

ENT Medical Dictator[©]

Instruction Manual

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Chapter 1 - Overview of ENT Medical Dictator

What is ENT Medical Dictator?

The ENT Medical Dictator[®] is a software program designed to assist an otolaryngologist in creating and storing the documentation of the patient's office visit. The software is designed to be run on a pen based computer that the physician will take with him into the room. During the course of the interview of the patient, the physician will be interacting with the computer using a special pen rather than a keyboard. Usually, the history of the patient's problem can be captured at the same time that the patient is talking, thereby saving time. After the patient encounter is over, the physician will then enter the information for the examination, impression and plan. This portion of the process normally takes an additional 15 to 45 seconds, depending on the complexity of the report. This process is repeated over and over again for each of the patients that are being seen that day.

At the end of the day, or whenever convenient, the portable computer is connected to a printer and all of that days patient visits are printed out at that time. The ENT Medical Dictator[®] is able to determine automatically, which patient visit records need to be sent to a referring physician and will automatically generate a cover sheet for the referral letter as well as an additional copy of the visit record. Both the cover letter and the extra copy of the visit report are printed on plain paper with a letterhead type heading automatically generated by the software. The format of the cover letter allows it to be dropped into a window envelope for immediate mailing to the referring physician after the letters have been signed by the physician.

What else does the ENT Medical Dictator do?

In addition to the clinical visit notes, the program can also track phone messages, scan images and documents if for later review and printing. It can also fax records to other doctors and insurance companies. Additionally, you can use the program to print prescriptions.

What about transcription?

The ENT Medical Dictator should greatly reduce the amount of transcription that is necessary because about 90% of the medical information is already in the program. The remaining 10% can either be typed in manually, or dictated into a sound file (.wav) on the computer for the transcriptionist. The transcriptionist can either be at a computer on the network in the doctor's office or the transcription could be done over the internet. If the internet option is being used, the doctor would dictate directly into the program, the sound files would be transmitted to the web site and transcribed text would be transmitted back and merged into the appropriate record. The transcriptionist can be located anywhere in the world. The doctor has the option of arranging his own payment terms with the transcriptionist or having the web site track how many lines have been typed.

Single User vs. Network Mode

When used in the single user mode, the records created with the ENT Medical Dictator[®] are stored on the portable computer's internal hard disk drive and can be reviewed or searched from the software program. It is also possible to print out selected records at a future date whenever desired. The system consisting of ENT Medical Dictator[®] with the portable computer in this case is designed to be a self contained, single physician system. If there are multiple physicians in the same practice or location, it would be necessary for each physician to have his or her own licensed copy of the software as well as their own pen based portable computer.

The ENT Medical Dictator[®] can also be used in a network mode. In this mode, there are two or more computers in the office used to collect the information. For example, in one room, a nurse could be taking

a history on a patient while the doctor was examining a different patient in another room. In this situation, one computer, usually a desktop PC would be designated as the “server” and would be the central storage site for the patient records. In order to use a pen based computer in such an environment, it would be necessary to buy additional hardware that allows for wireless networking, through either infrared or radio wave connections.

Advantages of the ENT Medical Dictator[©]

- **Cost Effective** - Generally, transcription costs are substantially reduced or eliminated. The majority of what the physician needs to say in his report can be found within the ENT Medical Dictator[©] extensive collection of lists and menus. Depending on the physician’s current cost of medical transcription, it is possible that the cost savings from transcription alone could pay for the system in less than a year in many cases.
- **Legible** - If the physician is currently handwriting his visit records, the ENT Medical Dictator[©] will produce neat, legible professional appearing records. The output of the program is designed to use English paragraphs, not just a list of symptoms. These records will be neat enough that a copy of the record can be used to send to the referring physician, insurance company, etc.
- **Timely** - Records of the patient visit can be printed out at any time, including immediately after the patient has been seen. With traditional transcription services there is often a 2-3 day delay in getting the dictation tape picked up, having the material transcribed, and finally having the hard copy of the transcription placed back into the chart. A common problem is that the patient will call back two days after his visit to report that the medicine given is not working. If the transcription is not back on the chart, it makes it difficult for the physician to respond to the request for a change in medication.
- **ENT Specific** - This software was written by a practicing otolaryngologist for the exclusive use of otolaryngologists. Most other medical record software on the market is designed for the broad market of physicians in general. Other software packages tout as one of their major “features” the ability to customize everything in the program. However, when the physician sits down and tries to actually use the program, he finds out that he must input virtually all of the phrases that he wants to use in his reports. ENT Medical Dictator[©] is the product of 2500 hours of development time and the review of over 5000 records of otolaryngologist patient visit records. Included in the program are templates for more than 30 common problems that are encountered in everyday E.N.T. practices. Each template has a list of common questions that can be answered for that particular problem as well as a set of common responses to those questions. Also included with the program is an extensive collection of the commonly used drugs, procedures, and diagnoses used by otolaryngologists. It is the intention that a otolaryngologist be able to pick up the pen based computer with ENT Medical Dictator[©] and begin being productive with it in a very short period of time.
- **Graphical User Interface** - ENT Medical Dictator[©] is a Microsoft Windows[®] based program that uses a modern graphical user interface to make the use of the program easier and more intuitive. All of the patient visit data is stored in a nonproprietary form: a Microsoft Access[®] database. Although the ENT Medical Dictator[©] is a single user, self contained system, the physician using the system may make back up copies of the data and incorporate that data into any existing computer system he or she is using. However, the responsibility for converting the patient data into existing computer systems from other vendors rests with the end user physicians and their respective computer system vendors.

ENT Medical Dictator[©] Requirements:

- Microsoft Windows 95 or later (Windows 98, Windows ME, Windows 2000, Windows XP, Windows NT, etc.)

- Monitor with minimum resolution of 800x600. 1024x768 or higher is recommended for Review Program.
- RAM requirements is just the recommended RAM requirements for the operating system being used.
- hard disk drive - the program will require appx. 15 MB and you will need to allow appx. 1 MB per month per doctor to store the patient data. If you are storing images or scanned documents, more hard disk space will be needed.
- Faxing requires a computer running Windows 2000 or Windows XP (requires Microsoft Fax Services)
- a Windows compatible printer (a laser printer is recommended for the speed and quality of the output).

Chapter 2 - Installing ENT Medical Dictator[©]

To Install the Program

Place the CD-ROM into your computer run SETUP.EXE from the CD-ROM.

Starting the program

After the program is installed, you may start the main program by clicking on Start, then Programs, then ENT Medical Dictator. This will bring up three options, Dictate, Review and Transcribe. The main ENT Medical Dictator is launched with the Dictate option. The Review option is a separate program designed to be used by the office staff after some records have been entered. The Review program will allow them to review records, print records and manage phone messages. The Review program is also the main program for scanning images and documents. The Review program will be discussed later in the manual. The transcribe program is used if you are recording voice dictation that needs to be transcribed. This feature will also be discussed later in the manual.

Inputting the Initial Doctor information

When you first install the program, you will be prompted to provide the basic information for the doctor or doctors that will be using the computer. You may set up the computer to be used by a single doctor or multiple doctors. Each doctor that uses the computer will have to have their own software code. This code is attached to the plastic case that the CD-ROM came in and must be entered exactly as shown on the software code label.

Update Databases	
David Stone, MD	Add another MD
Doctor Name and Title:	David Stone, MD
Group Practice Name:	
Software Code:	3120-3835-2433
Specialty Description:	Otolaryngology
Address/City/St/Zip:	5565 W. Las Positas Blvd., #350, Pleasanton, CA 94566
Phone/Fax:	925-463-1070
Print Sample Letterhead	Delete This Doctor
Exit	Save

After a brief check of the database files, the above screen will appear that allows you to enter the information for the doctor that will be using the program. If you have purchased the software, enter the Software Code so that you can get the full functions of the program. If you are using the program on a trial basis, leave the Software Code Field blank and the program will automatically set up the trial version. Only enter the group practice name if you have licensed the software as a medical group, rather than an individual.

What is the ENT Medical Dictator[®] Trial Version?

The ENT Medical Dictator[®] is a medical record program for otolaryngologist to assist them in creating records of patient visits in their offices. This program is designed to be run on a computer with a pen interface. It is possible to run the program with a mouse instead of a pen but it may be difficult to keep up with the patient while they are talking if you are using a mouse instead of a pen. The trial version of the program is a special evaluation version of the full program, ENT Medical Dictator[®] that is designed to be run on a regular desktop computer running Windows. The purpose of the trial version of the program is to allow a physician a chance to try out the program before purchasing the actual product. The trial program is virtually the full featured program with only the following exception:

1. The trial version of the program has a limit of 10 patients that can be stored to hard drive. Once you have achieved that limit, you will be given the choice of erasing the existing patients and continuing to add 10 more new patients.
2. The trial version of the software is otherwise identical to the full program. In fact, you may convert the trial version to the fully featured program merely by entering the proper software code you obtain once you purchase the program.

A Special Note About Video Modes

Most computers today can run in a variety of screen resolutions such as VGA (640x480), SVGA (800x600), XGA (1024x768). The ENT Medical Dictator is designed to take advantage of the larger screen real estate in the higher video modes. You should experiment with your computer and see which video mode works the best. You may change your screen resolution by right mouse clicking on the background of the main screen and choosing Properties then Settings.

Setting up a Network

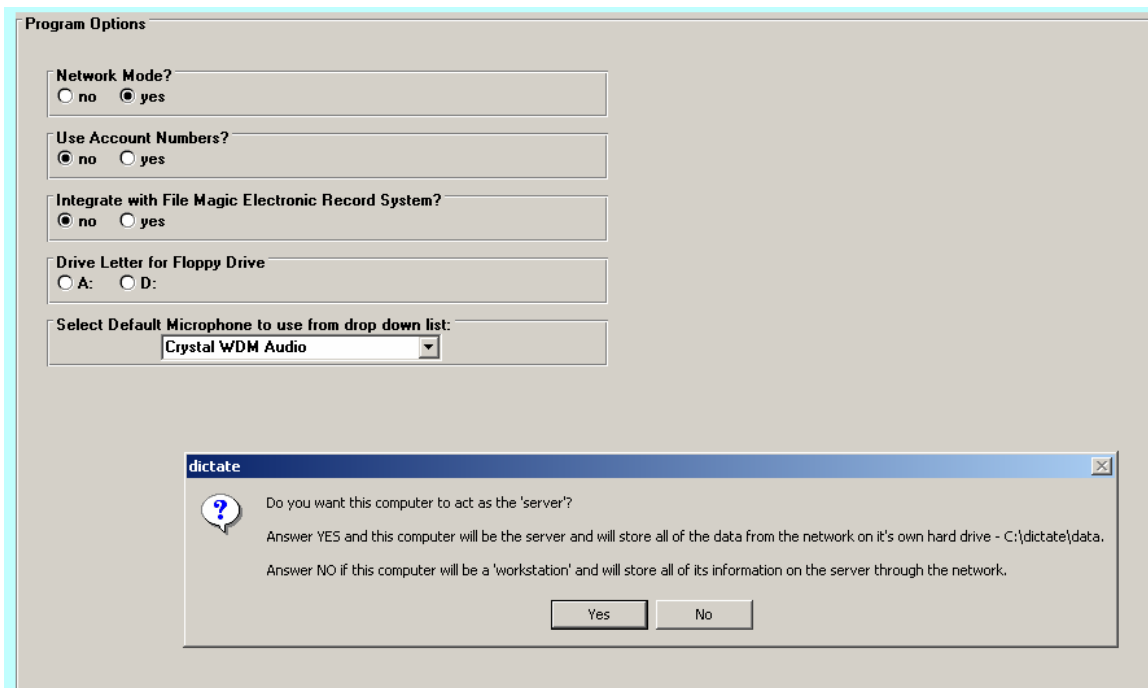
The program is designed to be either run on a single computer as a stand alone program or as a network of computers that share the patient records. In order to set up a network, you must first decide which computer will be the “SERVER” and which computers will be the “WORKSTATIONS”. The SERVER computer is the computer where all of the patient data will be stored. The WORKSTATION computers will run the program but will save their data via the network to the hard drive on the SERVER. Although traditionally a server computer is a more expensive and more capable computer, any computer capable of running the program can act as the “SERVER”. Also, the server can also run the program and be used to generate patient records if you wish.

