on the <FINISH> button.

- The SP's examination record is cleared. All data entered are saved.

- The system returns to the dental program menu screen and is ready for the next SP examination.

This page intentionally left blank.

4.4 Medical Exclusion Questionnaire

The Medical Exclusion Questionnaire (Exhibit 4-2) will be asked of all SP's aged 12 years and older. The purpose of this questionnaire is to identify SPs who should be excluded from portions of the oral health examination for their personal safety.

The Medical Exclusion Questionnaire asks about conditions that may preclude the SP from participating in some components of the oral exam. If there are no medical exclusions for the SP (all questions were answered "No"), then all assessments for SPs in that age category are performed. However, if there is at least one "yes" answer to a medical condition that leads to a medical exclusion, then all of the age appropriate assessments are performed **except the root caries and the two periodontal components**-gingival bleeding and loss of attachment. ISIS is designed to skip these assessments as appropriate.

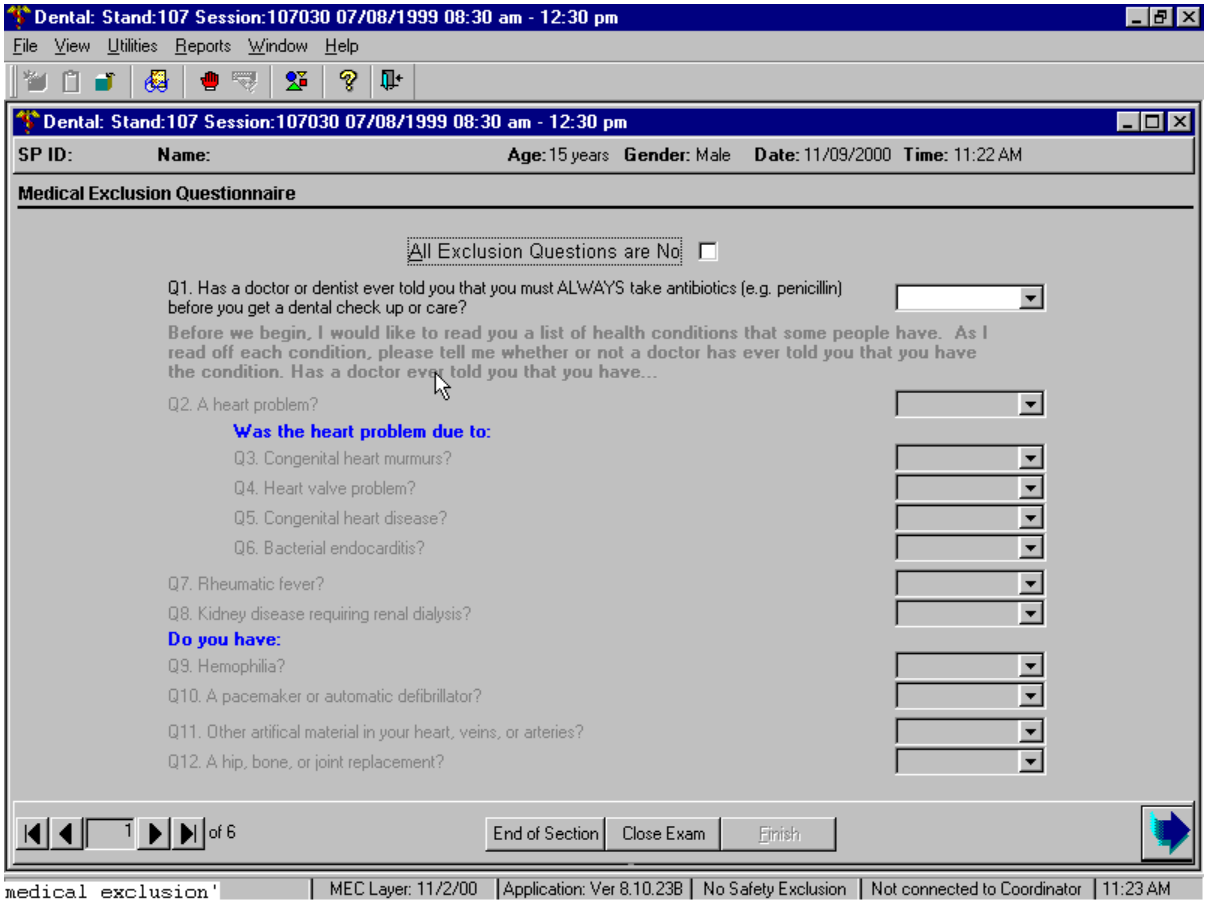
It is the examiner's responsibility to ask the medical exclusion questions directly of all SPs aged 16 years and older. The examiner will then summarize the SP's responses and prompt the recorder to enter all "No's" or a "Yes" to a particular question. The recorder will not enter data as the examiner administers the questions.

Medical exclusion information will be obtained from SPs aged 12-15 years via proxy interviews conducted by the MEC manager. The hard copy Proxy Questionnaire will accompany the SP to the dental room and the recorder will enter the responses when prompted by ISIS. The dental examiner must review the hard copy proxy questionnaire prior to starting the dental examination.

NOTE: A positive response to Q2 does not indicate a medical exclusion; rather it indicates that Q3-Q6 must be asked. A positive response to any of the specific conditions asked about in Q3-Q6 will generate a medical exclusion based on a heart condition.

NOTE: The remainder of the Medical Exclusion Questionnaire is not asked once a positive response to a medical exclusion item is given. For example, if the SP answers "Yes" to Q6, the examiner will not ask Q7-Q11. The system will prevent data entry on the remainder of the items in the questionnaire and will wait for the recorder to proceed to the next screen.

Exhibit 4-2. Medical Exclusion Questionnaire



Allowable Entries:

Y = Yes
N = No
D = Don't Know (Q9 and Q10 only)

Move Through Screen:

System autotabs after each entry.

Shortcut:

Use mouse to click on "All Exclusion Questions are No" box. A check mark will appear in the box and the program will automatically fill all pertinent data entry fields with "No." To clear the entries, click on the box a second time.

NOTE: The questions on hemophilia (Q9) and pacemakers (Q10) will not be asked here if the information is obtained elsewhere, such as in the household interview or other examination components. Answers obtained elsewhere will appear on the screen when the screen is initially displayed. Therefore, the examiner will only ask these questions if they are highlighted on the screen as this indicates that the information is still pending. Because these are "shared" medical exclusion items and "Don't Know" responses are accepted in other components, acceptable entries for those two items are "Yes," "No," and "Don't Know."

However, entries of "Don't Know" will be treated as "No" by the ISIS, that is, no medical exclusions will be prompted based on an entry of "Don't Know" in Q9 or Q10.

This page intentionally left blank.

4.5 Orofacial Pain Assessment

4.5.1 Introduction

SPs aged 10-69 years receive the orofacial pain component, which consists of a series of questions to be asked by the recorder and a physical examination to be conducted by the examiner. SPs aged 10-12 years will receive the questionnaire portion only, while SPs 13-69 years will receive both the questionnaire and the physical examination.

4.5.2 Recording Procedures

4.5.2.1 Pain Questionnaire

The dental recorder administers the Orofacial Pain Questionnaire to all SPs aged 6-69 years. The purpose of the pain questionnaire is to assess the frequency of five specific types of orofacial pain in the recent past. The pain questionnaire asks about pain in the orofacial area, specifically:

- Toothache or painful tooth (ages 10-69 years);
- Sores or irritations (ages 10-69 years)
- Pain in the jaw joint (ages 13-69 years)
- Dull, aching pain across the face (ages 13-69 years)
- Burning sensations in the mouth (ages 18-69 years).

A positive response to a particular type of pain leads to a question about frequency of that pain in the past 30 days. Any positive response to orofacial pain leads to two quality of life questions, which are asked at the end of the questionnaire.

The recorder begins the orafacial pain questionnaire by reading the introductory statement on the top of the screen. Then he/she will ask each highlighted question on the screen in order.

Prevalence Questions

The allowable codes for the prevalence questions, "Have you experienced…," are as follows:

Y = Yes
N = No

Scoring Guidelines

1. Answers of "Don't know" or "Refused" should be coded "N" for "No."
2. Do not provide any examples of pain except those provided in the question.
3. Pain caused by injuries should be included if the SP asks.

Frequency Questions

The allowable codes for the frequency questions, "For how many days have you experienced…," are:

0-30 = Number of days
77 (R) = Refused
99 (D) = Don't Know

Scoring Guidelines

1. All fractions are to be rounded up.
2. Score the midpoint for all ranges that cannot be narrowed to one number.

NOTE: A positive response to the prevalence questions will trigger the associated frequency question to be highlighted. The recorder will then ask the frequency question before proceeding to the next prevalence question. A negative response to the prevalence question will not trigger any change on the screen and the recorder will ask the next prevalence question or proceed to the next screen, as appropriate.

If a positive response is entered for **any** prevalence question, the program will display the Pain Sensation Questions screen, which displays the two quality of life questions. If all prevalence questions are answered in the negative, the program will display the Pain screen, which is used to record

the pain examination data (see Section 4.5.2.2). The two quality of life questions and their allowable codes are as follows:

During the past 30 days how often were you worried or concerned about these sensations?

A = Always
O = Often
S = Sometimes
L = Seldom
N = Never
R = Refused
D = Don't Know

NOTE: Use the mouse to pull up the options and read the five that appear to the SP when you read the question as follows: *"Would you say always, often, sometimes, seldom, or never?"*

During the past 30 days, for about how many days did these sensations keep you from doing your usual activities (for example: work, school, self-care, or recreation)?

0-30 = Number of days
77 (R) = Refused
99 (D) = Don't Know

NOTE: The conditions that triggered these two quality of life questions are summarized in blue type above the first question on the Pain Sensation Questions screen. If the SP cannot remember the conditions referenced earlier in the questionnaire, you may probe using the phrases listed on the screen for that SP.

4.5.2.2 Pain Examination

The examiner will conduct the pain examination once the questionnaire is completed. He/She will "call" out codes, which the recorder will enter on the "Pain" screen.

Allowable codes for this screen are as follows:

Maximal Incisal Opening

0 – 65 = Measurement in mm (where 65 = 65 mm or greater)
99 = Cannot be assessed.