Mapping Network Drives

Before the network can be used, the hard drive on the server must be “mapped” as logical drive letters on each of the workstation computers. A typical workstation computer may only have one hard drive (physical drive C:) and one CD-ROM drive (physical drive D:). Using features of the Windows operating systems, you can make a hard drive on another computer (for example drive C: on the server) appear as a “logical” drive such as F:. If you are not familiar with mapping network drives, you can search Windows help and look for “mapping drives”. After you have set up the drive mappings, make sure that you check the box that says “reconnect at login” so that the drives will be automatically mapped every time you start the computer. It is also important that if you have multiple computers on the network, you must start the server computer first before starting any workstation computers and also shut down the server last after shutting down all of the workstations. The server computer should not be started or stopped when there are any workstation computers connected to it.

Specifying which Computers will be Servers or Workstations

The actual software installation is identical for both servers and workstations and the same CD-ROM can be used on multiple computers. You will still need to enter the doctor information including software code for each computer. Once each computer is up and running, you can set the designation of server vs. workstation by clicking on the Program Options button on the bottom of the opening screen. After doing that, one of the options available will be to change the default network mode from NO to YES.



Follow the instructions on the screen and choose YES for the SERVER computer and NO for each of the WORKSTATION computers. If you choose NO (WORKSTATION computer) and if you have mapped your network drives properly, the program should automatically find the correct logical drive path that connects to the SERVER’s hard drive. You can test and see if the network is working properly by entering a few patients on the SERVER computer’s daily patient list and see if they appear on the WORKSTATION patient lists. It may take up to 30 seconds for the information to be synchronized from one computer to the next.

Chapter 3 - Windows Basics

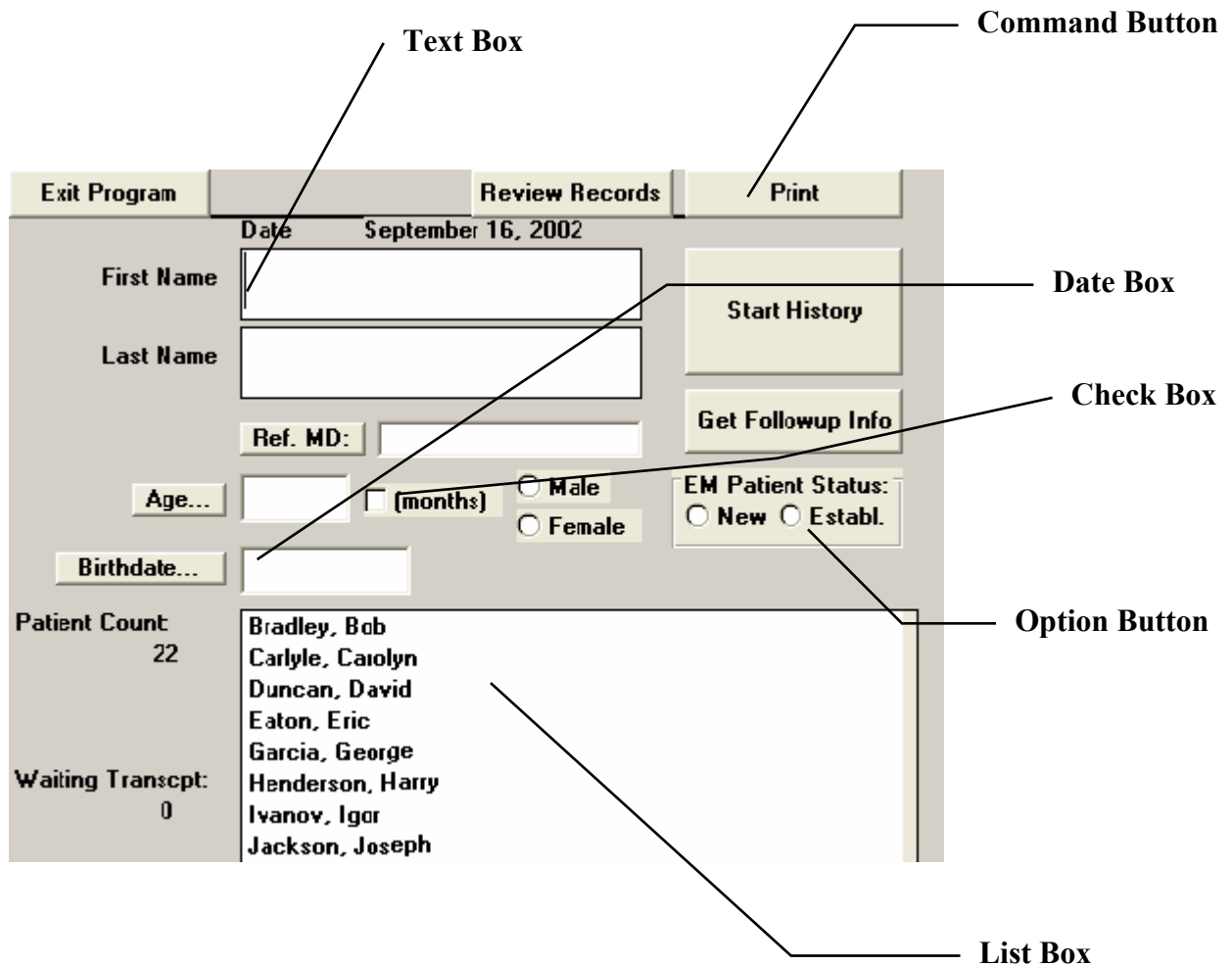
The physicians using ENT Medical Dictator[®] will be using a Windows program and as such will need to know at least a little about Windows programs and how they work. If you are an experienced Windows user and know how to start and end Windows, how to begin Windows programs by double clicking on the icons, and are in general comfortable interacting with the Windows interface, you may skip this chapter and move on to the next chapter. For those of you who are new to Windows, there are a few things that are essential to know in order to be able to utilize the ENT Medical Dictator[®]. This chapter is not intended as a complete course in Windows, but rather a brief introduction so that you can get your computer up and running.

Exiting ENT Medical Dictator[®] and exiting Windows

While running ENT Medical Dictator[®] you may exit the program at any time by finding the button labeled EXIT PROGRAM and clicking on it. To exit Windows click on the word FILE at the menu on top of the screen; and when the list of options drop down, choose CLOSE. If you wish to completely turn off your computer, it is a good idea to exit both the ENT Medical Dictator[®] and Windows before completely shutting off the power. Most of the pen based computers that will be used with the software program have a *Suspend Feature* that allows the computer to go into a suspended state where a small amount of power is being used to preserve the contents of the machine's memory. Refer to the documentation that came with your computer to learn how to place the computer in the suspended state. When the machine is turned back on after being in the suspended state, you will be right where you left off and will not have to wait the normal 1-2 minutes for Windows and your program to load.

Working with Text Boxes, List Boxes, Control buttons, etc.

Any Windows program is made of a collection of visual elements that make up the graphical user interface. Each of these elements has various properties and attributes that are unique to that class of objects. In order to fully utilize the ENT Medical Dictator[®] you will need to be familiar with command buttons, list boxes, check boxes, option buttons, pen input controls, and the virtual keyboard. All of these controls will be covered in greater detail in the next few pages.

Examples of various elements in a Windows program:**Text Boxes**

These controls are used to enter information in the form of characters or text. The vertical dark line at the beginning of this particular text box is called the insertion point. When the program is actually running, this line will blink on and off about once a second. The insertion point is important because it determines where the text that is being typed will be placed. Often, a single window will have more than one text box visible at a time and it is important to place the insertion point at the correct location by tapping with the pen, otherwise the text that is being typed in may not appear where you expect it. The text can be entered by either an actual keyboard connected to the pen based computer or it can be entered by tapping on the virtual keyboard with the pen.

Command Buttons

These controls respond to the user when they are clicked or tapped with the pen. Normally, the command button is labeled with a key word to allow the user to know what to expect. The actions carried out by the

computer can be as simple as showing a list of items to choose from, or as complicated as printing out a multipage report.

Check Boxes

Description:

- the patient is spinning
- the environment is spinning
- lightheadedness
- swimming sensation in the head
- loss of consciousness
- blacking out
- tendency to fall
- loss of balance

Check boxes are small white square boxes that can be “selected” by tapping the pen on the box. This will place an “x” inside the box. More than one item in a group of check boxes can be selected. In the example shown, the doctor has chosen his description for dizziness should include both “the patient is spinning” as well as a “lightheadedness” description. If an item is selected by mistake, it may be unselected by tapping the pen back on the box that contains the little “x”.

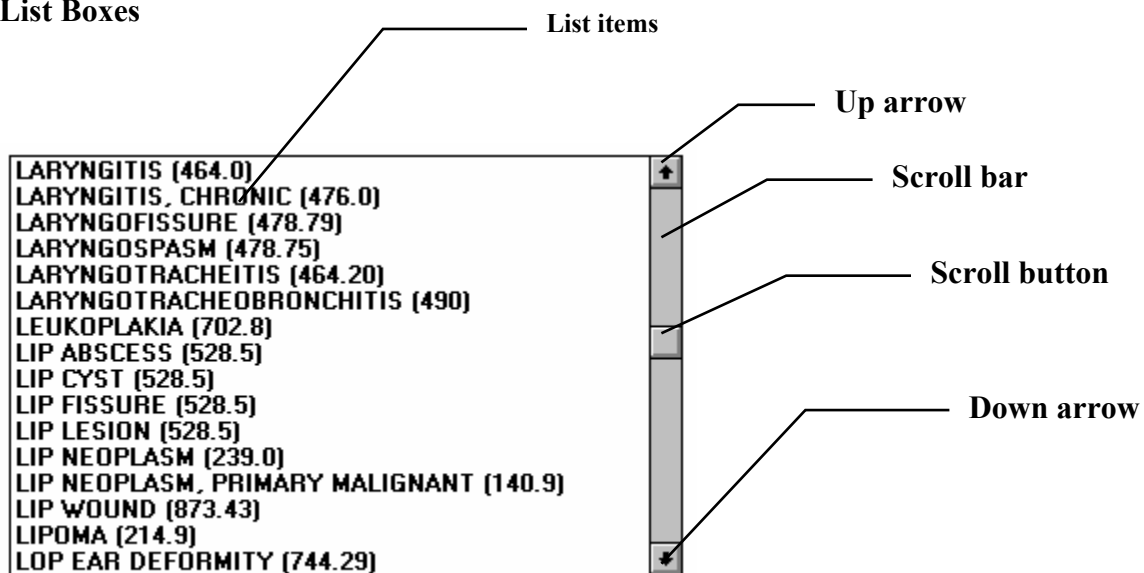
Option Buttons

Located:

- left ear
- right ear
- both ears
- both ears, worse on left
- both ears, worse on right

Options buttons are in some ways similar to check boxes in the sense that the choice of an item is made by tapping the pen on the little white circle next to the item. The one big difference is that **only one item** may be selected in a group of items. In this particular example, it would not be appropriate to select both the “left ear” item and the “both ears” item at this same time and the computer will not allow you to do that. Once you select a second item in a group of option buttons, the first item will automatically be deselected.