General Instructions for Muscle and Joint Palpation for Tenderness

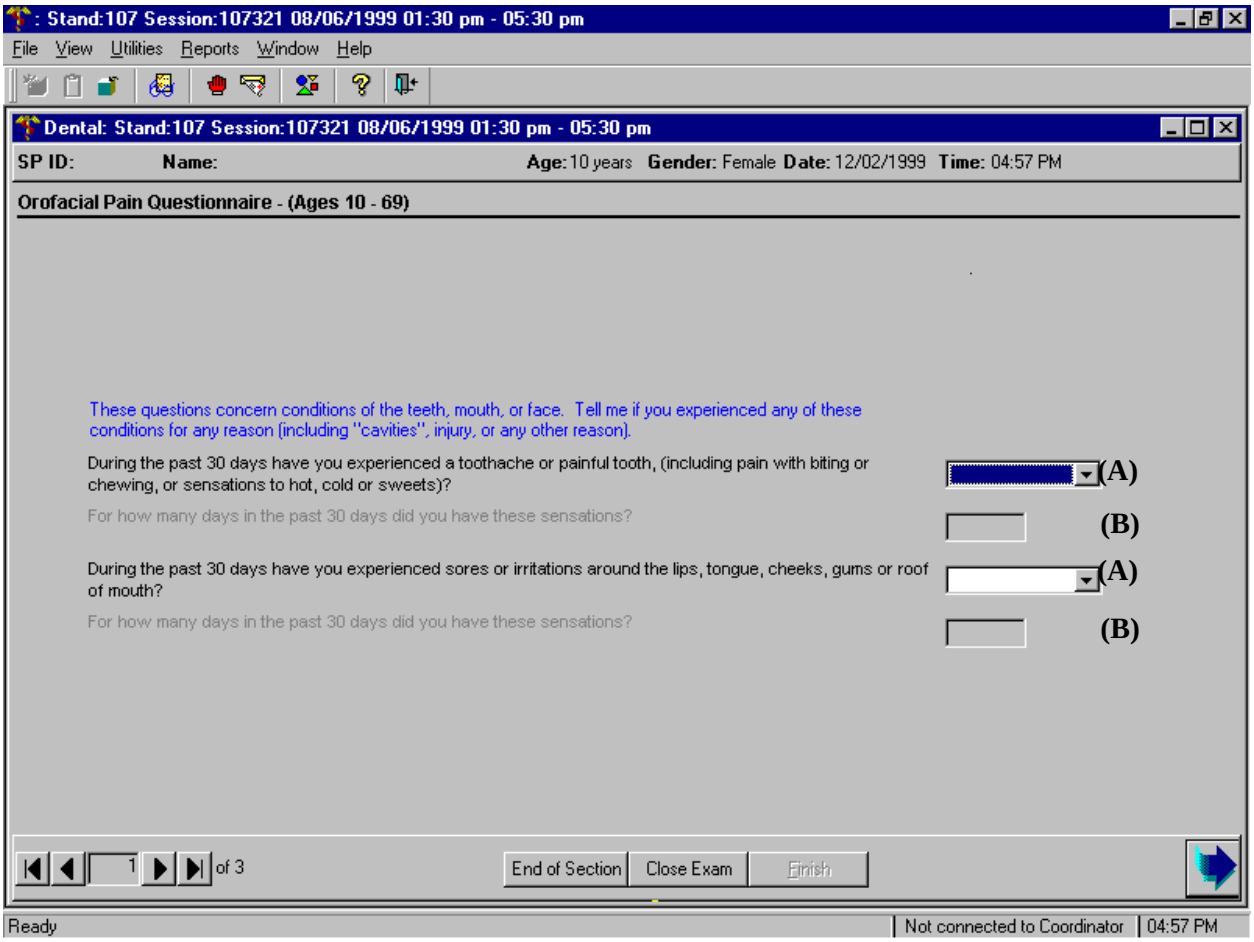
1 = Yes (Pain upon palpation)
2 = No (No pain upon palpation)
9 = Cannot be assessed

4.5.3 Orofacial Pain Screens

The recorder uses the Orofacial Pain Questionnaire screens to record the SP's responses to the Orofacial Pain Questionnaire as discussed in Section 4.5.2.1. The recorder will obtain this information directly from the SP. Remember that there are up to four screens of questions that may be asked depending on the SP's age and answers to previous questions. The recorder will only ask those questions which are highlighted by the program. The cursor will automatically skip over questions that should not be asked and the question itself is grayed out on the screen.

The recorder then uses the Pain screen to record the examiner's assessment of orofacial and other pain. The recorder will obtain this information from the examiner. Allowable codes for each item are provided in Section 4.5.2.2.

4.5.3.1 Orofacial Pain Questionnaire (Ages 10-69) Screen



Allowable Entries:

Prevalence Questions (A)
Y = Yes
N = No

Frequency Questions (B)
0-30 = Number of Days
77 (R) = Refused
99 (D) = Don't Know

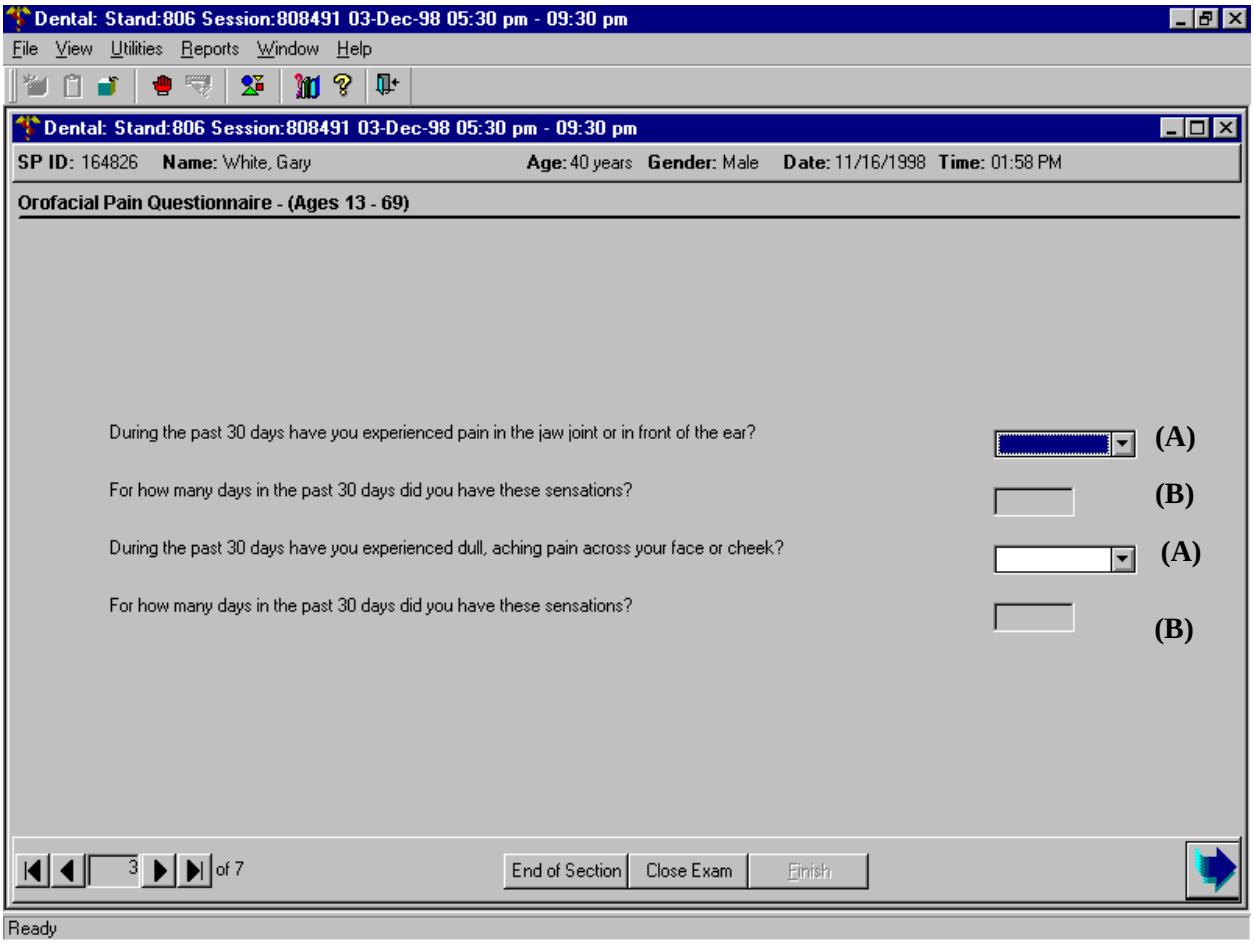
Move Through Screen:

Prevalence Questions (A)
System autotabs after each entry.

Frequency Questions (B)
User must press <TAB> key after data entry.
(*NOTE: There is no need to zero-fill numbers less than 10.*)

Shortcut: None

4.5.3.2 Orofacial Pain Questionnaire (Ages 13-69) Screen



Allowable Entries:

Prevalence Questions (A)
Y = Yes
N = No

Frequency Questions (B)
0-30 = Number of Days
77 (R) = Refused
99 (D) = Don't Know

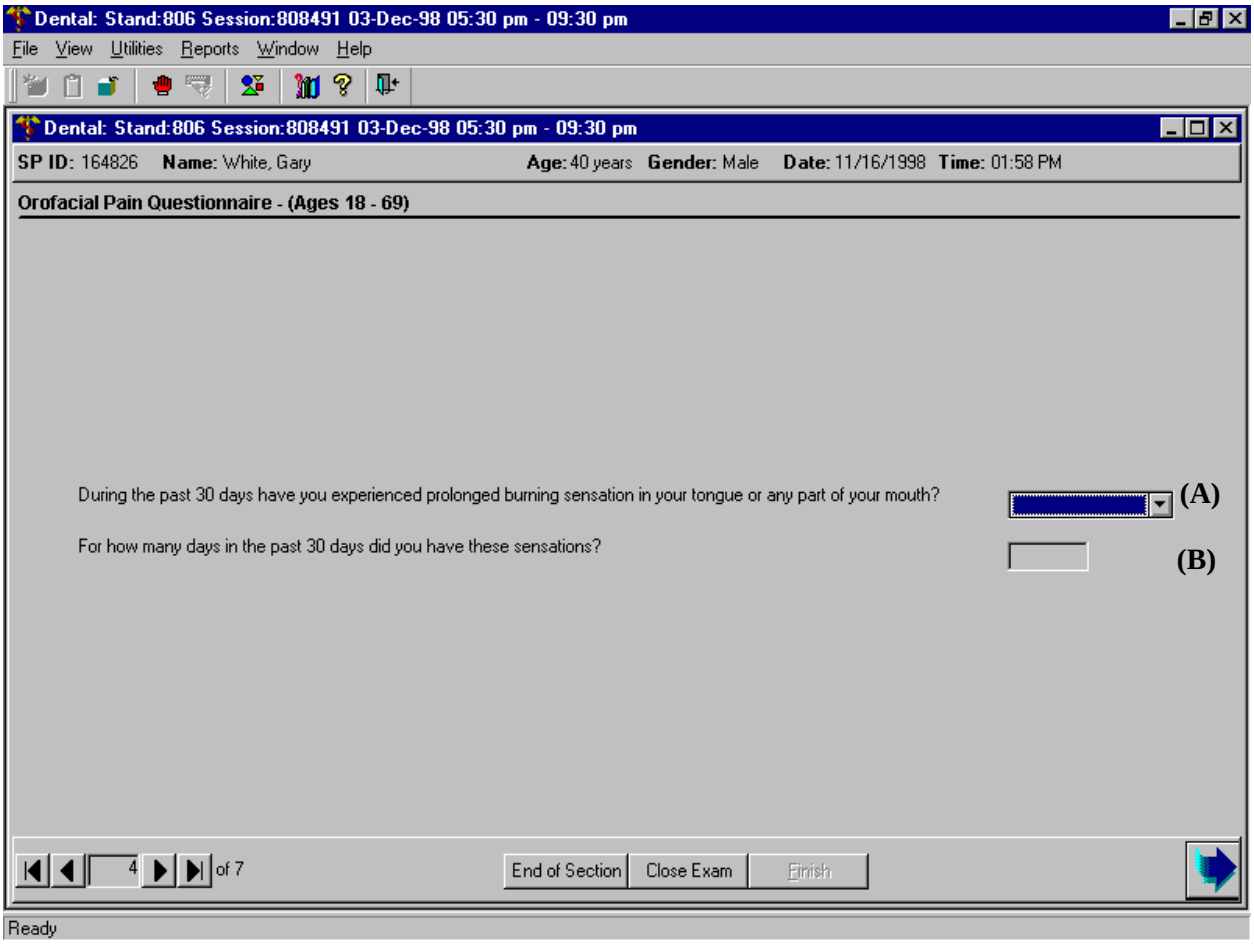
Move Through Screen:

Prevalence Questions (A)
System autotabs after each entry.

Frequency Questions (B)
User must press <TAB> key after data entry.
(***NOTE: There is no need to zero-fill numbers less than 10.***)

Shortcut: None

4.5.3.3 Orofacial Pain Questionnaire (Ages 18-69) Screen



Allowable Entries:

Prevalence Questions (A)
Y = Yes
N = No

Frequency Questions (B)
0-30 = Number of Days
77 (R) = Refused
99 (D) = Don't Know

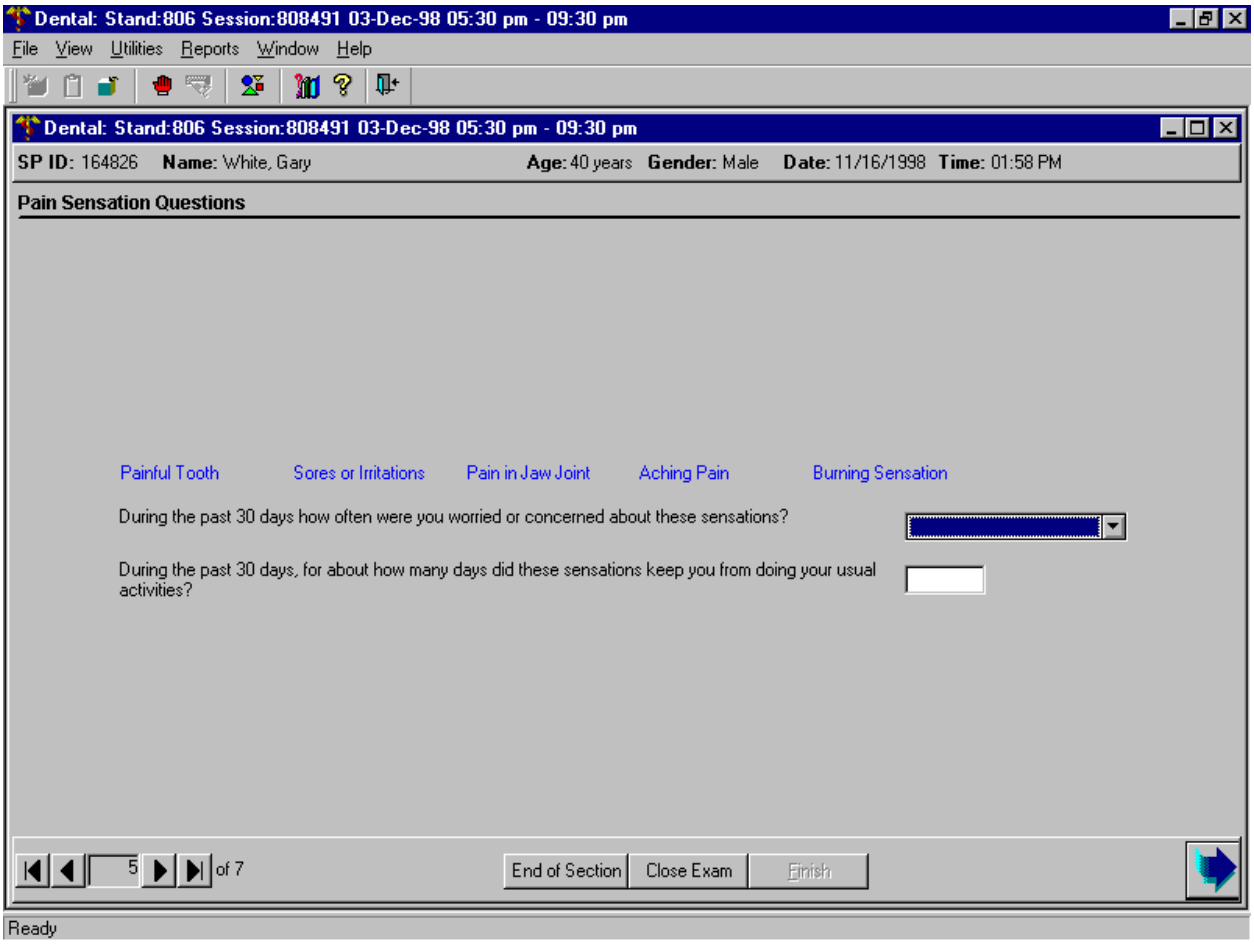
Move Through Screen:

Prevalence Questions (A)
System autotabs after each entry.

Frequency Questions (B)
User must press <TAB> key after data entry.
(***NOTE: There is no need to zero-fill numbers less than 10.***)

Shortcut: None

4.5.3.4 Pain Sensation Questions Screen



Allowable Entries:

Question 1
A = Always
O = Often
S = Sometimes
L = Seldom
N = Never
77 (R) = Refused
99 (D) = Don't Know

Question 2
0-30 = Number of Days
77 (R) = Refused
99 (D) = Don't Know

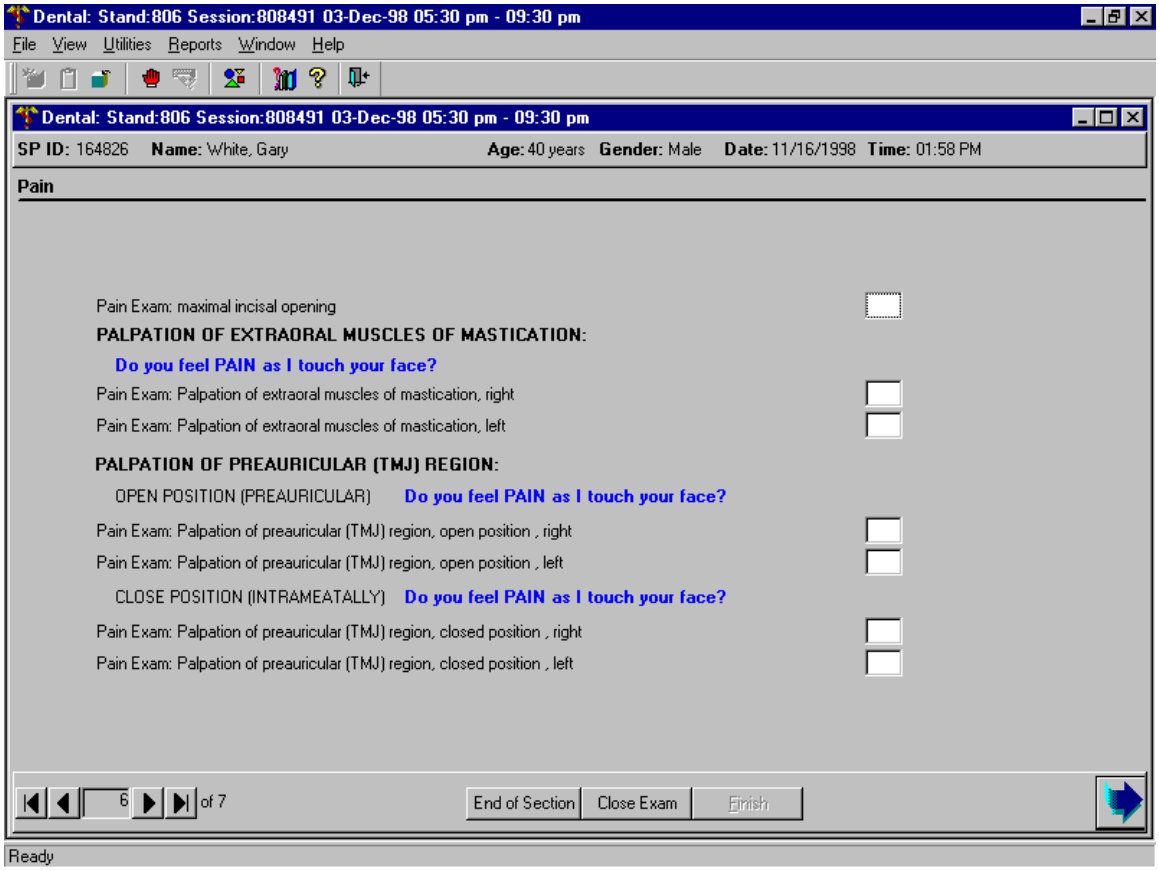
Move Through Screen:

Question 1
System autotabs after each entry.

Question 2
User must press <TAB> key after data entry.
(*NOTE: There is no need to zero-fill numbers less than 10.*)

Shortcut: None

4.5.3.5 Pain Exam Screen



Allowable Entries:

Opening (A)
00-65 = Measurement in mm (where 65 = 65 or greater)
99 = Cannot be assessed

NOTE: Must be 2-digit entry; therefore, zero-fill numbers less than 10.

Palpation (B)
1 = Yes (Pain upon palpation)
2 = No (No pain upon palpation)
9 = Cannot be assessed

Move Through Screen: System autotabs after each entry.

Shortcut: None

This page intentionally left blank.

4.6 Tooth Count

4.6.1 Introduction

SPs 2+ years and older receive this examination assessment which includes the assessment of the number of primary and permanent teeth present and the presence of surgical implants. Information on surgical implants is obtained from preliminary questions asked by the examiner. The examiner will proceed to examine the SP utilizing any guidance provided during the questioning.

4.6.2 Recording Procedures

The recorder enters the code called by the examiner for the question about whether the SP has ever had a tooth replaced with a surgical implant. The recorder then uses the next screen (Tooth Count screen) to enter the tooth count calls made by the examiner.

NOTE: It is extremely important that the correct calls be made by the examiner and entered correctly by the recorder on this screen since the outcome of this assessment determines how other assessments are performed and coded. For example, root caries, dental fluorosis, and traumatic injuries are assessed only on permanent teeth as defined in the tooth count.

The results of the tooth count are entered on the Tooth Count screen, which contains four rows of eight data entry spaces. Each row represents a quadrant. The quadrants are displayed in the following order: upper right, upper left, lower left, and lower right. The eight data entry spaces correspond to the eight teeth per quadrant and are listed in order from the central incisor to the third molar. Abbreviations are provided along the top of the row to identify the teeth as described in Section 4.3.

The first five data spaces can store codes for primary or permanent teeth while the last three only store codes for permanent teeth. Only one code per tooth is to be entered. The codes for the tooth calls for this component are as follows:

1 = Primary Tooth
2 = Permanent Tooth
3 = Implant
4 = Tooth Not Present

Whenever a call in the Tooth Count is made that precludes an assessment later on, (such as primary teeth not eligible for assessment of incisor trauma), the program automatically shades the affected tooth in the subsequent assessment. A "Cannot be assessed" code is also automatically displayed in the shaded data entry space. This code is "9" and the shaded "9" code is termed a "hard 9." Note that the program does not allow the recorder to overwrite the "9" with any other code in subsequent assessments. ISIS will skip these tooth positions and the cursor will move to the first blank tooth space. To change this hard "9," the Tooth Count code for that tooth must be changed on the Tooth Count Screen.

NOTE: There is a variable on the screen labeled "Implant" which must be checked if the SP reports an implant. Simply recording a "3" in the tooth spaces will not suffice for coding the SP as having an implant.

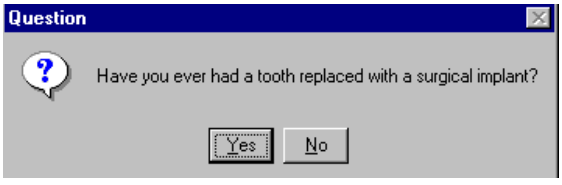
NOTE: There is a variable on the screen labeled "Edentulous" which must be checked if the SP is edentulous (SP has no teeth). Simply recording all "3s" and "4s" in the tooth spaces will not suffice for coding the SP as edentulous.

NOTE: Both the "Implant" and "Edentulous" boxes may be checked if the SP is edentulous and has implants.

NOTE: If an SP reports an implant, but the dental examiner determines there are no implants, you must uncheck the implant box before you proceed.