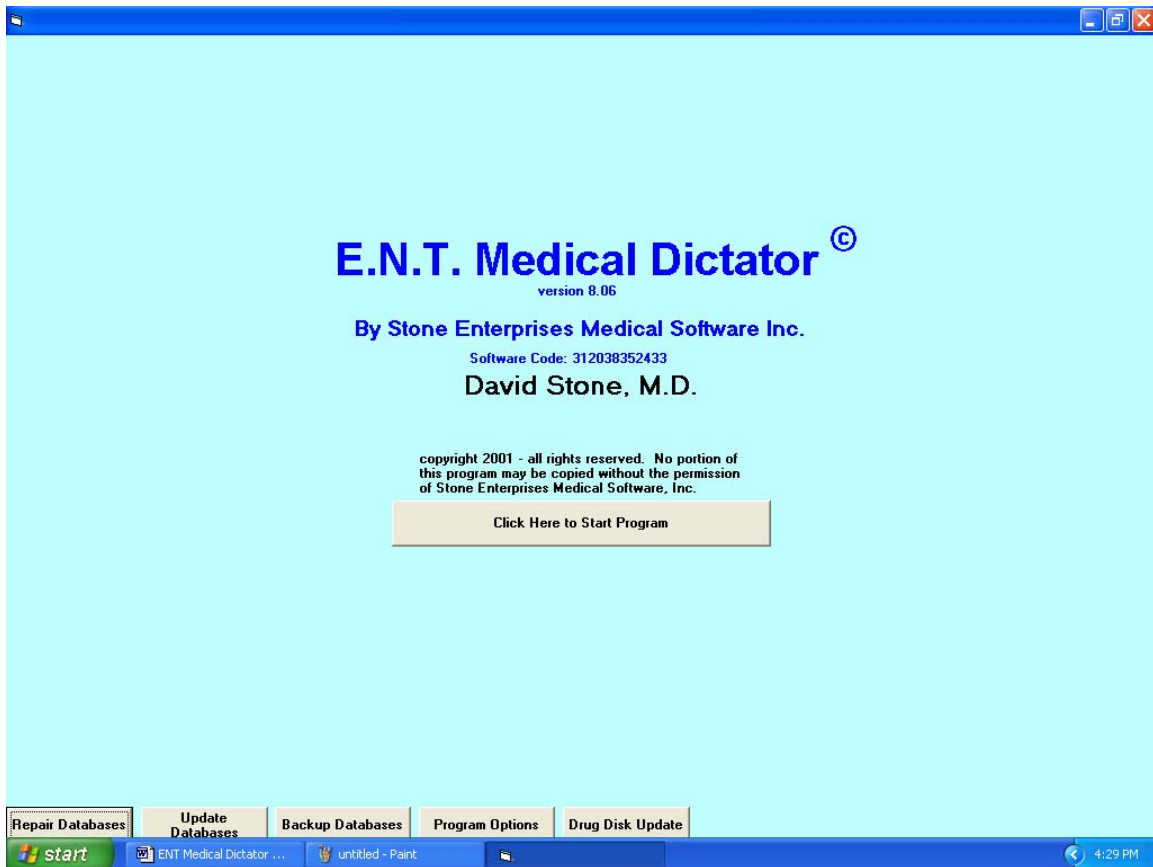
List Boxes



List boxes are used to present a list of items for selection. The number of items available can range from 2 to 3 items up to several hundred items. The item that you wish to select is entered by tapping on the item with the pen. If there are more items on the list than can be seen at once, a scroll bar will appear to assist in finding the item. To move the list up one item at a time, tap on the up arrow. To move the list up more rapidly, press the pen on the up arrow and hold it against the screen. (On a computer with a mouse, you would hold down the left mouse button). If you wish to move up the list a whole screen at a time instead

of a single item at a time, then tap the pen on the scroll bar above the scroll button. Holding the pen on the scroll bar will cause the list to scroll upwards very rapidly. The scroll button gives you a visual representation of your relative position in the list. In the above example of the list of ICD-9 diagnoses, you are looking at the “L’s”, which is about in the middle of the alphabet, therefore the scroll button is in about the middle of the scroll bar.

Chapter 4 - Opening Screen and Program Flow



This is the first screen that you will see when you start ENT Medical Dictator[®]. For the time being, ignore the five buttons you see in the lower part of the screen: **Repair Databases, Update Databases, Backup Databases, Program Options, and Drug Disk Update**. The purpose and use of these buttons will be explained later. To begin the program, tap on the larger button in the middle of the screen labeled: **Click Here to Start Program**. After doing that you will see the following screen.

Exit Program	Review Records	Print
Date September 16, 2002		
First Name	<input type="text"/>	Start History
Last Name	<input type="text"/>	
Ref. MD:	<input type="text"/>	Get Followup Info
Age...	<input type="text"/> <input type="checkbox"/> (months)	EM Patient Status: <input type="radio"/> New <input type="radio"/> Establ.
	<input type="radio"/> Male <input type="radio"/> Female	
Birthdate...	<input type="text"/>	
Patient Count: 22	Bradley, Bob Carlyle, Carolyn Duncan, David Eaton, Eric Garcia, George Henderson, Harry Ivanov, Igor Jackson, Joseph Kerns, Karen	
Waiting Transcpt: 0		
Add to List		

Before you start taking the history from the patient, you must specify the first and last name of the patient. Normally, at the beginning of the day, one of the computers on the network is used to enter the names for that day. If you are using a pen enabled computer in a stand alone mode, the names are entered directly into that computer. This should only take a few minutes to enter 20 or 30 names. Make sure that the insertion point is in the first name field before you begin typing the first name on the list. If you don't see the flashing vertical line at the beginning of the *first name field*, use your pen to tap on that field. After the first name is entered, press the **TAB** key to move the insertion point to the *last name field* and type in the last name. After the last name is complete, press the **TAB** key one more time that will take you to the button called *Add to List*. At this point press the **ENTER** key and that will return the insertion point back to the first name field and the whole process can be repeated. To summarize the sequence for entering a list of names is:

first name [**TAB**] last name [**TAB**] [**ENTER**]

If the account number feature is turned on, pressing the [Tab Key] after entering the last name will take you to the account number field rather than the Add To List button. You may then enter the account number then press the [Tab Key] to take you to the Add To List button. You may also enter the name of the referring doctor at this time if you wish.

When you use the [Tab Key] to get to Add To List button and before you press the [Enter Key], you can enter the age, sex, and account status information. As long as the Add To List button has the focus (you can see a dark line around the button), any numeric keys you press will be placed in the age field. If you press "M" or "F" the appropriate sex option button will be chosen. If you press "N" or "E" then the new patient or established patient option will be selected. With these changes to the program, it is now possible to enter all of the information for the daily patient list without using the mouse.

An alternative to entering the age is to enter the birthdate by clicking on the birthdate button. That will bring up a screen such as:

Patient's birthday:

JAN	01	1	11	21	31	2002	1977	1952	1927	1902
FEB	02	2	12	22		2001	1976	1951	1926	1901
MAR	03	3	13	23		2000	1975	1950	1925	1900
APR	04	4	14	24		1999	1974	1949	1924	1899
MAY	05	5	15	25		1998	1973	1948	1923	1898
JUN	06	6	16	26		1997	1972	1947	1922	1897
JUL	07	7	17	27		1996	1971	1946	1921	1896
AUG	08	8	18	28		1995	1970	1945	1920	1895
SEP	09	9	19	29		1994	1969	1944	1919	1894
OCT	10	10	20	30		1993	1968	1943	1918	1893
NOV	11					1992	1967	1942	1917	1892
DEC	12					1991	1966	1941	1916	
						1990	1965	1940	1915	
						1989	1964	1939	1914	
						1988	1963	1938	1913	
						1987	1962	1937	1912	
						1986	1961	1936	1911	
						1985	1960	1935	1910	
						1984	1959	1934	1909	
						1983	1958	1933	1908	
						1982	1957	1932	1907	
						1981	1956	1931	1906	
						1980	1955	1930	1905	
						1979	1954	1929	1904	
						1978	1953	1928	1903	

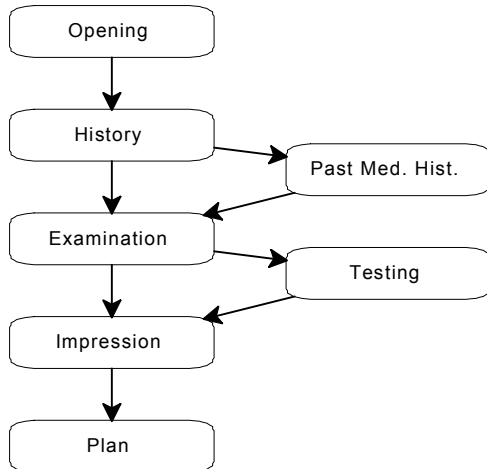
Cancel Enter

Click on the left list for the month, the middle list for the day and the right list for the year. Using the birthdate button will automatically fill in the age field for you. Also, the birth date will be stored in the database and records can be looked up by birth date as well as name or account number. Many offices are moving toward electronic records but do not want to change their current office practices to identify patients by an account number. Using a name with the birth date is a method to make sure you are looking at information for the correct patient.

If you make a mistake while typing in the list of names, highlight the incorrect name by tapping on the name with the pen. Then tap on the *Clear Item button*. If you wish to clear the whole list at once, again highlight one name then tap on the *Clear List button*. After all the names are entered, usually the keyboard is disconnected and the pen based computer is used for the rest of the day as a tablet.

When you are ready to see a patient, just tap on his or her name on the patient list and that will automatically load the first and last names into the appropriate fields. If you have a patient that is added in after the list of patients is entered in the morning, you may use the on screen keyboard to manually enter the first and last names. Once the proper first and last names are in place, you have the option of entering age and sex information. Although not required, this information will help your dictation be more readable and informative. The age information is entered by clicking on the drop down list and choosing the appropriate age. If the age number refers to months instead of years, just check the month box. When all the information is entered, tap on the Start History button to begin the process of taking the patient's history. Account numbers are optional and are set up by using the program options button on the opening screen.

Program Flow



The program is designed to flow in a fairly linear way from History, to Examination, to Impression, and finally to Plan. There are options, however, to enter a more detailed Past Medical History module after the History and before the Examination. Similarly, after the Examination, the Testing module may optionally be entered if there is testing information such as audiograms to report. However, because otolaryngologists don't always finish one patient completely before starting the next, the ENT Medical Dictator[®] makes a provision for up to 5 patient's information to be stored simultaneously in a partially finished format. A typical example is that the physician would see a patient in the first room and after taking the history, would determine that an audiogram is necessary. After ordering the audiogram and before going into the second exam room to see the

next patient, he or she would save the partially completed medical record on the pen based computer and start the next patient's record. Later, when the audiogram is done, the physician may return to the first patient's record and finish it. The details of exactly how to do this will be explained later.

Chapter 5 - Tutorial - Your First Patient

The remainder of the manual describes in greater detail how the program works. However, by now you know enough about ENT Medical Dictator[®] that you are probably anxious to see the program in action. This chapter will describe a typical, fairly simple patient visit with a patient who has an ear ache. The visit might go something like this:

- Doctor:** *"Hello, my name is Dr. Smith. How may I help you today?"*
- Patient:** *"Doctor, I have this really bad ear ache that is just killing me. It feels like a knife in my ear."*
- Doctor:** *"That doesn't sound like very much fun. How long have you had the problem?"*
- Patient:** *"It started about 3 days ago and has been getting worse."*
- Doctor:** *"Which ear is the pain in?"*
- Patient:** *"The left ear. The right ear seems OK."*
- Doctor:** *"Have you had any cold symptoms recently?"*
- Patient:** *"As a matter of fact I have had a runny and congested nose."*
- Doctor:** *"How is your hearing now?"*
- Patient:** *"It seems pretty good. I can still hear fairly well."*
- Doctor:** *"Do you have any ringing in your ears or any dizziness?"*
- Patient:** *"No"*
- Doctor:** *"Have you been doing much swimming recently?"*
- Patient:** *"No"*
- Doctor:** *"Do you have a history of ear infections in the past?"*
- Patient:** *"Not that I can remember."*

After taking the above history, the doctor would continue on to examine the patient. For the sake of this tutorial example, we will assume that the doctor finds an inflamed and bulging left ear drum with the remainder of the exam normal. His diagnosis will be acute otitis media and he will treat the patient with amoxicillin and see him back in 10 days.

Starting the Tutorial

At this point you should have your computer on and running ENT Medical Dictator[®]. You should for the purpose of this tutorial also have the keyboard connected if you are running the program on a portable computer. This chapter will take you step by step as you create your first patient record based on this hypothetical patient with an ear ache. Follow along in the manual and do exactly what it says to create your first visit record. Please note: the exact appearance of the screen may appear slightly different.

Before you enter the room

Step 1
Tap with pen in first name field and enter "Robert"

Step 2
Tap with pen in last name field and enter "Johnson"

Step 3
Tap on male

Step 4
Tap on Start History

Exit Program	Review Records	Print
Date: September 16, 2002		Start History
First Name: Robert	Last Name: Johnson	
Ref. MD:		EM Patient Status: <input type="radio"/> New <input type="radio"/> Establ.
Age... <input type="text"/> (months) <input type="checkbox"/>	<input checked="" type="radio"/> Male <input type="radio"/> Female	
Birthdate... <input type="text"/>		
Patient Count: 22	Bradley, Bob Carlyle, Carolyn Duncan, David Eaton, Eric Garcia, George Henderson, Harry Ivanov, Igor Jackson, Joseph	
Waiting Transcpt: 0		

Doctor: "Hello, my name is Dr. Smith. How may I help you today?"

Patient: "Doctor, I have this really bad ear ache that is just killing me. It feels like a knife in my ear."

(Step 5)

(Step 6)

Doctor: "That doesn't sound like very much fun. How long have you had the problem?"

Patient: "It started about 3 days ago and has been getting worse."