4.6.3 Screens

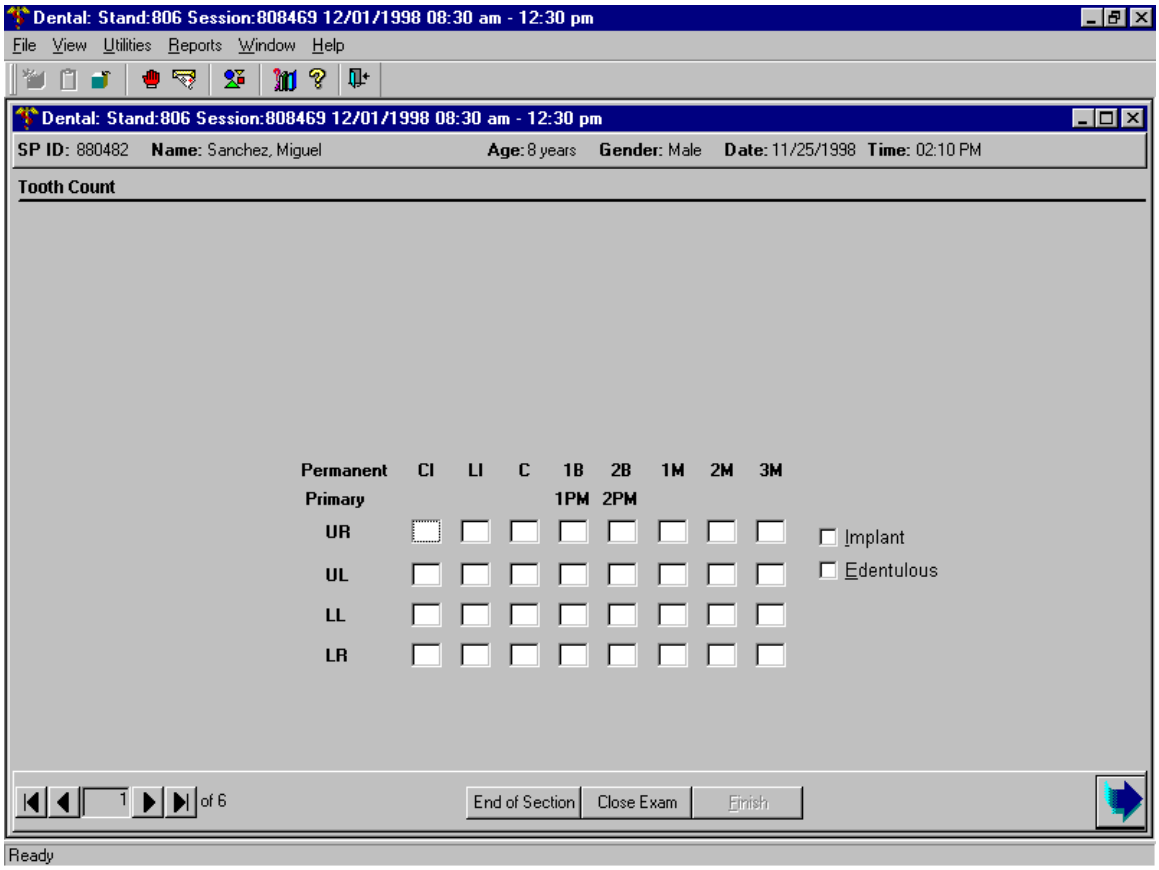
In order to record data in the system for the tooth count, the recorder must first record whether there are surgical implants present by answering the question *"Have you ever had a tooth replaced with a surgical implant*?" The examiner asks this question of the SP and the recorder enters "Y" for "Yes" or "N" for "No" depending on the SP's answer. Regardless of the SP's answer, the program displays the Tooth Count Screen.



When "Yes" is selected from the question box, the program will prefill the Implant box on the Tooth Count screen. When "No" is selected from the question box, the program will not prefill the Implant box on the Tooth Count screen.

NOTE: The information in the "Implant" box can be changed directly on the Tooth Count screen *without* returning to this question box by unchecking the implant box.

4.6.3.1 Tooth Count Screen



Allowable Entries:

1 = Primary tooth
2 = Permanent tooth
3 = Implant
4 = Tooth not present

Move Through Screen:

System autotabs after each entry.

Shortcut:

Edentulous: Use the mouse to click on the "edentulous" box. A check mark will appear in the box; the program automatically fills all remaining blank data entry fields with "4."
F12: Does not function on the screen.

QC Check:

Implant: The system makes sure that at least one "3" in entered whenever the "implant" box is checked. The system makes sure that no "3"s are entered if the "implant" box is not checked.

Edentulous: The system makes sure that only "3"s and "4"s are entered whenever the "edentulous" box is checked. The system makes sure that at least one "1" or "2" is entered if the "edentulous" box is not checked.

4.7 Dental Caries Assessment Methods

4.7.1 Coronal Caries Assessment

4.7.1.1 Introduction

There are two parts to the dental caries assessment: coronal caries and root caries. Each SP aged 2 years and older receives the coronal caries assessment, which involves all teeth except the third molars. The order in which the teeth are examined is the same as that used for the Tooth Count Screen.

The examiner begins the assessment in the maxillary right quadrant with the right central incisor and continues distally through the second molar in the same quadrant. The same sequence is followed for the upper left, lower left, and lower right quadrants. Tooth surfaces are examined in the following order: lingual, facial (buccal), mesial, and distal for anterior teeth, and lingual, occlusal, facial, mesial, and distal for posterior teeth. It is not advisable to call out individual surface codes as each tooth surface is examined, as this can be confusing to the recorder. It is better for the examiner to mentally accumulate surface calls for a given tooth until all surfaces have been examined before dictating the calls to the recorder.

4.7.1.2 Recording Procedures

A maximum of 28 permanent teeth are scored for each SP. Third molars, or wisdom teeth, are not scored for dental caries. The Coronal Caries screen is divided into four rows, which correspond to the four quadrants of the mouth: upper right, upper left, lower left, and lower right. These quadrants are labeled in the extreme left column of the screen. The teeth are labeled across the top. Space to enter the overall caries tooth call and the individual surface caries is provided for each tooth except the third molars. There is space to enter codes for seven teeth per quadrant.

As condition codes are entered on the Coronal Caries screen, the corresponding condition symbols are displayed on the Heads-Up Display screen. As mentioned earlier, red bullets symbolize caries while restorations are symbolized by shading. No changes are made to the display of implants (red circle with "I") or missing teeth (red circle with slash) based on calls made on this or subsequent screens.

Scoring Codes. The codes characterizing a whole tooth condition are referred to as "tooth calls." The allowable codes are as follows:

S = Sound permanent tooth (no decay or filling on any surface)
Z = Permanent tooth with surface condition
D = Sound primary (deciduous) tooth
K = Primary tooth with surface condition
U = Unerupted tooth
E = Missing due to dental disease (caries/periodontal disease)
M = Missing due to other causes (orthodontic/traumatic or other nondisease)
R = Missing due to dental disease but replaced
X = Missing due to other causes but replaced
Y = Tooth present, condition cannot be assessed

If the tooth is permanent with no decay or filling on any surface, the examiner calls "S." If the tooth is permanent and is not sound, the examiner calls "Z" **and** the appropriate surface condition codes as described below. "D" is entered for all sound primary calls while "K" **and** the appropriate surface condition codes are entered if the primary tooth has surface conditions (caries, restoration). If the tooth is missing and characterized by one of the other "tooth" calls, the examiner calls out the appropriate letter, "U" through "X."

The recorder records the appropriate tooth condition code in the first space for the tooth. After this first space, there is a separate block of data entry spaces to accommodate the surface calls for that tooth as necessary.

For caries, the allowable codes to indicate the appropriate surface are as follows:

0 = Lingual caries
1 = Occlusal caries
2 = Facial caries
3 = Mesial caries
4 = Distal caries

For filled teeth or restorations, the allowable surface codes are as follows:

5 = Lingual restoration
6 = Occlusal restoration
7 = Facial restoration
8 = Mesial restoration
9 = Distal restoration
C = Crown (short call for both primary and permanent teeth)

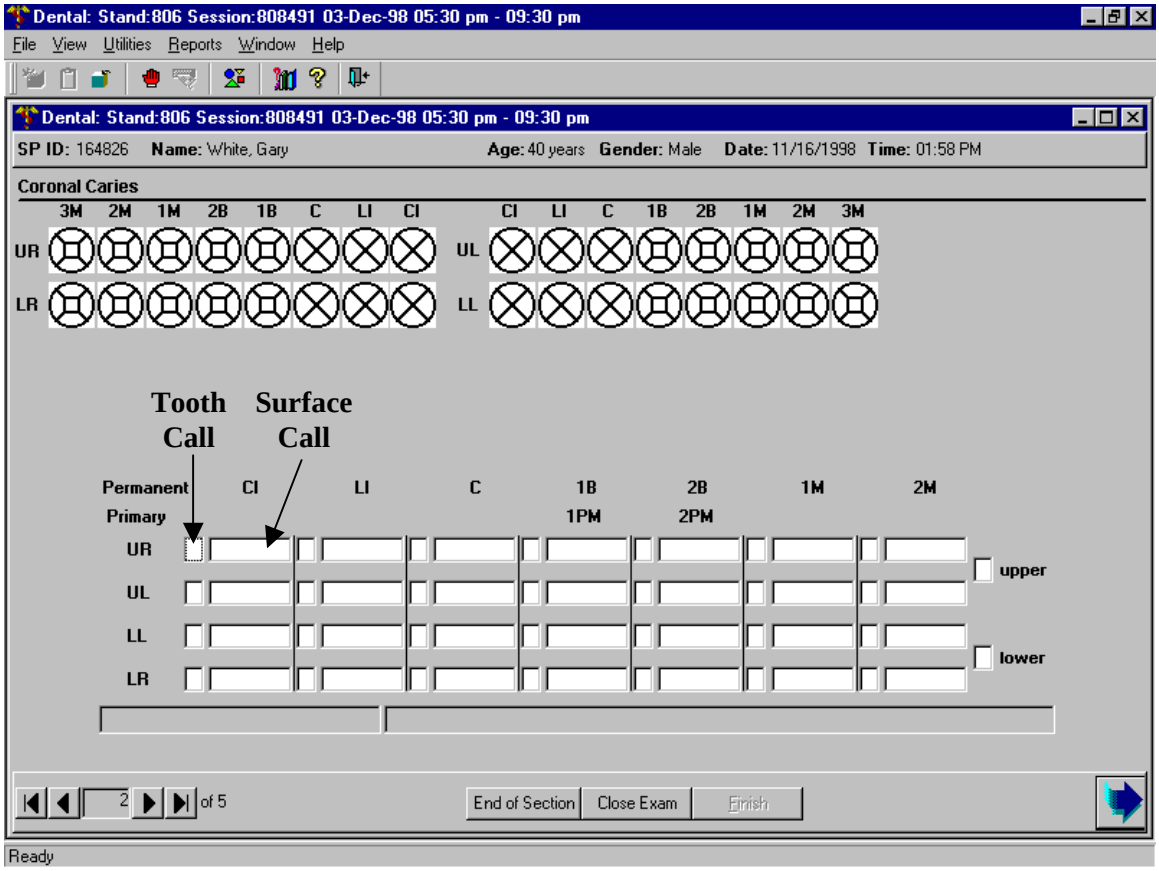
If the tooth is permanent with decay on one or more surface (Z), the examiner calls the number(s) which correspond(s) to the surface(s) having decay. For example, if the examiner calls 0, 1, 2, 3, or 4, it means that there is decay on the surfaces of the tooth represented by those numbers. The recorder fills the appropriate spaces on the caries area of the screen. If the examiner calls 5, 6, 7, 8, or 9, it means that there is a filling on the surface(s) represented by the number(s) called. If the examiner calls "C," it means that there is a crown on that tooth. Combinations of caries and restorations on different surfaces are allowed. For example, if the examiner calls "1, 8, 9"; it means that there are caries on the occlusal surface and restorations on the mesial and distal surfaces. This procedure continues to the second molar for each of the four quadrants of the mouth.