(Step 7)

(Step 8)

(Step 9)
(Step 10)
(Step 11)

Step 9
Select "3"

Step 10
Select "Days"

0
1
2
3
4
5
6
7
8
9
10
a few
several
many

days
weeks
months
years

Date beg. ago. (other) Cancel Enter

Step 11
Tap on Enter

(Step 12)

Date
Freq.
Duration
(other)
Done Cancel

Step 12
Tap on Done

Doctor: "Which ear is the pain in?"

Patient: "The left ear. The right ear seems OK."

(Step 13)

(Step 14)

(Step 15)

The screenshot shows the 'ear pain' form with the following elements:

- Header:** 'ear pain' in a blue bar, with a 'medications' button on the right.
- Buttons:** 'Y', 'N', and 'clear' at the top left.
- Symptom List:** A list of symptoms with checkboxes:
 - onset, frequency
 - left or right ear pain
 - URI symptoms
 - ear drainage
 - hearing loss
 - plugged sensation
 - tinnitus or vertigo
 - recent swimming
 - hx. Otitis
 - hx. TMJ syndrome
- Location Section:** A section titled 'Location' with radio button options:
 - left
 - right
 - both
 - both, worse on left
 - both, worse on right
- Footer:** 'Page 1', 'Page 2', and 'Page 3' buttons, and 'Cancel' and 'Done' buttons.

Step 13
Tap on yes for left or right ear

Step 14
Select left ear

Step 15
Tap on done

Doctor: "Have you had any cold symptoms recently?"

Patient: "As a matter of fact I have had a runny and congested nose."

(Step 16)

(Step 17)

(Step 18)

(Step 19)

The screenshot shows the 'ear pain' form with the following elements:

- Header:** 'ear pain' in a blue bar, with a 'When...' button and a 'medications' button on the right.
- Buttons:** 'Y', 'N', and 'clear' at the top left.
- Symptom List:** A list of symptoms with checkboxes:
 - onset, frequency
 - left or right ear pain
 - URI symptoms
 - ear drainage
 - hearing loss
 - plugged sensation
 - tinnitus or vertigo
 - recent swimming
 - hx. Otitis
 - hx. TMJ syndrome
- URI Symptoms Section:** A section titled 'URI Symptoms:' with checkboxes:
 - nasal congestion
 - nasal discharge
 - sore throat
 - fever
 - cough
 - swollen cervical nodes
 - ear pain
 - post nasal discharge
- Footer:** 'Page 1', 'Page 2', and 'Page 3' buttons, 'More Questions...' button, and 'Cancel' and 'Done' buttons.

Step 16
Tap on yes for URI symptoms then tap on What

Step 17 & 18
Select these two symptoms

Step 19
Tap on done

Doctor: "How is your hearing now?"

Patient: "It seems pretty good. I can still hear fairly well."

(Step 20)

Doctor: "Do you have any ringing in your ears or any dizziness?"

Patient: "No"

(Step 21)

Doctor: "Have you been doing much swimming recently?"

Patient: "No"

(Step 22)

Doctor: "Do you have a history of ear infections in the past?"

Patient: "Not that I can remember."

(Step 23)

History is now complete.

(Step 24)

The screenshot shows a medical history form titled "ear pain" with a "medications" button in the top right. The form has columns for "Y" (Yes) and "N" (No) and a "clear" button. The form is divided into three pages: "Page 1", "Page 2", and "Page 3".

Y	N		clear
<input checked="" type="checkbox"/>	<input type="checkbox"/>	onset, frequency	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	left or right ear pain	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	URI symptoms	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	ear drainage	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	hearing loss	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	plugged sensation	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	tinnitus or vertigo	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	recent swimming	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	hx. Otitis	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	hx. TMJ syndrome	<input type="checkbox"/>

Annotations:

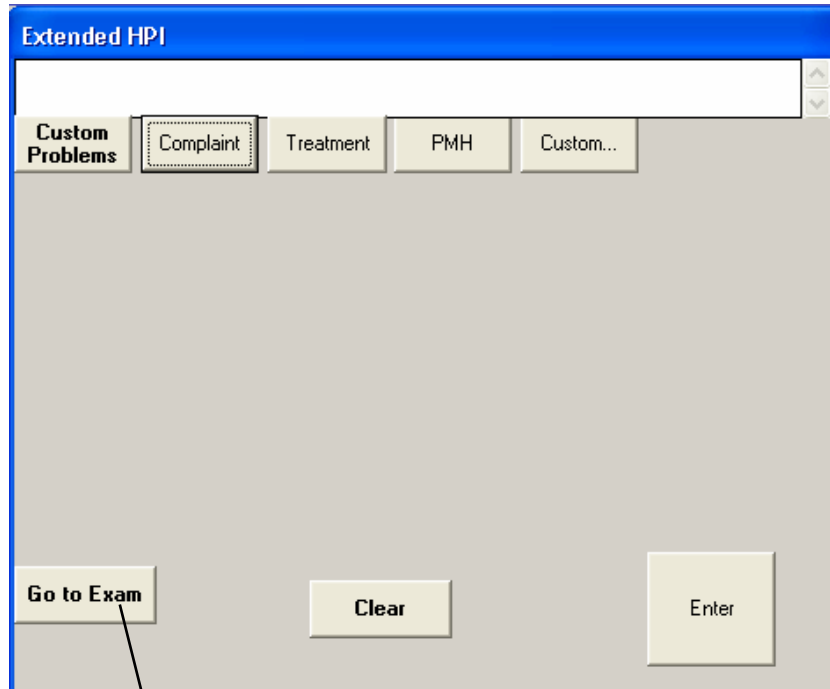
- Step 20:** Tap on no (pointing to the 'N' column header)
- Step 21:** Tap on no (pointing to the 'N' column header)
- Step 22:** Tap on no (pointing to the 'N' column header)
- Step 23:** Tap on no (pointing to the 'N' column header)
- Step 24:** Tap on Make History. This will generate the history paragraph. (pointing to the "Make History" button)

Form content on the right side:

- noted: 3 days ago
- the left ear
- URI symptoms
- denies hearing loss
- no tinnitus/vertigo
- no swimming
- denies otitis

Buttons: "More Questions...", "Make History"

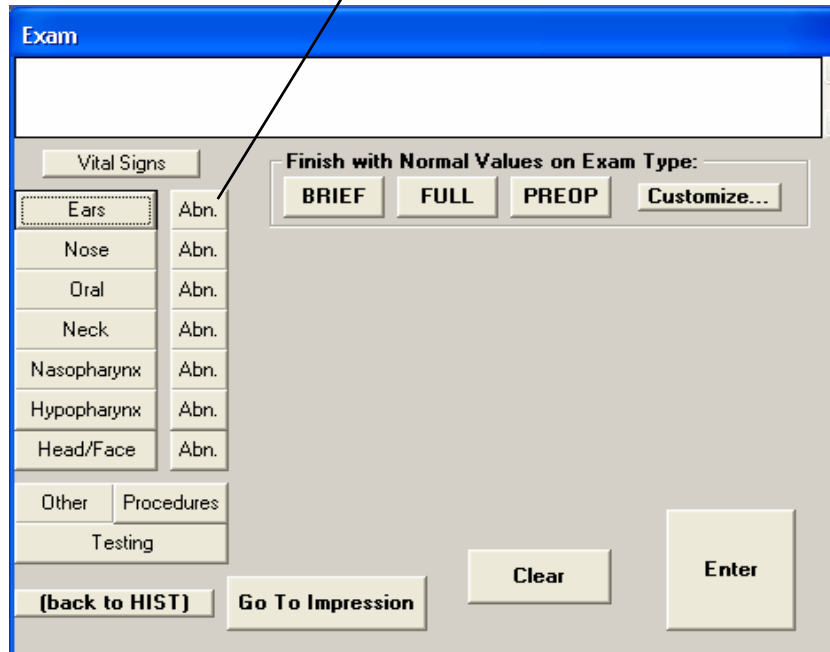
Go to the exam module.
(Step 25)



Step 25
 Tap on Go to Exam

Step 26
 Tap on the abnormal ear exam button

When the exam screen appears, document the abnormal ear exam.
(Step 26)



Document the inflamed and bulging left ear drum.

(Step 27)

(Step 28)

(list box will change)

(Step 29)

Step 27
Tap on Left Ear

Step 28
Select tympanic membrane

FOCUSED EXAM (1 of 6 for Expanded Exam)

ears- Left tympanic membrane is inflamed and bulging.

Vital Signs

Abnormal Ears

Nose Abn.

Oral Abn.

Neck Abn.

Nasopharynx Abn.

Hypopharynx Abn.

Head/Face Abn.

Other Procedures

Testing

Both Ears

Left Ear

Right Ear

normal
intact
mobile
noninflamed
inflamed
mildly inflamed
dull
decreased mobility
retracted
middle ear effusion.
tubes...
bulging
cholesteatoma
tympanosclerosis
granulation tissue
perforated...

(back to HIST) Go To Impression Clear Enter

Step 29 -First select the word "inflamed" then scroll down the list until "bulging" is visible and select it also.

Step 30
Tap right ear

Step 31
Select normal

The right ear was normal.

(Step 30)

(Step 31)

(Step 32)

FOCUSED EXAM (1 of 6 for Expanded Exam)

ears- Left tympanic membrane is inflamed and bulging. Right

Vital Signs

Abnormal Ears

Nose Abn.

Oral Abn.

Neck Abn.

Nasopharynx Abn.

Hypopharynx Abn.

Head/Face Abn.

Other Procedures

Testing

Both Ears

Left Ear

Right Ear

normal
normal inc. hearing
external canal
tympanic membrane
pinna
clinical hearing...
CUSTOM...

(back to HIST) Go To Impression Clear Enter

Step 32

Step 33 Tap on Enter

Tap on Neck, Nasopharynx, Hypopharynx, Sinus.

Step 34

Tap Go to Impression

The rest of the exam was normal.

(Step 33)

You could have also tapped one of the “finish with normal” buttons.

(Step 34)

FOCUSED EXAM (2 of 6 for Expanded Exam)

Vital Signs

Finish with Normal Values on Exam Type:
 BRIEF FULL PREOP Customize...

Abnormal Ears	
Nose	Abn.
Oral	Abn.
Neck	Abn.
Nasopharynx	Abn.
Hypopharynx	Abn.
Head/Face	Abn.

Other Procedures
Testing

(back to HIST) Go To Impression Clear Enter

Impression was otitis media

(Step 35)

(Step 36)

Impression

more dx:	Diagnosis	Status	
Ears	====EARS====	====NOSE====	====SINUS====
Nose	cerumen impact	allergic rhinitis	acute sinusitis
Oral	eust. tube dys.	epistaxis	recur. sinusitis
Sinus	external otitis	nasal polyps	====NECK====
Neck	labyrinthitis	====THROAT====	lymphadenitis
Other	otitis media	adenoid hypertrophy	laryngitis
	rec. otitis med.	pharyngitis	====
	serous otitis	tonsillitis	ICD-9 Short List
	SNHL	tmj syndrome	ICD-9 Long List
	tinnitus		

Go To Plan clear

(back to Exam)

Step 37
Select acute

Step 38
Select severe

Step 39
Select left

Modify the diagnosis
 “otitis media” to “acute
 severe left otitis media”

(Step 37)

(Step 38)

(Step 39)

(Step 40)

Impression

acute severe left otitis media

more dx: **Diagnosis**

- acute
- chronic
-
- mild
- moderate
- severe
-
- left**
- right
- bilateral
-
- probable
- possible
- recurrent
- resolved
- unresolved
- early
- history consistent
- no evidence
- persistent

worse...
 better...
 unchanged
 responding to treatment
 not responding to treatment
 unlikely
 not bad enough, treat.
 not bad enough, surg.
 well tolerated
 has resolved

and
 or
 with
 due to
 versus
 which is caused

clear Enter

(back to Exam)

Go to Plan Module

(Step 41)

Impression

Diagnosis Status

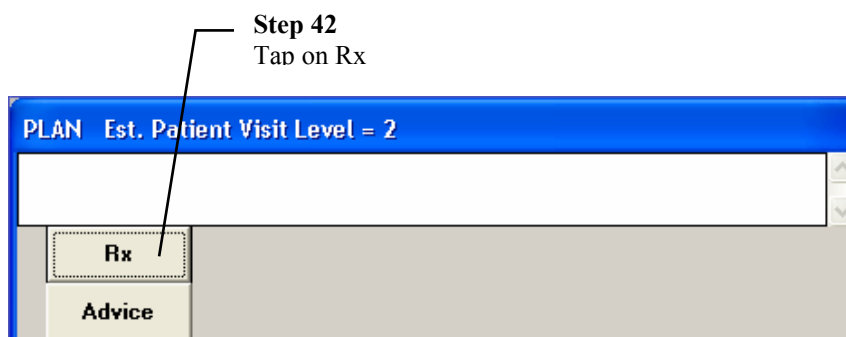
Go To Plan

(back to Exam)

Enter the antibiotic information

(Step 42)

(Step 43)



Step 42
Tap on Rx

Step 43
Select antibiotic

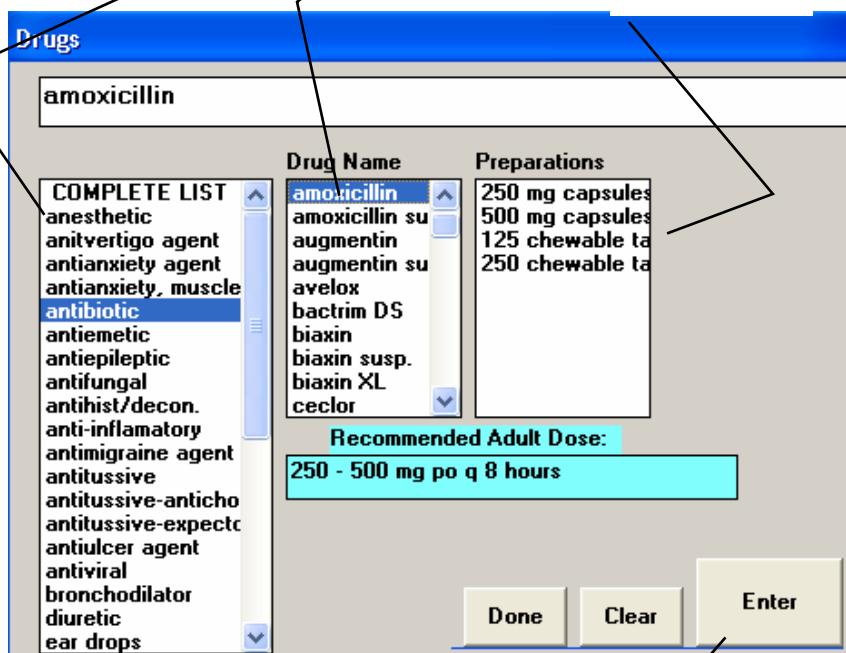
Step 44
Select amoxicillin

Step 45
Select 500 mg

(Step 44)

(Step 45)

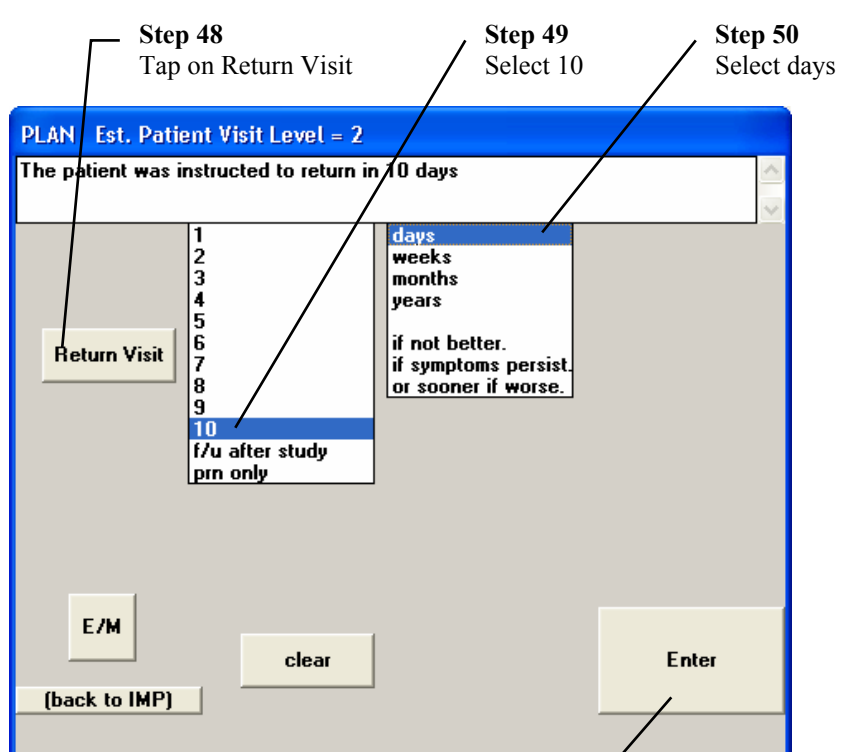
(Step 46)



Step 46
Tap on Enter

Have patient return in 10 days.

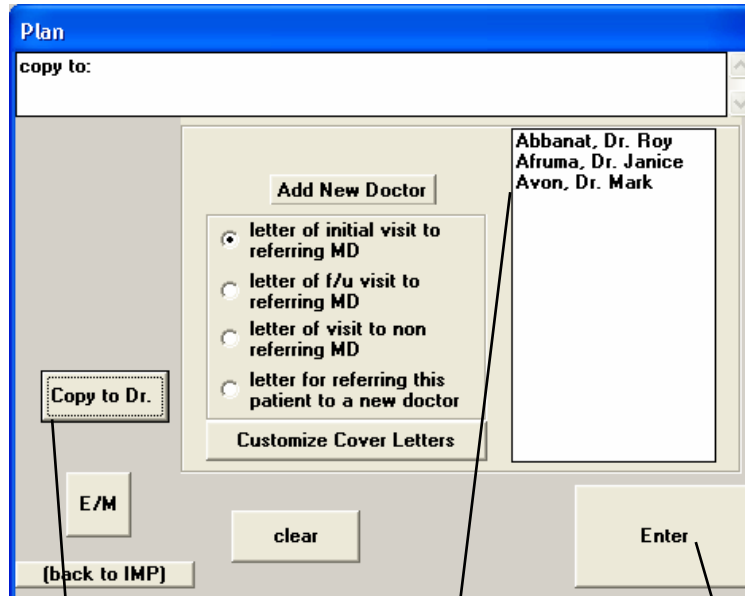
- (Step 48)
- (Step 49)
- (Step 50)
- (Step 51)



Step 51
Tap on Enter

Send a copy of the report to the referring doctor, Mark Avon

- (Step 52)
- (Step 53)
- (Step 54)



Step 52
Tap on Copy to

Step 53
Select Avon, Mark

Step 54
Tap on Enter

Congratulations!

You have just finished your first patient record. Even though it may have taken you 10 minutes to complete the 54 steps necessary to make this patient visit record, with a little practice you should be able to complete a simple visit record like this in under 20 seconds. To see the record that you have created, turn your attention to the left window.

Johnson, Robert Prob. Foc. HISTORY, Focused EXAM

New Patient

Johnson, Robert
September 16, 2002

HISTORY

The patient is here for evaluation of ear pain. The problem was noted beginning 3 days ago. The patient reports that the pain is in the left ear. The patient also had cold symptoms. The patient has not had tinnitus or vertigo, had a hearing loss, or been swimming recently. The patient also denies having had a history of otitis.

EXAMINATION

ears- Left tympanic membrane is inflamed and bulging. Right pinna is normal in appearance with no scars, lesions or masses and ear canal is clear with tympanic membrane intact, noninflamed and mobile.

IMPRESSION

acute severe left otitis media

PLAN

The patient was given a prescription for:
amoxicillin 500 mg capsules, #30, 1 po tid x10 days
The patient was instructed to return in 10 days

copy to: Dr. Mark Avon

Normally at this time you would tap on the SAVE RECORD button to save your work, but since this is a practice record, tap on the delete pt. button in the lower left portion of the screen. When the program asks for confirmation, answer **yes**.

The next three pages of this manual show:

1. An example of a dictation printed on a laser printer than would be filed in the chart.
2. A cover letter that would be generated.
3. A copy of the visit record that would go out to the referring doctor.

All three of the pages are generated automatically when the patient records are printed out at the end of the day.

Now that you have a feel for how the program works, feel free to experiment with creating a few patient records of your own. The remainder of this manual will cover in detail how the program works.

Johnson, Robert
September 16, 2002

HISTORY

The patient is here for evaluation of ear pain. The pain was noted beginning 3 days ago. The pain is in the left ear only. The patient has had other symptoms including nasal congestion and nasal discharge. The patient has not noticed any hearing loss, had tinnitus or vertigo, or been swimming recently. The patient also denies having had a history of otitis.

EXAMINATION

ears- Left tympanic membrane is inflamed and bulging. Right external ear canal is clear and the tympanic membrane is intact, mobile and noninflamed.

nose- No intranasal masses, polyps or inflammation seen.

oral- No intraoral lesions or masses seen

neck- No masses or cervical lymphadenopathy noted.

nasoph.- No masses or lesions noted.

hypoph.- No inflammation or lesions noted.

sinuses- Non tender to percussion

IMPRESSION

acute severe left otitis media

PLAN

The patient was given a prescription for:
amoxicillin 500 mg, #30, i po tid for 10 days
The patient was instructed to return in 10 days.

copy to Dr. Mark Avon

Dr. John Smith

John Smith, M.D.

123 Main St., Suite 120, Anytown, CA 94588

Ear, Nose & Throat

phone 510-555-1234

Sept. 16, 2002

Dr. Mark Avon
5565 W. Las Positas Blvd., #360
Pleasanton, CA 94588

Dear Mark:

Thank you very much for your recent referral of Robert Johnson to my office. Enclosed find a copy of my office evaluation. If you should have any questions, or if I can be of any further assistance, please do not hesitate to call me.

Sincerely,

John Smith, M.D.

John Smith, M.D.

Ear, Nose & Throat

123 Main St., Suite 120, Anytown, CA 94588

phone 510-555-1234

Johnson, Robert

September 16, 2002

HISTORY

The patient is here for evaluation of ear pain. The pain was noted beginning 3 days ago. The pain is in the left ear only. The patient has had other symptoms including nasal congestion and nasal discharge. The patient has not noticed any hearing loss, had tinnitus or vertigo, or been swimming recently. The patient also denies having had a history of otitis.

EXAMINATION

ears-	Left tympanic membrane is inflamed and bulging. Right external ear canal is clear and the tympanic membrane is intact, mobile and noninflamed.
nose-	No intranasal masses, polyps or inflammation seen.
oral-	No intraoral lesions or masses seen
neck-	No masses or cervical lymphadenopathy noted.
nasoph.-	No masses or lesions noted.
hypoph.-	No inflammation or lesions noted.
sinuses-	Non tender to percussion

IMPRESSION

acute severe left otitis media

PLAN

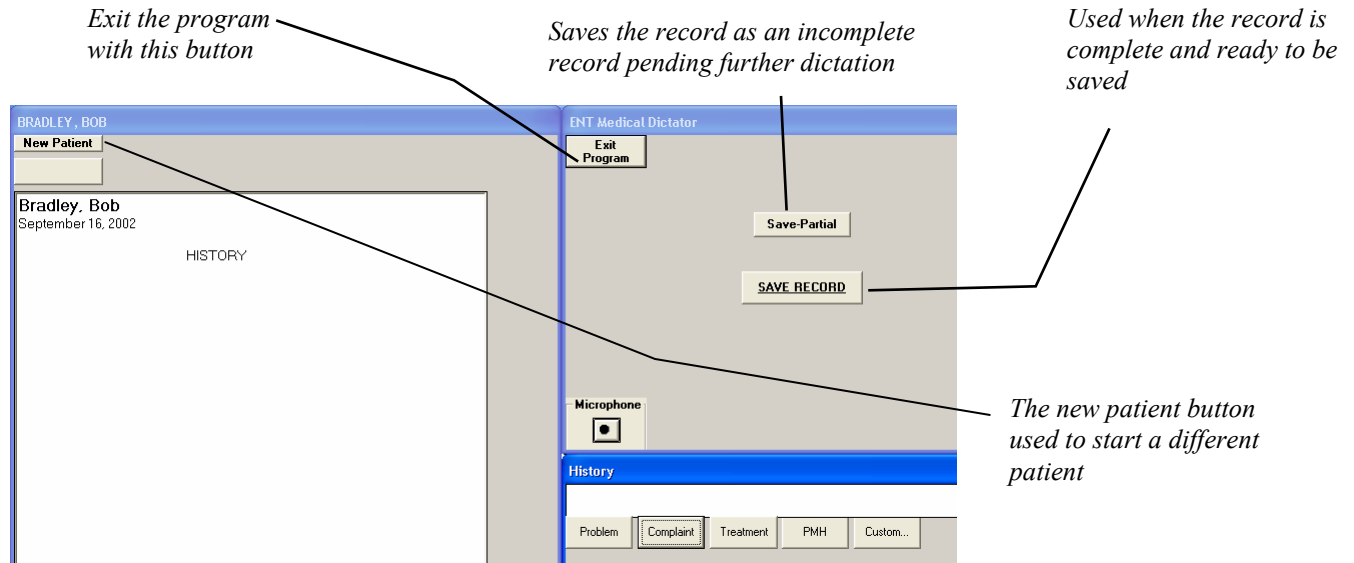
The patient was given a prescription for:
amoxicillin 500 mg, #30, i po tid for 10 days
The patient was instructed to return in 10 days.

copy to Dr. Mark Avon

Dr. John Smith

Chapter 6 - History Module

Once the Start History button is pressed, two things will happen. First, the opening window will disappear. Second, in its place will be two windows: the upper window containing a box showing the information that has been entered so far, and a lower window that contains the History Module. Since the program allows for different screen resolutions, the positioning of certain controls may appear in different locations on your computer. One window will contain the “working area” and will be the portion of the screen that the physician will be interacting with most of the time. As he or she progresses through the program, the lower window will be replaced in turn by the Examination Module window, etc.