NOTE: Only *one entry* is made for each tooth surface. In the event that a surface has both decay and a filling, only the decay is called. If the examiner gives two codes, which are on the same surface, the recorder should bring this to the examiner's attention immediately. (The system will beep and an error message will be displayed in the lower right portion of the screen. Data entry will be prohibited until an allowable response is entered.)

NOTE: The examiner and recorder are both responsible for making sure that the calls the examiner makes are being recorded by the recorder in the correct tooth space on the screen. In order to do that consistently, each tooth position is to be referred to by its quadrant location and tooth location. For example, whenever a new quadrant is started or there is a long silence between calls, the recorder will prompt the examiner with the next blank tooth space, such as "upper left central incisor" (noted as "UL CI" on the screen).

NOTE: In instances where all teeth in the upper and/or lower mouths are missing *for the same reason*, it is imperative that the examiner prompt the recorder to use the "Upper" and "Lower" fields to indicate the caries code. By doing so, the system will fill all teeth in that half mouth with the same code and the SP will be scored with the appropriate half-mouth calls.

4.7.1.3 Caries Screen



Allowable Entries: See next page.

Move Through Screen:

Tooth Calls
System autotabs after each entry.

Surface Calls
User must press <TAB> to proceed to next data entry field.

Shortcut: Use the mouse to click on "Upper" or "Lower" box, as appropriate, whenever all teeth in the upper or lower half-mouth are missing **for the same reason**. The cursor will appear in the box. Enter the code for the reason for the missing teeth as prompted by the examiner and the program will automatically fill all pertinent data entry fields with that code.

To clear the "Upper" and/or "Lower" box entries, keep the cursor in the box and press the <Delete> key.

Allowable codes for this shortcut are: E, M, R, X.

Tooth Count Screen continued

Allowable Entries:

Tooth Calls

S = Sound permanent tooth (no decay or filling on any surface)
Z = Permanent tooth with surface condition
D = Sound primary (deciduous) tooth
K = Primary tooth with surface condition
U = Unerupted tooth
E = Missing due to dental disease (caries/periodontal disease)
M = Missing due to other causes (orthodontic/traumatic or other nondisease)
R = Missing due to dental disease but replaced
X = Missing due to other causes but replaced
Y = Tooth present, condition cannot be assessed

Surface Calls

Caries	Surface	Restoration
0	Lingual	5
1	Occlusal	6
2	Facial (Buccal)	7
3	Mesial	8
4	Distal	9
	Crown	C

This page intentionally left blank.

4.7.2 Root Caries Assessment

SPs aged 18 years and older receive this assessment to determine the prevalence of root caries and root restorations.

4.7.2.1 Recording Procedures

A maximum of 28 permanent teeth will be examined for each SP. Third molars, or wisdom teeth, are not scored for root caries. The Root Caries screen consists of two "whole mouth" variables. Space has been provided to indicate whether **any** root caries or root restorations exist in the SP's mouth.

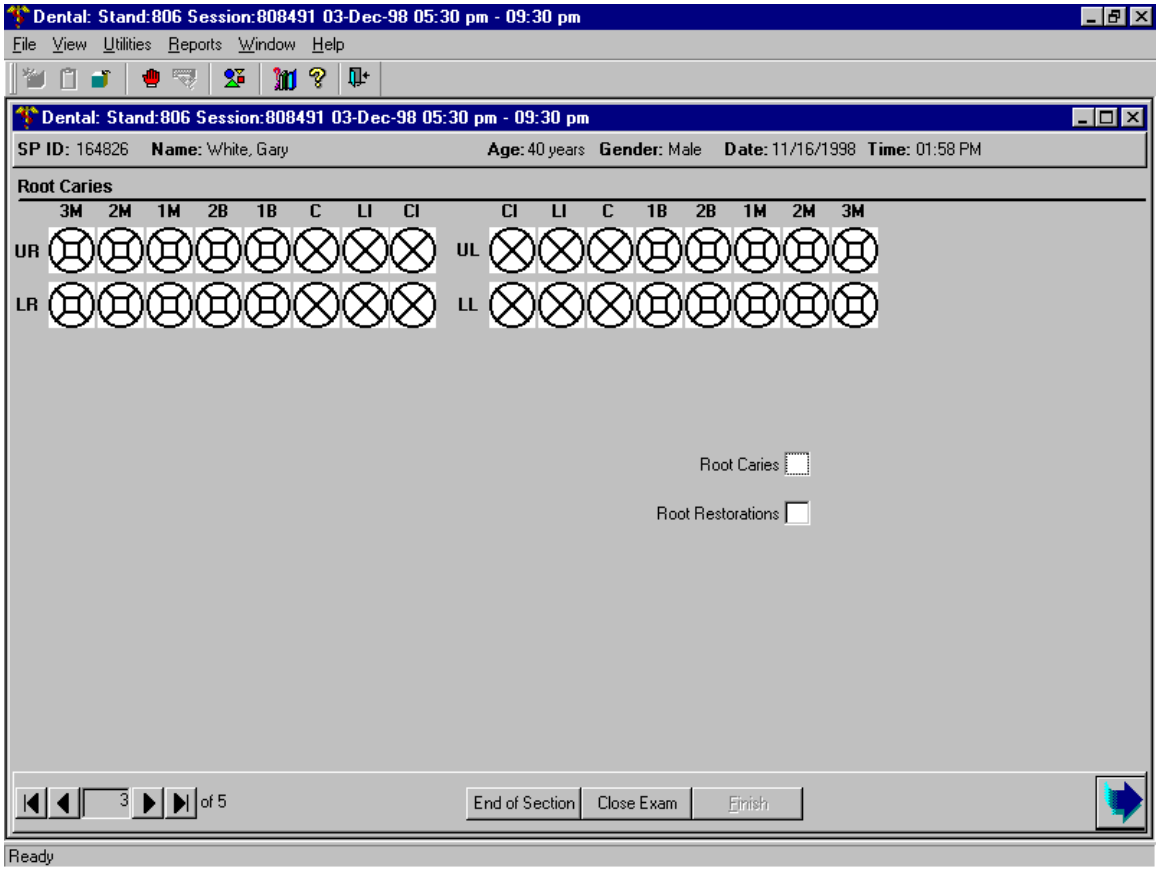
The allowable "whole mouth" codes for root caries are as follows:

1 = Root caries detected
2 = No root caries detected
9 = Cannot be assessed

The allowable "whole mouth" codes for root restorations are as follows:

1 = Root restoration detected
2 = No root restoration detected
9 = Cannot be assessed

4.7.2.3 Root Caries Screen



Allowable Entries:

Root Caries
1 = Root caries detected
2 = No root caries detected
9 = Cannot be assessed

Root Restorations
1 = Root restoration detected
2 = No root restoration detected
9 = Cannot be assessed

Move Through Screen: System autotabs after each entry.

Shortcut: None

4.8 Sealant Assessment

4.8.1 Introduction

SPs aged 2-34 years receive the sealant assessment. The sequence of the examination is the same as that of the tooth count. However, only the pitted or grooved surfaces of the first and second bicuspid/primary molars, first and second molars, and the permanent maxillary lateral incisors are to be scored for the assessment.

The calls for the sealant assessment are as follows:

0 = Sealant not present
1 = Occlusal sealant present on permanent tooth
2 = Facial sealant present on permanent tooth (lower molars only)
3 = Lingual sealant present on permanent tooth (upper molars only)
4 = Occlusal sealant present on primary tooth
9 = Cannot be assessed

4.8.2 Recording Procedures

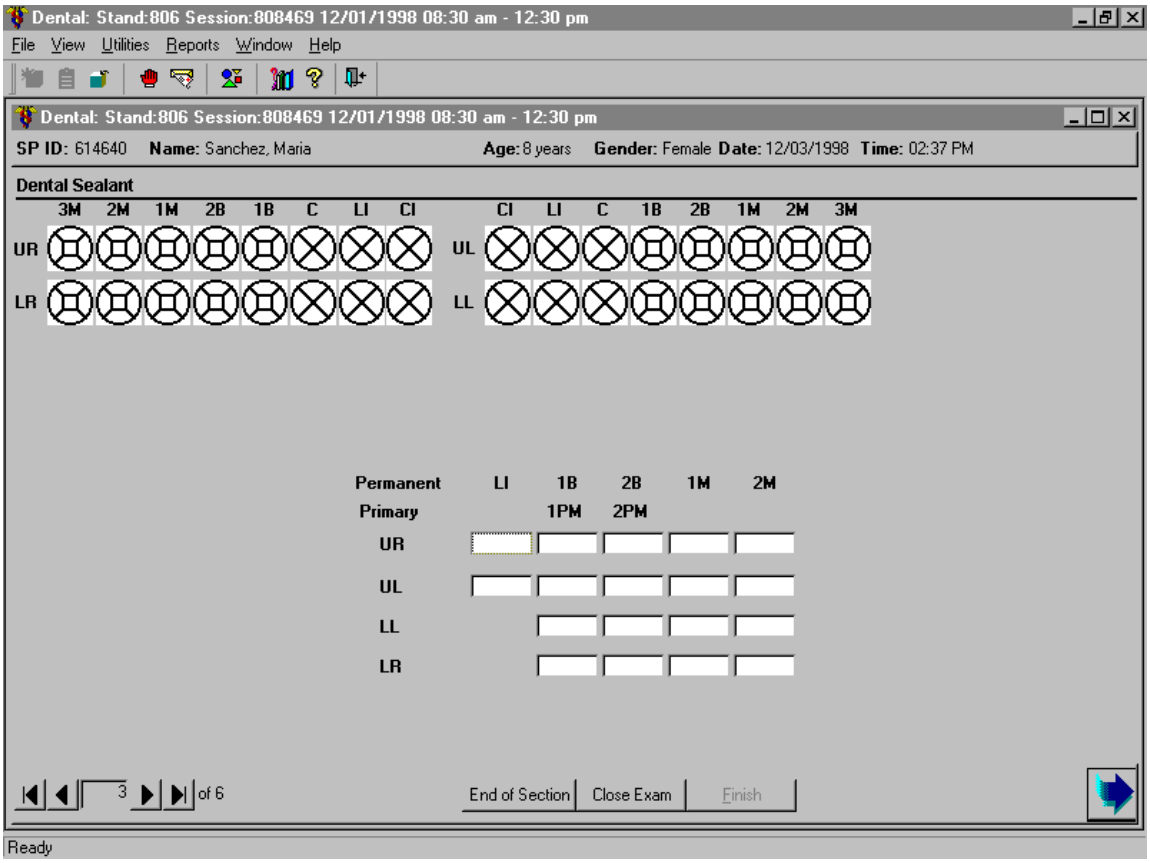
Sealant codes can be entered for the bicuspids/primary molars, first and second molars, and the permanent maxillary lateral incisors only. One code is permitted for primary teeth, bicuspids, and permanent lateral incisors, while multiple codes are permitted for permanent molar teeth. Refer to the previous section for allowable codes.

The examiner may use a designated shortcut key to record all "0s" if the SP has no sealants on the teeth to be assessed. In this instance the examiner calls "No Sealants" instead of calling "0" for each individual tooth assessed and the recorder will press the <F2> key four times to automatically fill "0s" in all blank data entry fields by quadrant.

NOTE: "0", "4" and "9" are mutually exclusive calls. However, combinations of "1, 2" or "1, 3" are allowed for permanent molars since more than one surface of these teeth may be sealed.

NOTE: Only "0," "3," or "9" are allowable codes for lateral incisors.

4.8.3 Dental Sealant Screen



Allowable Entries:

0 = Sealant not present
1 = Occlusal sealant present on permanent tooth
2 = Facial sealant present on permanent tooth (lower molars only)
3 = Lingual sealant present on permanent tooth (upper molars only)
4 = Occlusal sealant present on primary tooth
9 = Cannot be assessed

Move Through Screen:

System autotabs after each entry of "3" on lateral incisors.
System autotabs after each entry of "0", "4" and "9" on any tooth.
User must press <Tab> key after all other entries.

Shortcut:

Press <F2> key to automatically enter "0" for all remaining blank data entry fields in a quadrant.

4.9 Dental Fluorosis Assessment

4.9.1 Introduction

All SPs aged 6-49 years old receive the dental fluorosis assessment which utilizes the Dean's Fluorosis Index to assess the condition. The assessment is conducted in the same order and sequence as the caries examination, and all permanent teeth except the third molars are assessed.

4.9.2 Recording Procedures

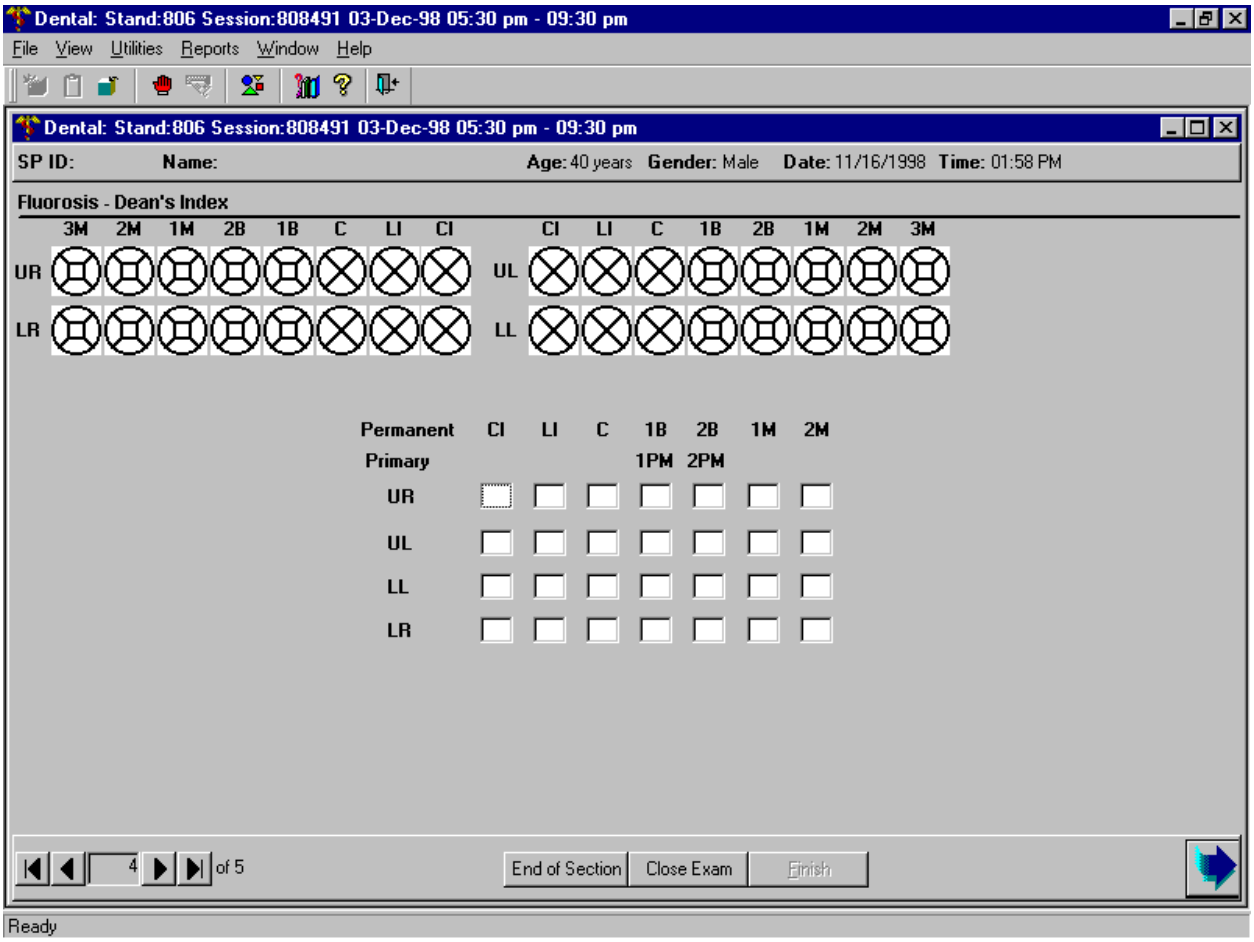
The scores called by the examiner are entered in the appropriate fields for the Dean's Index using the codes as follows:

0 = Normal (no fluorosis detected)
1 = Very mild (opaque, paper white areas involving less than ¼ of the tooth surface)
2 = Mild (opaque, paper white areas involving ¼ to less than ½ of the tooth surface)
3 = Moderate (opaque paper white areas involving ½ or more of the tooth surface)
4 = Severe (discrete or confluent pitting in involved areas)
5 = Questionable (sight aberration of normal enamel appearance including white flecks)
8 = Non-fluoride opacity
9 = Cannot be assessed

NOTE: There is only one score per tooth.

The recorder may use a designated shortcut key to record "0s" whenever the SP has no fluorosis. In these instances, the examiner calls "No Fluorosis" instead of "0" for each individual tooth assessed and the recorder presses the <F2> key 4 times to automatically fill "0s" in all blank data entry fields by quadrant.

4.9.3 Fluorosis – Dean's Index Screen



Allowable Entries:

0 = Normal (no fluorosis detected)
1 = Very mild
2 = Mild
3 = Moderate
4 = Severe
5 = Questionable
8 = Nonfluoride opacity
9 = Cannot be assessed

Move Through Screen: System autotabs after each entry.

Shortcut: Press <F2> key to automatically enter "0" for all remaining blank data entry fields in a quadrant.

4.10 Incisor Trauma Assessment

4.10.1 Introduction

All SPs aged 6-29 years receive the traumatic injuries assessment for the upper and lower permanent incisors only. The examiner asks the SP (or a responsible adult for children) whether the SP has ever had an injury to the front teeth. Note that there is no space in the system to record this information; it is used as a reference for the examiner during the examination.

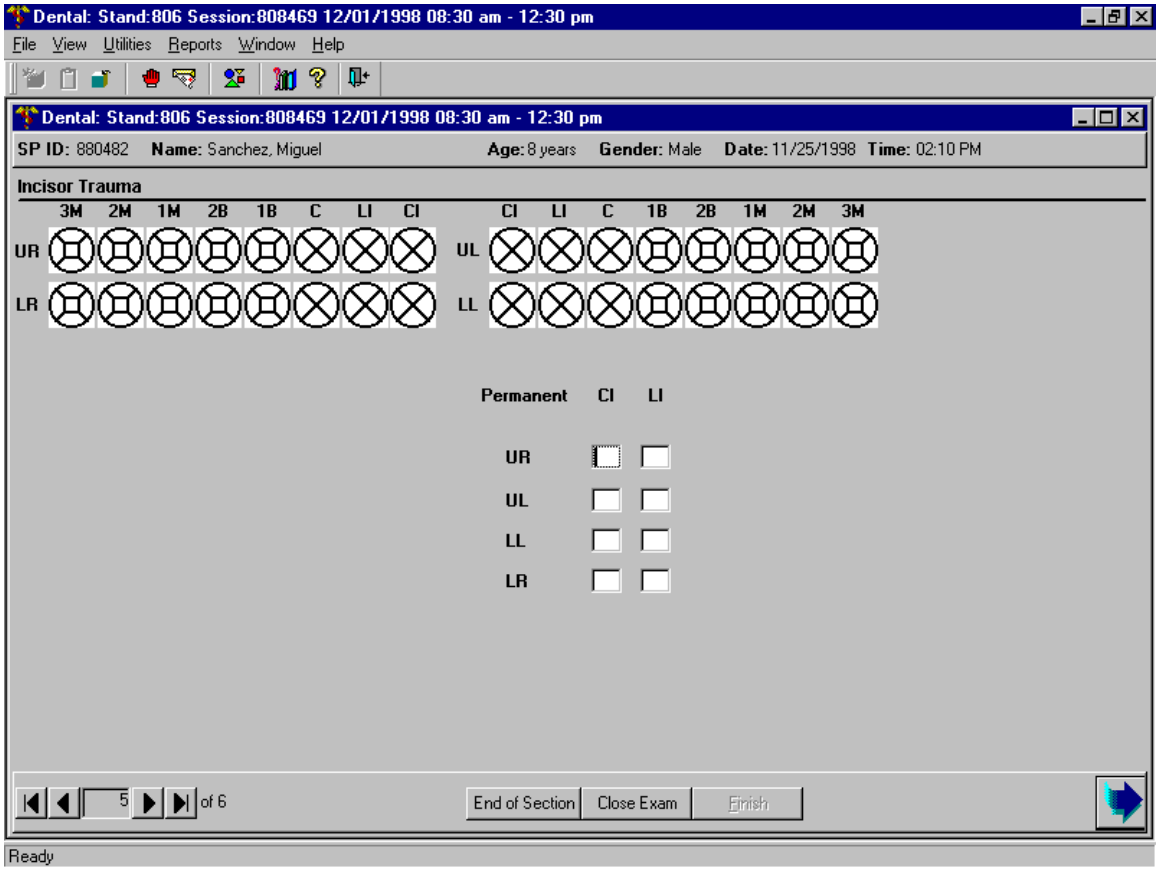
4.10.2 Recording Procedures

Findings for the traumatic injuries of permanent incisor teeth are recorded on the Incisor Trauma screen. If there is no physical indication of trauma in any of the eight incisors, the examiner will call "No Trauma" and the recorder will record "0" for each tooth assessed. Allowable codes range from "0" to "6" and "9" as listed above. Missing or implanted teeth are restricted to "6" and "9."

One of the following scores is to be assigned for each incisor tooth:

0 No evidence of traumatic injury
1 Unrestored enamel fracture is present and does not involve the dentine
2 Unrestored fracture is present which involves the dentine
3 Untreated pulpal damage
4 Restored fracture, either with a full crown or a less extensive restoration.
5 Lingual restoration as a sign of endodontic therapy, and a positive history from the SP or responsible adult of root canal therapy following traumatic injury
6 Tooth is missing due to trauma
9 Cannot be assessed

4.10.3 Incisor Trauma Screen



Allowable Entries:

0 = No evidence of traumatic injury
1 = Unrestored enamel fracture is present; does not involve the dentine
2 = Unrestored fracture is present which involves the dentine
3 = Untreated pulpal damage
4 = Restored fracture
5 = Lingual restoration
6 = Tooth is missing due to trauma
9 = Cannot be assessed

Move Through Screen: System autotabs after each entry.

Shortcut: None

4.11 Periodontal Assessment

The periodontal section includes two parts: measurements to determine the loss of attachment and the identification of bleeding from probing. Periodontal assessments are conducted from posterior to anterior beginning with the most distal tooth in a quadrant (excluding third molars) and proceeding toward the midline. Three sites per tooth (the distal, mid-facial, and mesio-facial) are examined in a randomly selected upper quadrant and a randomly selected lower quadrant for the periodontal assessments.

4.11.1 Participant Eligibility for the Periodontal Assessment

SPs aged 13 years and older will receive the periodontal assessment. The assessment is performed on three sites per tooth (distal, mid-facial and mesio-facial) for two randomly selected quadrants—one upper quadrant and one lower quadrant. The periodontal assessment begins with the most distal tooth and moves forward through each quadrant. Only permanent teeth are measured. The dental examiner will complete loss of attachment for the upper quadrant, and then bleeding on probing for the same quadrant before proceeding to the lower quadrant.