This diagram is fairly complicated, so let’s look at the various elements in a little more detail.

Save Record button

This is the last button pressed at the end of documenting the patient visit. This is used after all of the history, examination, impression, and plan information is complete and the record is ready to be saved to the hard disk drive on the pen based computer. After being saved, the record may be printed out or reviewed at a later time.

Save-Partial button

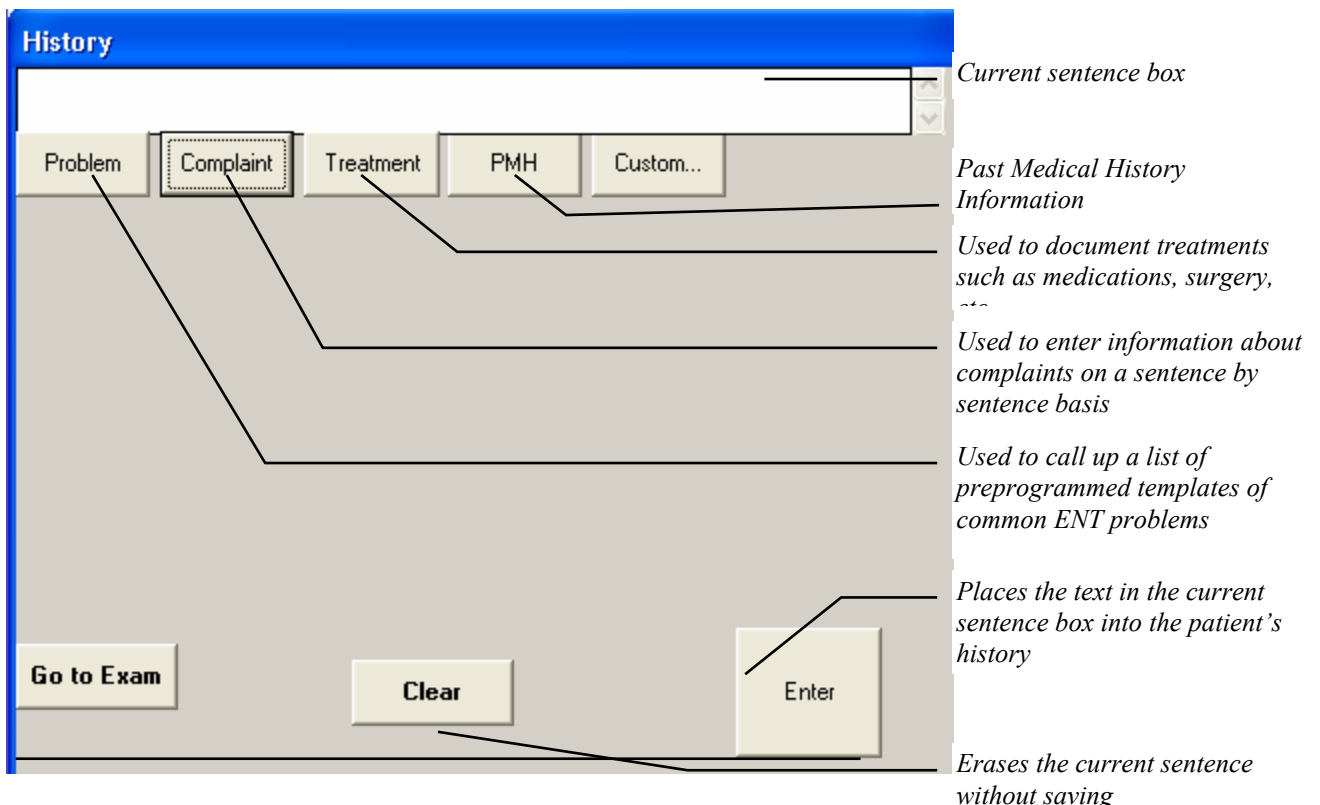
This is similar to the Save Record button with one very important difference. This is used when the physician wishes to save a record that is ***incomplete***. This would generally be used if the patient’s problem was unusual enough not to fit conveniently into one of the preprogrammed templates of common ENT problems. In these types of patients, there may be one or two paragraphs of unusual information to be entered that would be too time consuming to enter by tapping on the on screen keyboard. In these cases, the physician may still dictate this portion of the exam. By using this button to save the record, the record will be stored on the hard disk with a special mark that indicates this record is not complete. This patient’s record will appear on the daily patient list with the phrase **(partially complete)** following the name to indicate that the record is not complete. When records are printed out at the end of the day, this record will be skipped over and not printed. At some point in time, later that day or the next day, someone (physician or transcriptionist) will have to hook up the keyboard to the pen based computer and type in just the portion of the incomplete record that was dictated. It is estimated that the ENT Medical Dictator[®] will cover at least 95% of what needs to be stated; and the volume of transcription necessary should go down significantly.

Full Page button

Tapping on this button will enlarge the upper windows to fill the whole screen. Pressing the button a second time will shrink the window back to normal size. This feature is useful if more of the patient record needs to be visible to allow review or editing of the information. Also when in full screen mode, two addition buttons will become visible on the bottom of the screen. The button on the left is for deleting the current patient. Use this button if you want to start over on a patient. The button on the right is for deleting a portion of the current patient history. Each time this button is pressed, the last line of the record will be deleted.

New Patient button

Tap on this button to start a new patient. If you have not completed the patient you are currently working on, an additional button will appear to the right of the new patient button with the previous patient's name on it. At any time, the previous patient's record may be called back up by clicking on the button with his or her name on it.



The History Module with the following elements:

Problem button

This button will bring up a list of the most common ENT problems encountered which should cover over 90% of the routine office visits in a general otolaryngologist's practice. If after listening to the patient for 1-2 minutes the physician can determine the nature of the problem, he or she should use this feature because it is by far the easiest way to enter the history. Each problem will have a series of commonly asked questions that are pertinent to that clinical problem, as well as the most common responses preprogrammed into the various lists etc. By the way, these clinical problems are symptom related not diagnosis related. Because the physician does not know the final diagnosis when taking the history, the clinical problems are organized in symptom groups such as: *Ear Pain, Ear Drainage,*

Hearing Loss, etc. rather than diagnosis groups such as *Otitis Media*, *Otitis Externa*, *Conductive Hearing Loss* etc. This is what the screen looks like when the Problem button is tapped:

The screenshot shows a software interface titled "History". At the top, there is a search bar and a set of tabs: "Custom Problems" (which is selected and highlighted with a dashed border), "Complaint", "Treatment", "PMH", and "Custom...". Below the tabs, there are three columns of text lists, each enclosed in a box. The first column is titled "EARS" and lists: dizziness, ear drainage, ear itching, ear pain, hearing loss, plugged ear, recurrent otitis media, serous otitis followup, tinnitus, tube followup. The second column is titled "NOSE" and lists: epistaxis, mouth breathing, nasal congestion, nasal drainage, nasal polyps, nasal trauma, post nasal drainage. The third column is titled "SINUS" and lists: sinusitis, sinusitis followup. Below these columns, there is a section titled "GENERAL" which lists: cough, facial lesion, surgery pre op, general followup, surgery post op, cancer followup, snoring/apnea, TMJ syndrome, upper respiratory infecti, and Surgical Procedures. At the bottom of the screen, there are three buttons: "Go to Exam", "Clear", and "Enter".

The use of these problem templates will be covered in more detail later.

Complaint button, Enter button, Clear button

Tapping on this button will allow the history to be built on a sentence by sentence basis rather than the paragraph at a time that is generated with the problem templates. The information for the sentence will be built piece by piece by choosing items on lists and pressing buttons. The information will appear in the current sentence box as it is created. When the sentence is complete, the enter button is pressed to add the sentence to the history. If a mistake is made, the clear button will erase the current sentence box.

When the complaint button is first pressed, a series of buttons will appear on the left side of the screen to allow the physician to choose which type of complaint is being entered. In the following example, the Ear button was pressed and a list of possible ear complaints was presented like this:

History

The patient reports

Ears	DENIES	cerumen buildup
Nose	mild	dizziness
Throat	moderate	ear drainage
Sinus	severe	ear itching
Neck	-----	ear pain
Other	left	hearing loss
Go to Exam	right	otitis externa
	bilateral	otitis media
	-----	plugged sensation
	acute	poor speech develop
	chronic	previous ear infecti
	intermittent	tinnitus
	recurrent	true vertigo
	occasional	
	frequent	
	constant	

	stable	
	recent	
	some	
	somewhat	

Clear Enter

The main ear complaints are in the center list box and a list of adjectives are in the left list box. It is possible to enter more than one adjective for each diagnosis. For example to enter **chronic mild right ear pain**, each of the three preceding adjectives would be selected one at a time by tapping with the pen on the left list, then the complaint **ear pain** would be selected by tapping on the middle list. Once the main complaint has been selected, an additional button labeled *When* will appear that will provide additional choices regarding the time sequence of the complaints. Also, another button will appear labeled *And* that will allow more than one complaint to appear in a given sentence.

History

The patient reports chronic mild right ear pain for several years

			When		and
Ears	DENIES	cerumen buildup	for	1	days
	mild	dizziness	for at least	2	weeks
Nose	moderate	ear drainage	since	3	months
	severe	ear itching	beginning	4	years
Throat	-----	ear pain		5	seasons
	left	hearing loss		6	
	right	otitis externa		7	
Sinus	bilateral	otitis media		8	
	-----	plugged sensation		9	
Neck	acute	poor speech develop		10	
	chronic	previous ear infecti		a few	
	intermittent	tinnitus		several	
	recurrent	true vertigo		last few	
Other	occasional			every	
	frequent			times	
	constant			times per	
Go to Exam	stable				
	recent	Clear			Enter
	some				
	somewhat				

This sentence by sentence building of the history can be used to generate the entire history or can be used to supplement the history that was generated by a program template.

Treatment button

If the information being entered falls more along the lines of treatment rendered, this button would be the appropriate choice. Current medications, previous physician visits, previous surgeries, test results, and drug allergy information can all be entered. Again, by first tapping on the relevant button, a series of list boxes will appear that will provide items for selection and the sentence will be built piece by piece. Also two additional buttons will appear, *When* and *Result* to allow further modifying information to be added. Once the information is complete tap on the enter button.

History

The patient has taken ceclor 500 mg capsules

Custom Problems | Complaint | **Treatment** | PMH | When | Result

Medicine

Medicine taken:

- antibiotics
- an antihistamine
- a decongestant
- a nasal spray
- an ear drop
- a pain medicine
- MORE CATEGORIES
- COMPLETE LIST

- amoxicillin
- amoxicillin susp.
- augmentin
- augmentin susp.
- avelox
- bactrim DS
- biaxin
- biaxin susp.
- biaxin XL
- ceclor**
- 250 mg capsule:
- 500 mg capsule:

Go to Exam | Clear | Enter

PMH button

The past medical history information may be entered in one of two ways. The simple way will just include a single sentence with a list of past medical problems. The more complicated way will open an entirely new module, the Past Medical History module, that will allow a more extensive group of information to be entered. For a routine patient with an ear ache, the single sentence past medical history would probably be adequate. However, for a more comprehensive exam, such as a E/M level 5 visit, the physician would want to use the more complete exam. Pushing the PMH button shows:

Review of Systems

Generally Healthy | **Complete PMH**

General

Cardiac

Respiratory

Gastrointestinal

Genitourinary

Gynecologic

Neurologic

This button will automatically insert a sentence indicating that the patient has no other major medical problems.