4.11.1.1 Selection of Quadrants to be Assessed

The computer program automatically identifies the two random quadrants (one random upper and one random lower) to be selected for the periodontal assessment as follows:

The fifth digit of the ID number is used to select the upper quadrant. If this number is even, the right side is used. If this number is odd, the left side is used.

Similarly, the sixth digit of the ID number is used to select the lower quadrant for the periodontal examination. If this number is even, the right side is used. If this number is odd, the left side is used.

For example, if the SP's ID number is 123456, this would represent a left upper and right lower designation for the SP.

1	2	3	4	5	6
				Upper left	lower right

4.11.1.2 Recording Procedures

Findings for the periodontal assessment are recorded on the periodontal assessment screens. There is one screen for the upper quadrant and one screen for the lower quadrant. Codes for the periodontal assessment are provided below. Again, only permanent teeth are assessed.

The codes listed below are for loss of attachment.

The allowable range for the FGM to CEJ measurement is:

-9 to 9	=	Measurement in millimeters
±A	=	Measurement is ±10 millimeters
±B	=	Measurement is ±11 millimeters
±C	=	Measurement is ±12 millimeters
Y	=	Cannot be assessed

The allowable range for the FGM to sulcus base measurement (pocket depth) is:

0 - 9	=	Measurement in millimeters
A	=	Measurement is 10 millimeters
B	=	Measurement is 11 millimeters
C	=	Measurement is 12 millimeters
Y	=	Cannot be assessed

NOTE: If one measurement cannot be assessed, then the other measurement must also be coded as "Cannot be assessed."

NOTE: The second measurement must be equal to or greater than the first measurement. If the user enters a second measurement that is smaller than the first measurement, the system will prevent the user from moving until the error is corrected. If the second measurement was entered incorrectly, simply enter the correct information.

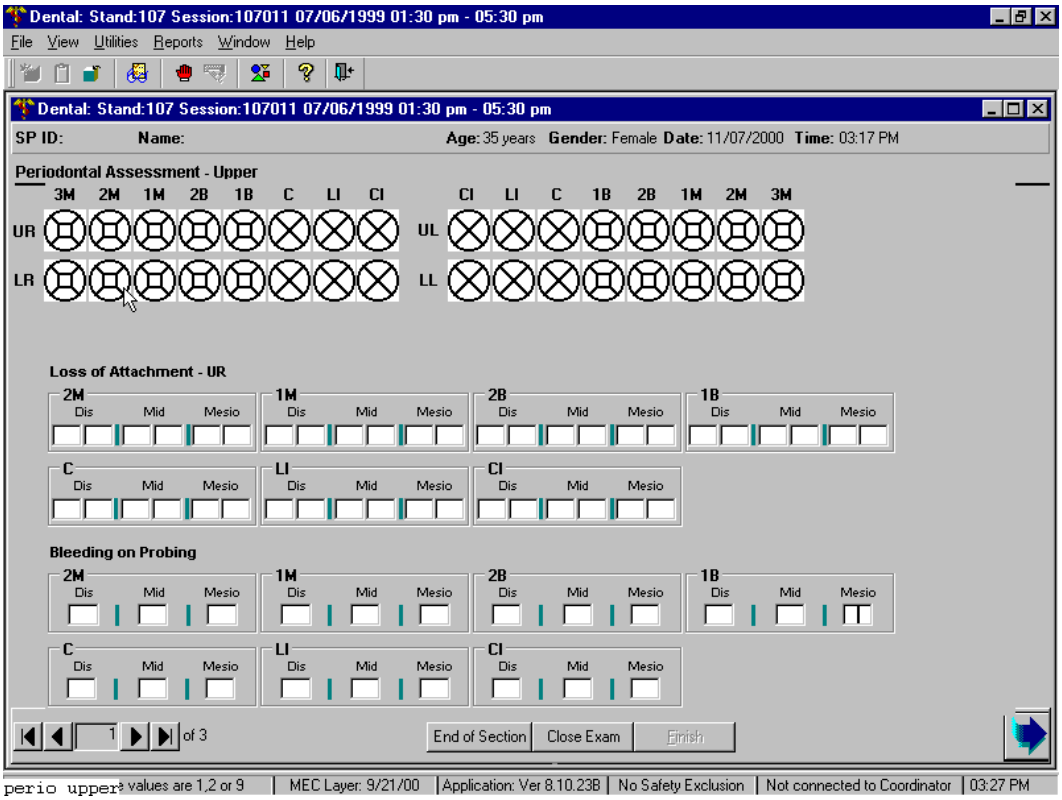
If the first measurement was entered incorrectly, you must delete the second measurement first, backspace to the first measurement, enter the correct information on the first space, then return to the second space and *reenter* the information.

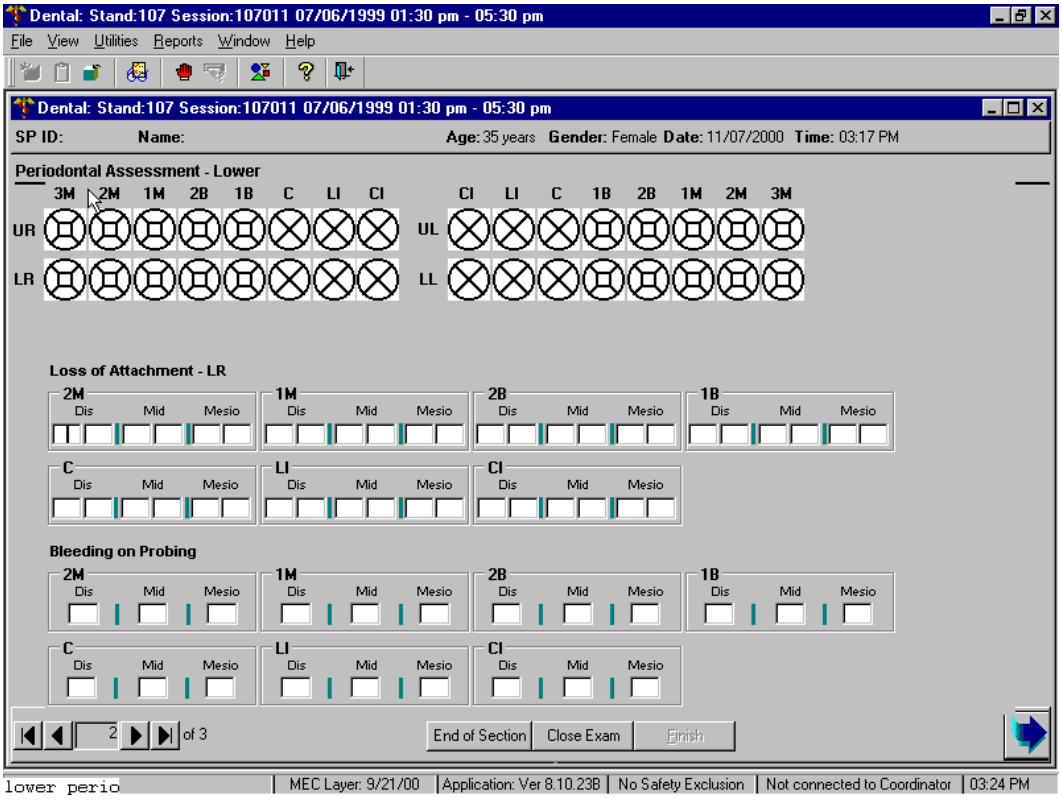
If a "9" is entered, the system will send a message asking you if the measurement was "9 mm." This is because, for all other assessments, "9" is "Cannot be assessed," but for loss of attachment, a "9" is an actual measurement. The code "Y" is "Cannot be assessed."

The allowable codes for bleeding on probing are as follows:

1 = Bleeding from probing detected
2 = No evidence of bleeding
9 = Cannot assess

4.11.1.3 Loss of Attachment Screen





Allowable Entries for Loss of Attachment:

For each tooth site (distal, mid-facial, or mesio-facial) the following two spaces must be recorded:

First Data Entry Space (FGM to CEJ measurement)
-9 to 9 = Measurement in millimeters
±A = Measurement is ±10 millimeters
±B = Measurement is ±11 millimeters
±C = Measurement is ±12 millimeters
Y = Cannot be assessed

Second Data Entry Space (FGM to sulcus base measurement)
0 – 9 = Measurement in millimeters
A = Measurement is 10 millimeters
B = Measurement is 11 millimeters
C = Measurement is 12 millimeters
Y = Cannot be assessed

Move Through Screen: System autotabs after each entry.

Shortcut: None

Allowable Entries for Bleeding on Probing:

For each tooth site (distal, mid-facial, or mesio-facial) the following entries are allowable:

1 = Bleeding from probing deleted
2 = No bleeding detected
9 = Cannot assess

Move through Screen: System autotabs after each entry

Shortcut: None

This page intentionally left blank.

4.12 Recommendation For Care and Referrals

As described in this chapter, certain calls for several of the assessments trigger a "Recommendation For Care" referral that is specific for this study. There are four levels of referrals defined in the system as follows:

Level 1 - SP should see a dentist immediately

Level 2 - SP should see a dentist within the next 2 weeks

Level 3 - SP should see a dentist at his/her earliest convenience

Level 4 - SP should continue with his/her regular routine dental care

Recommendation For Care levels are flagged for specific **conditions**. An overall Recommendation For Care level is assigned by the examiner based on the summary of care levels assigned to each individual assessment conducted during the exam and the examiner's best professional judgement.

A Recommendation For Care level must be assigned to each and every SP by the examiner. If the SP does not have a condition that triggers a Level 1, Level 2, or Level 3 recommendation for any assessment, he/she will be flagged as a Level 4 examination Recommendation For Care referral. However, if the examiner finds any condition that warrants a different level of referral, he/she will override the system's referral.

4.12.1 Recommendation For Care Recording Procedures

This section is comprised of two screens. The first screen is used to document the care level assigned by the examiners. The second screen is used to create the SP referral letter, if needed.

4.12.1.1 Recommendation For Care Screen

The Recommendation For Care screen is a multipart screen with a list of the assessments that may trigger a referral on the upper left side of the screen and a choice of referral levels on the upper right side of the screen. (The system automatically pulls data from the assessments performed to aid the

examiner in determining which level of care should be recommended.) The lower portion of the screen is an open-ended comment section used by the examiner to clarify the reason for the recommendation.

The "Assessments" section will be prefilled by the system. If the codes entered for an assessment do not trigger a Recommendation For Care flag as defined in this chapter, the system automatically assigns a Level 4 to that assessment. If the codes entered for an assessment trigger a predetermined care level, the system automatically assigns that level. In the event that multiple codes are assigned within the assessment, the system automatically displays the code for the more severe recommendation. **NOTE: Preassigned levels are provided as a guide for the examiner only.**

The "Overall Recommendation" section is to be based on the level of care determined by the examiner and entered by the recorder. It is the examiner's responsibility to assign an overall examination Recommendation For Care level based on his/her best professional judgment and call the level to the recorder.

The "Other Conditions" section is located just below the "Overall Recommendation" section. The dental examiner will choose to have one or more of the following conditions printed on the Referral Letter and Report of Findings as follows.

A = Decayed teeth
B = Gum problems/disease
C = Oral hygiene
D = Clinical impression of soft tissue condition
E = Other finding (see comment)
F = No significant findings

NOTE: "F" is mutually exclusive with all other calls and no other condition will be listed if selected.

Section E is only used when a referral letter will be generated. The "Comments" section is for the examiner to record any open-ended comment up to 75 characters long. The purpose of this comment is to clarify the reason for the Level 1 or Level 2 referral, if necessary. **The information recorded in this space is printed on the Referral Letter the SP receives so the information must be entered verbatim as provided by the examiner.**

The "Referral Refused" and "Generate Referral Letter" boxes are enabled whenever a Level 1 or Level 2 recommendation is entered.

- If the SP refuses the referral, use the mouse to click on the "Referral Refused" box. A check mark will appear and a letter will not be created. You will be required to enter a comment. This should include the reason the referral was refused and any comments the examiner may have that would be helpful. Proceed to the Recommendation For Care Status screen.

- If the SP accepts the referral, use the mouse to click on the "Generate Referral Letter" button. The SP Referral Information screen is displayed. Complete the screen as discussed in the next section.

4.12.1.2 SP Referral Information Screen Recording Procedures

The SP Referral Information screen is used to record the information necessary to create the SP Referral Letter. It is displayed whenever the "Generate Referral Letter" button is selected on the Recommendation For Care screen.

To complete this screen, the examiner will obtain the name and address of the SP's dentist or clinic to whom the letter should be addressed. In addition, the examiner will inform the recorder of any statements that should be added regarding the nature of the explanation or the SP's response. Then the screen is used to document to whom the referral was actually given–the SP or the SP's guardian.

If the SP does not have a specific dentist or clinic to whom the letter should be sent, the Clinic Pickup feature on the upper right hand portion of the screen is used as follows:

- Use the mouse to click on either "Clinic" or "Dentist."

- The list of NHANES referral dentists and/or clinic names will appear. The examiner asks the SP to choose one of the facilities listed and that is the health care provider to whom the SP Referral Letter will be addressed. Use the mouse to click on the name the SP chooses.

- The name and address information for that dentist/clinic is transferred to the SP Referral Information screen and the referral list is cleared from the screen. If the dentist/clinic name has many characters, the information may not transfer over. You will then need to enter the information.

- Continue with data entry on the rest of the screen.

All comments to be added in the "Description of Explanation" and "SP Response" dialog boxes are to be recorded verbatim as the examiner dictates. In sensitive cases, the examiner may ask the recorder to leave the room and complete the screen him/herself with the SP still present. The examiner will then complete the examination or ask the recorder to come back and close the examination.

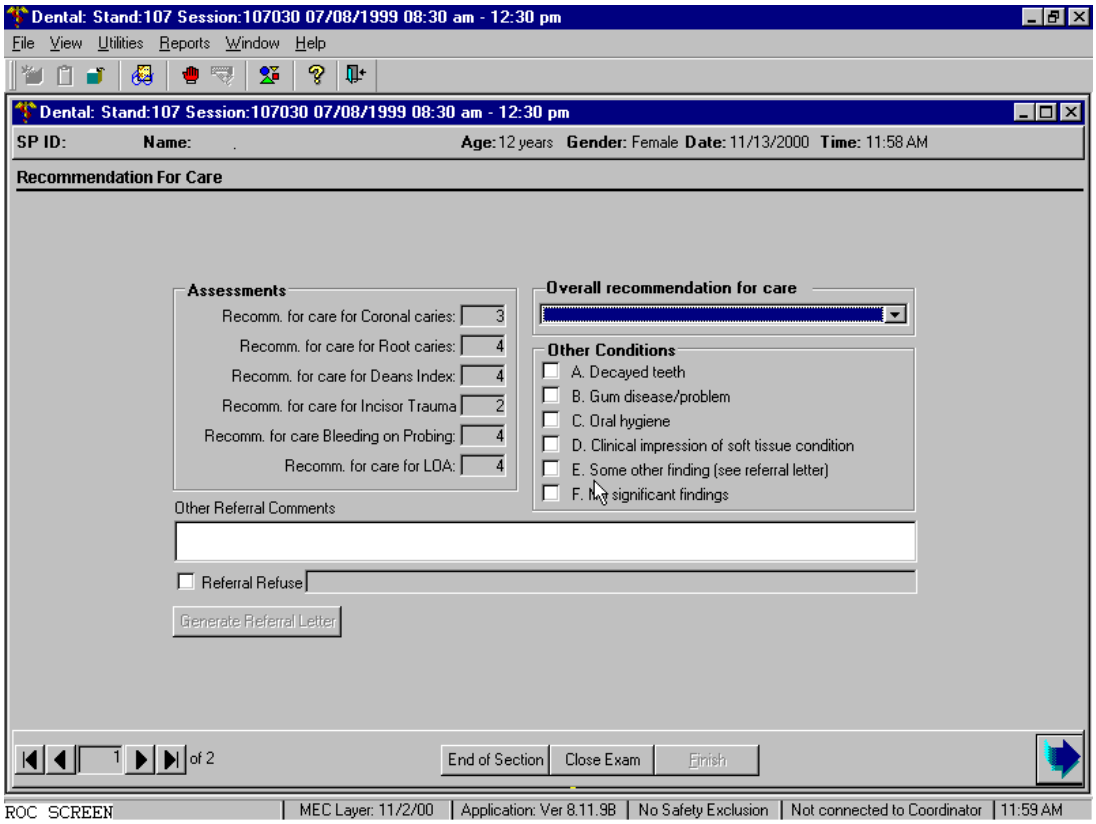
After completing the SP Referral Information screen, the following functions may be performed by choosing the menu options on the lower right hand portion of the screen. Use the mouse to click on the appropriate button as follows:

Print	This button will trigger the referral letter to be printed in the Shipping Room. Use this function whenever the examiner needs to review a hardcopy of this letter with the SP. ***Do not provide the SP with a copy of this letter.*** He/She will receive a copy of the letter along with the related documents when he/she leaves the MEC.
Preview	This button is used to view the letter on the computer screen. You will be able to scroll through the letter to verify that all items have been inserted properly: the dentist name and address, the SP name, and the conditions entered on the Recommendation For Care screen. Any changes that need to be made must be made on the appropriate referral screen; changes cannot be made on this preview screen.
Save	This button is used to save the letter so it may be printed by the coordinator when the SP leaves the MEC. It then closes the SP Referral screen and returns the user to the Recommendation For Care screen.
Cancel	This button is used to cancel the generation of the SP Referral Letter and return the user to the Recommendation For Care Screen.

After the SP Referral Information screen is completed, the program returns to the Recommendation For Care screen. To proceed with the rest of the examination, press <Enter> and the system will proceed to the Recommendation For Care Section Status screen.

NOTE: If the examination was not completed; (e.g. SP ill, MEC closes, equipment malfunction, etc.), but the examiner felt that an SP Referral Letter should be generated, the <CLOSE EXAM> button, not the <FINISH> button, must be selected on the Recommendation For Care screen (refer back to Section 4.3.4.3.) to exit the examination.

4.12.2 Recommendation for Care Screen



Allowable Entries:

Overall Recommendation

1 = SP should see a dentist immediately
2 = SP should see a dentist within the next 2 weeks
3 = SP should see a dentist at his/her earliest convenience
4 = SP should continue his/her regular routine care

Other Conditions

(Code all that apply by using the mouse to click on the appropriate boxes)

A. Decayed teeth
B. Gums/gum disease
C. Oral hygiene
D. Clinical impression of soft tissue condition
E. Some other finding (see referral letter)
F. No significant findings

NOTE: The last condition, "No finding," is mutually exclusive of the other categories and cannot be combined with any other entry.

Other Referral Comments

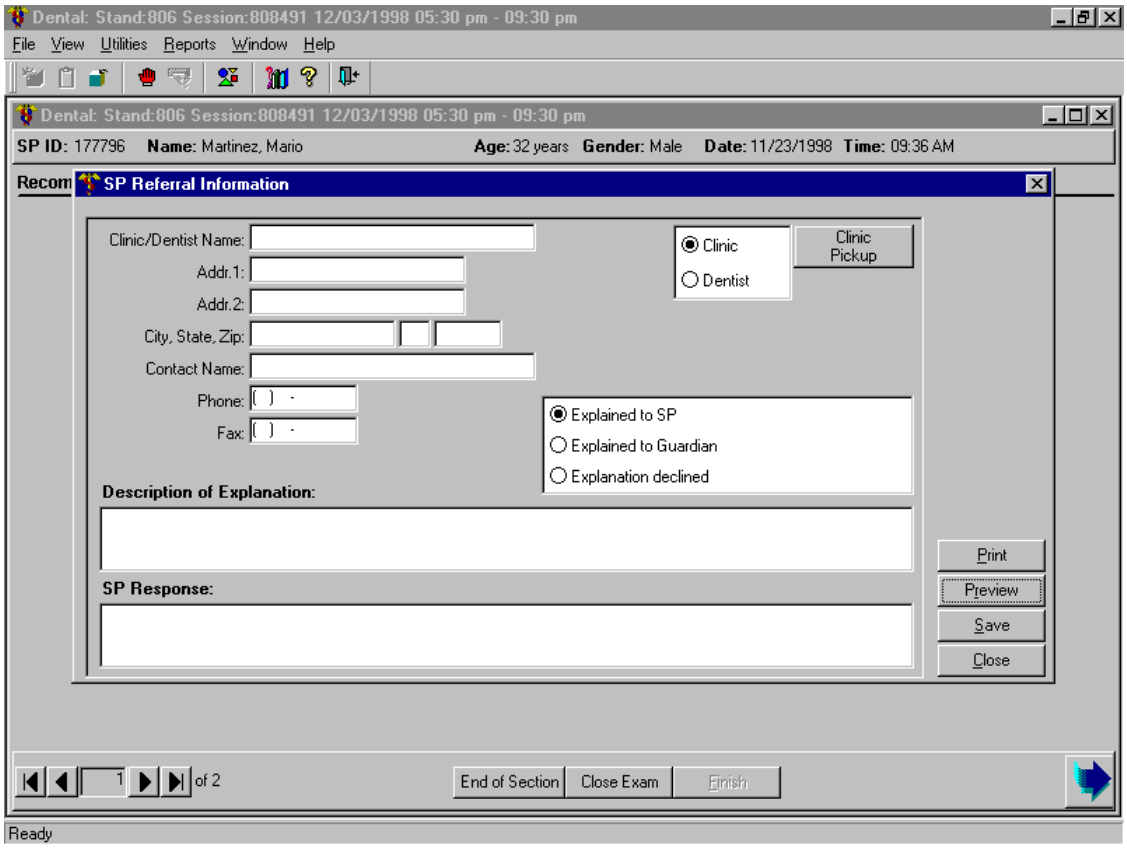
Accepts up to 75 characters. Type in examiner's verbatim response.

NOTE: This section must be completed whenever "Some other finding" is selected in the "Other Conditions" field.

Move Through Screen: User must use mouse to move from field to field.

Shortcut: None

4.12.2.1 SP Referral Information Screen



Allowable Entries:

Clinic/Dentist Name, Address, and Phone

If SP has a preferred dentist/clinic: Enter verbatim as provided by the SP.

If SP requires a referral dentist/clinic: Use mouse to select "clinic" or "dentist" in Clinic Pickup box.

Explained to…

Use mouse to select one of three options displayed on the screen.

Description of Explanation/SP Response

Accepts up to 225 characters; enter verbatim as provided by examiner.

Move through screen: User must use mouse to move from data entry field to data entry field.

Shortcut: None

4.13 Post-examination Procedures

1. Complete the Dental Examination Screens.

2. Use the mouse to click on the <FINISH> button located on the navigation bar of the Recommendation For Care Section Status screen. (Remember to click on the <CLOSE EXAM> button if exiting prior to the end of the examination). The SP's examination record is cleared.

3. Escort the SP to the next component room or back to the coordinator area for assignment to another component as directed by the coordinator via the ISIS messaging system.