This button will load the complete PMH module. More about this module will be presented later.

Tapping on this down arrow will bring out a list of common cardiac conditions that can be added to the single sentence past medical history.

Chapter 7 - Problem Modules

The screenshot shows a medical problem module interface for "ear pain". The interface is divided into several sections:

- Title Bar:** "ear pain" in a blue header.
- Buttons:** "When..." (left), "medications" (right), "clear" (below the question list), "More Questions..." (bottom left), and "Make History" (bottom right).
- Question List:** A list of questions with "Y" and "N" response buttons to the left of each question. The questions are:

Y	N	Question	clear
<input type="checkbox"/>	<input type="checkbox"/>	onset, frequency	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	left or right ear pain	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	URI symptoms	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	ear drainage	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	hearing loss	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	plugged sensation	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	tinnitus or vertigo	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	recent swimming	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	hx. Otitis	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	hx. TMJ syndrome	<input type="checkbox"/>
- Text Entry Area:** A large empty rectangular area on the right side of the screen for entering a text summary.
- Page Navigation:** "Page 1", "Page 2", and "Page 3" buttons at the bottom left.

This is an example of one of the more than 30 problem templates that come preinstalled in the ENT Medical Dictator[®]. All of the templates carry a common format of a series of questions and response buttons on the left side of the screen and a place for the text summary on the right side of the screen. The questions can be asked in any order; and not all of the questions need to be answered. The response buttons on the left can be tapped with the pen to indicate whether the answer was *yes* (Y) or *no* (N). Also some questions such as **left or right ear**, will use the response button to indicate that the physician wishes to supply this additional information. Once the basic question has been answered, there may be one or more additional buttons appear above the question list that allows additional information be added to the basic response. For example, answering *yes* to the otorhea question will allow two additional buttons to appear: *When* and *What*. Tapping on the *what* button will bring up an additional frame that will temporarily cover the right side of the screen that will allow additional information to be entered regarding the nature of the otorhea. You may have up to 3 pages of questions and you may add your own questions during the history. These features will be discussed in more detail later.

The screenshot shows a medical history form for 'ear pain'. The form is titled 'ear pain' in a blue header. Below the header are two buttons: 'When...' and 'medications'. The main area is divided into two columns. The left column has a table with 'Y' and 'N' headers and a 'clear' column. The right column is titled 'ear drainage' and contains radio button options for 'left', 'right', 'bilat', 'clear', 'prurulent', and 'bloody'. At the bottom are buttons for 'Cancel', 'Done', 'Page 1', 'Page 2', 'Page 3', 'More Questions...', and 'Make History'.

Y	N		clear
<input type="checkbox"/>	<input type="checkbox"/>	onset, frequency	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	left or right ear pain	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	URI symptoms	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ear drainage	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	hearing loss	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	plugged sensation	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	tinnitus or vertigo	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	recent swimming	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	hx. Otitis	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	hx. TMJ syndrome	<input type="checkbox"/>

ear drainage

left clear
 right prurulent
 bilat bloody

Cancel Done
 Page 1 Page 2 Page 3
 More Questions... Make History

After this additional information has been entered, tap on the *done* button to confirm your choices. **It is important that you not start asking another question until you have cleared the right side of the screen by either choosing *Done* or *Cancel*.** Failure to do this might make it possible to construct a sentence that does not make sense, such as: *The patient has had left prurulent hearing loss.*

Entering information about the time sequence of symptoms and treatments is very important for the completeness of the medical record. The majority of questions that can be asked will have the option of specifying time information by tapping on the *When* button.

The screenshot shows a 'When...' dialog box. It contains four buttons: 'Onset', 'Freq.', 'Duration', and '(other)'. At the bottom are 'Cancel' and 'Enter' buttons.

The information about when an event occurred generally falls into one of four categories: Onset, Frequency, Duration and Other; and there are separate buttons for each of these functions. The information regarding onset may be entered in one of two ways, either in terms of a certain amount of time ago such as 1 week ago, 3 months ago, several years ago, etc. The onset information may also be entered

in terms of a specific date. The onset button will toggle back and forth between these two methods every time it is tapped:

Once the appropriate information is chosen, the *Enter* button is tapped to confirm the selection. If desired, information on the frequency and duration of the complaint may be entered in a similar manner.

The (other) button will bring up a list of other phrases that can be used to supplement the normal onset, frequency, and duration buttons.

After each category of information is entered, the *Enter* button must be tapped and when all of the time information is complete, then tap on the *Done* button to clear the right side of the screen.

Clear button

If a mistake is made while entering the information about a question, or if the patient remembers half way through the interview that his previous answer was not correct, it is possible to clear the information for a question by tapping on this button. This will clear all the information about the question including the additional *What* and *When* information. At this point, the information may be reentered or left out, at the discretion of the physician.

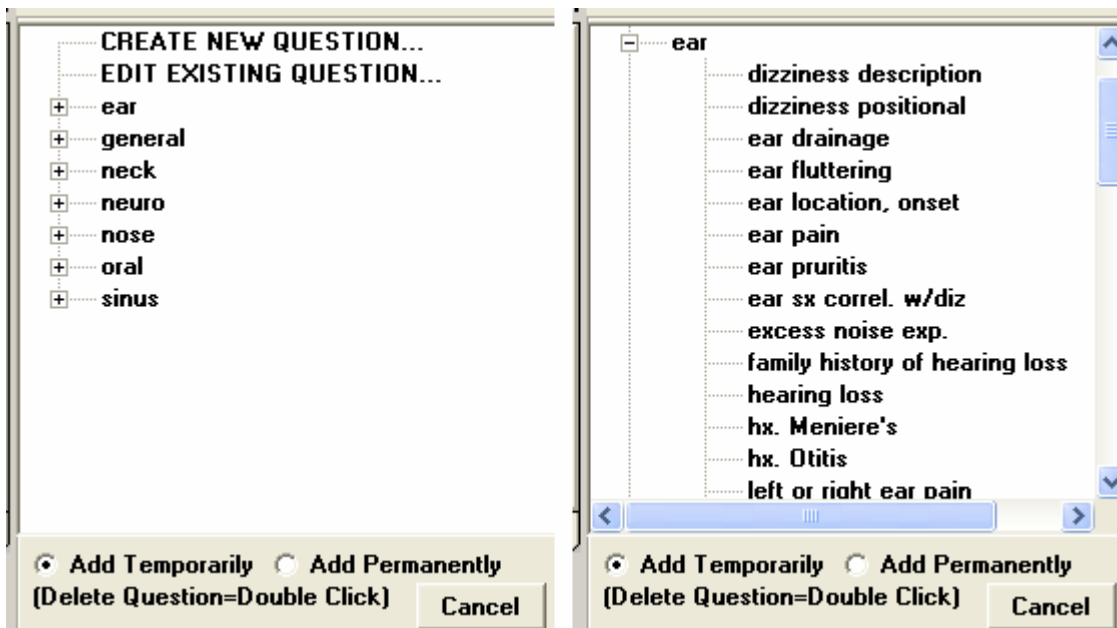
Make History button

When all the questions have been answered, tap on this button to generate a paragraph of English text that incorporates the responses that have been entered so far. This paragraph will appear on the top part of the screen and the current problem module will disappear and the history module will reappear. If desired, more than one problem module may be used during the same visit. An example would be a patient with both acute ear pain and chronic nasal congestion.

Medication button

The medication button is used to enter information on which medicines the patient has been taking as well as when the medicine was taken and the patient's result. A summary of the medicine information will appear just to the left of the medicine button. After the first time the medicine button is used, its caption will change to More Meds and a second medicine or group of medicines can be entered. This process can be repeated multiple times.

More Questions button



The screen on the left is the first screen you see when you click on the More Questions button. Each general category has a plus sign to the left that will expand the category to a longer list of specific questions for that category. Clicking on one of these questions will add the question to the current problem module, either temporarily or permanently depending on which option is chosen. Double clicking on one of the existing questions will remove the question from the form. In this way, you can create your own customized problem modules on the fly. More information about creating custom questions and custom modules will be discussed later in the manual.

Chapter 8 - Past Medical History Module

Past Medical History

Prev. PMH reviewed - unchanged Retrieve prev. PMH info.

- Medical
- Prev. Hosp.
- Prev. Surg.
- Current Med.
- Drug Allergy
- Fam. Hist.
- Soc. Hist.
- ROS

Go to Exam

Clicking on the *Prev. Surgery* button, followed by *general surgery* will allow the exact type of previous surgery to be selected. Also, information of when the surgery occurred can be entered before tapping on the *when* button. Other items of a more complete past medical history may be entered similarly.

Past Medical History

surgery- Previous surgery: cholecystectomy

when

cardiac surgery	hernia repair
general surgery	appendectomy
gyn. surgery	cholecystectomy
neurosurgery	hemorrhoidectomy
ophth. surgery	ulcer surgery
orthopedic surgery	cancer surgery
plastic surgery	trauma surgery
thoracic surgery	intestinal surgery
urologic surgery	colon surgery
vascular surgery	laproscopic abd. su
ENT surgery	

Clear Enter

Prev. PMH Reviewed - Unchanged

This button is used to insert a sentence in the PMH section that indicates that the PMH was reviewed and was found to be unchanged. Usually, when this button is used, no further PMH information is entered.



There are five different versions of statements that indicate that you have reviewed the past medical history form that the patient had filled out. You can specify that the patient filled out the form today or on a previous visit. You may also either specify the details of the abnormal past medical history or just leave it with the general statement.

Retrieve Prev. PMH info.

This button is used when it is known that a fairly complete PMH was taken on this patient before. A common example would be a patient who came back for a pre-op visit after being seen for an initial visit a few weeks prior. Since it is likely that a large amount of the PMH history would be unchanged, activating this button would allow easy input of information that had not changed.

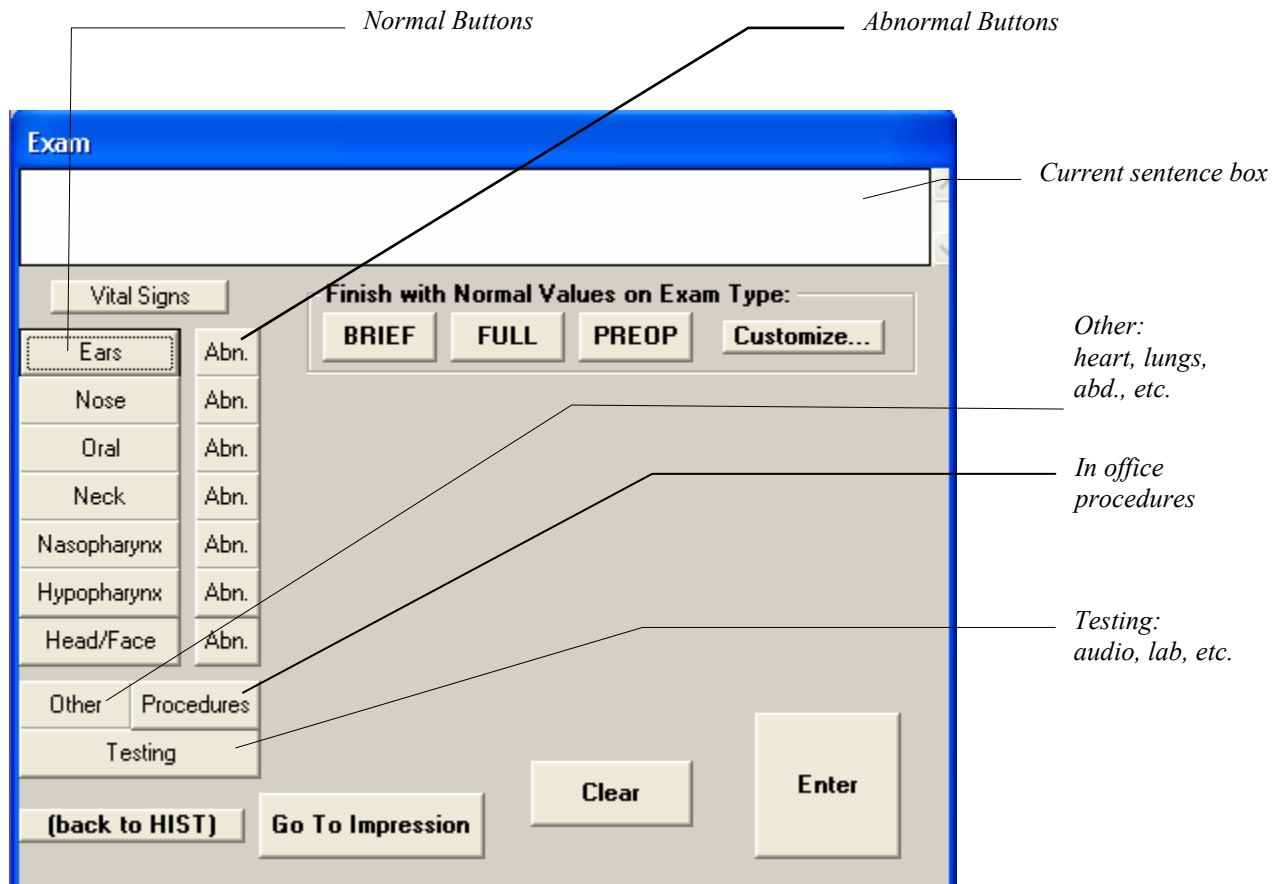
Past Medical History

Instructions: Either accept the previously entered values with the insert button, or enter a new value with the buttons on the left.

Medical	<input type="button" value="insert"/> medical- asthma, emphysema.
Prev. Hosp.	<input type="button" value="insert"/> hosp.- Hospitalized for asthma 1994.
Prev. Surg.	<input type="button" value="insert"/> surgery- No prior surgical procedures.
Current Med.	<input type="button" value="insert"/> med.- Current med: accupril 20mg tablets and atrovent inhaler.
Drug Allergy	<input type="button" value="insert"/> allergy- No known drug allergies.
Fam. Hist.	<input type="button" value="insert"/> F.H.- Family history of coronary artery disease.
Soc. Hist.	<input type="button" value="insert"/> social- light drinker, nonsmoker.
ROS	<input type="button" value="insert"/> ROS- GI: ulcer disease,.

The information on the right part of the screen was retrieved from previous visits that included a complete PMH. If more than one previous PMH was collected, the information will represent the most recent information that was collected. If this information has not changed, it can be inserted into the PMH by simply clicking on the insert button next to that item. If the information has changed, then click on the larger category button on the left and enter the new information for that particular category.

Chapter 9 - Exam Module

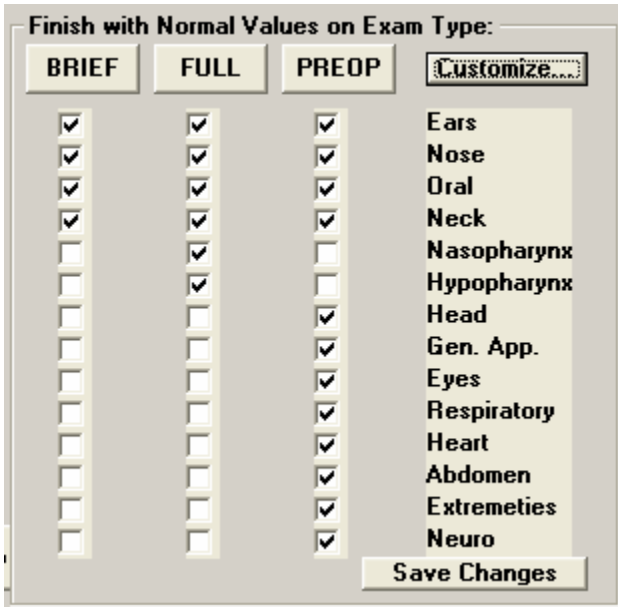


Normal buttons

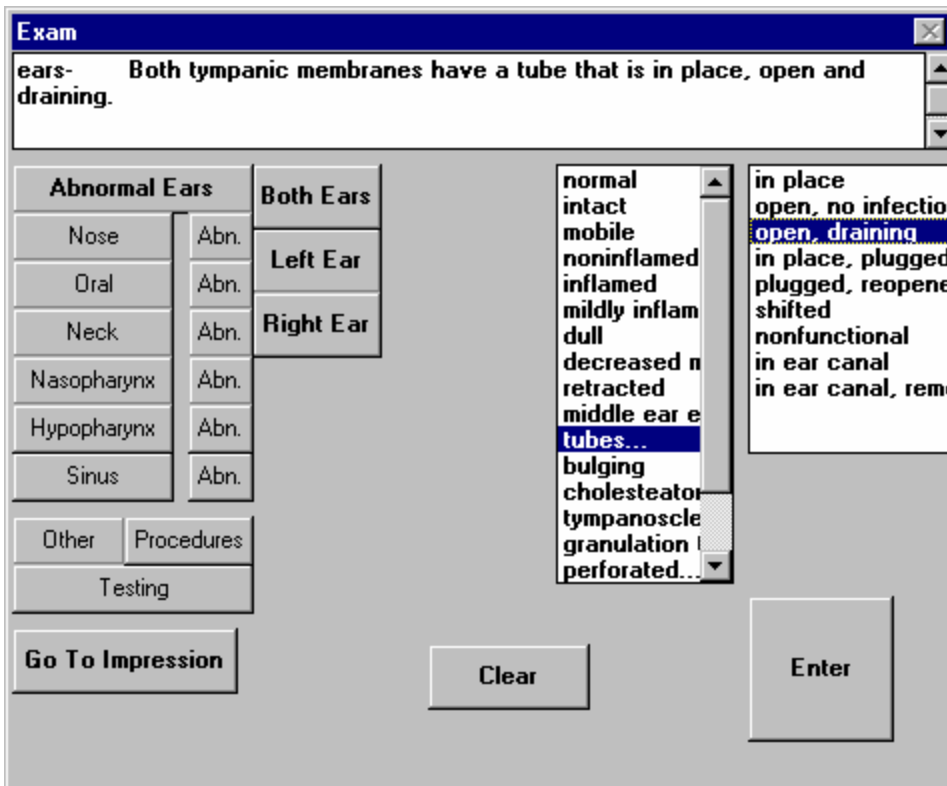
The larger buttons on the left side of the screen are to be used when that particular area was examined and found to be normal. A single tap of the pen on this button will automatically place the default sentence for a normal exam onto the patient's record. The program has predefined terminology for standard exams, but this terminology can be changed and the physician may insert his own default phrase instead. To see how this is done, refer to the section on customizing the program later in the manual.

Finish with Normal Values on ExamType

These buttons are used to finish an exam when everything else on the exam is normal. This is a somewhat faster alternative to clicking on each normal button individually. There have been three defined exam types: Brief Exam, Full Exam and PreOpExam. When one of these buttons is clicked, the program will check for the list of items that are normally included in this type of exam. Anything that is missing will be filled in with the default normal exam findings for that item. You may customize which items are included in each of the three types of exams:



The above values are the default values that come with the program.



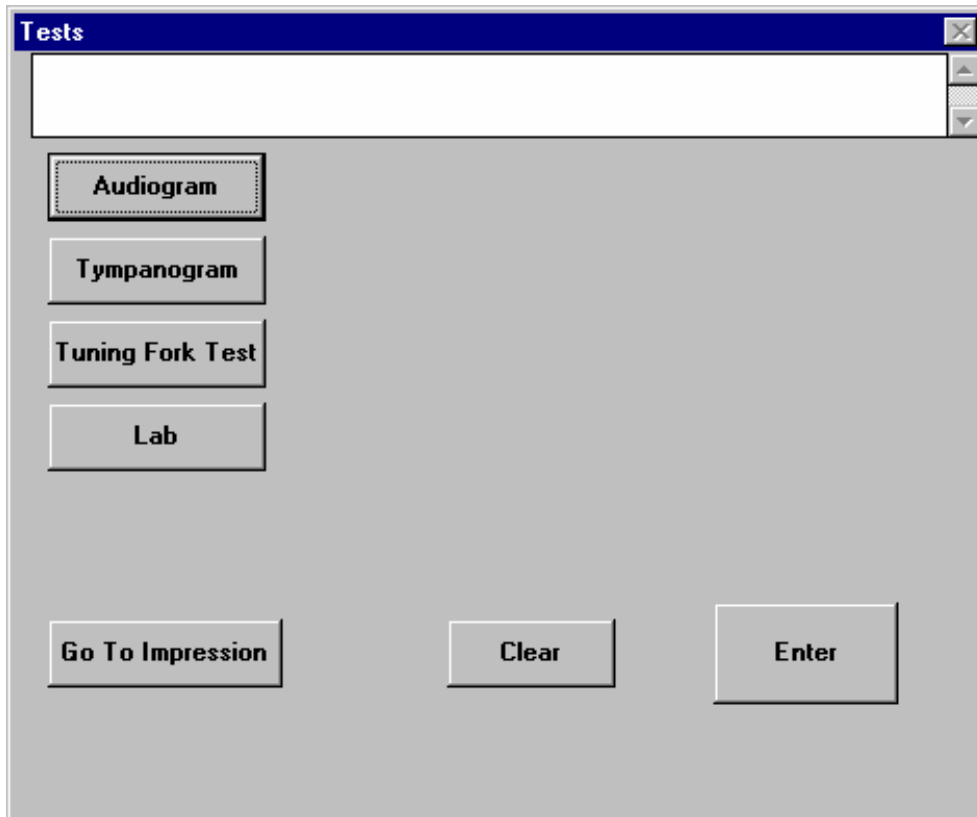
Abnormal buttons

The smaller buttons on the right are used for the abnormal exams. A pen tap on one of these buttons will bring up a series of lists and buttons that allow for documentation of the abnormal examination finding. In a similar manner to building a sentence about a complaint in the history module, the abnormal exam

description is built piece by piece in the text box and when complete is entered by tapping on the *Enter* button.

The *Other* button is used to document examinations of other areas of the body such as heart, lungs, abdomen, etc. The default normal terminology for these items is also customizable. The *Testing* button is used to bring up the Testing module that allows description of the result of the audiogram, tympanogram, lab test, etc. The *Procedure* button is for in office procedures, both diagnostic and therapeutic. These modules will be explained in more detail later.

Chapter 10 - Testing Module



Audiogram button

When the testing module first appears, only the four buttons on the left, *Audiogram*, *Tympanogram*, *Tuning Fork Test*, *Lab* will appear. In the above example, the user has tapped on the *Audiogram* button and the audiogram frame appeared as shown. The information about the audiogram may be entered in one of two ways, either by creating descriptive phrases such as RIGHT MILD CONDUCTIVE HEARING LOSS, or by specifying the actual frequency numbers and their decibels of hearing loss. If the first method is chosen, the user would initially check the box indicating normal or abnormal hearing. If abnormal is selected, then he or she will be asked to specify if the hearing loss is symmetrical or asymmetrical. Finally, the severity and nature of the hearing loss will be specified. There is also a button to indicate how today's results compare to a previous audiogram. Here is such an example:

Tests

audio.- Left ear has a severe sensorineural hearing loss. Right ear has a mild conductive hearing loss.

Audiogram result:

normal abnormal specify freqs.
 symmetrical asymmetrical

LEFT		RIGHT	
normal	hearing loss	normal	hearing loss
mild	sensorineural	mild	sensorineural
moderate	conductive	moderate	conductive
severe	mixed	severe	mixed
profound		profound	
high freq.		high freq.	

An example of documenting the audiogram by specifying the frequencies would look like this:

Tests

audio.-

Audiogram

Left Ear					Right Ear				
500	1000	2000	4000	8000	500	1000	2000	4000	8000
15	30	35	45	75	10	15	15	35	45
↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

Up arrow

Down arrow

Go To Impression Clear Enter

To actually enter the number of decibels of hearing loss for each given frequency, the user would tap the pen on either the *up* arrow or the *down* arrow to move the numeric value up or down 5 dB at a time. Once all the frequencies have been entered, the *enter* button is tapped and a sentence that specifies these frequencies is added to the patient's history.

Tympanogram button

The tympanogram frame allow a description of each side of the tympanogram to be entered independently. Again, this will create a descriptive phrase to be added to the patient's history.

Tympanogram Normal Bilaterally

Left Ear

Normal (Type A) Small peak
 Flat (Type B) Somewhat flat
 Flat with large canal volume
 Negative Pressure (Type C)

Right Ear

Normal (Type A) Small peak
 Flat (Type B) Somewhat flat
 Flat with large canal volume
 Negative Pressure (Type C)

Lab button

The *Lab* button will allow the results of common laboratory tests to be entered also.

Tuning Fork Test button

The *Tuning Fork Test* button will allow the results of the tuning fork tests to be entered as per this form:

Tests

Tuning Fork Tests

256 cps 512 cps 1024 cps

Hearing Acuity

right better same left better

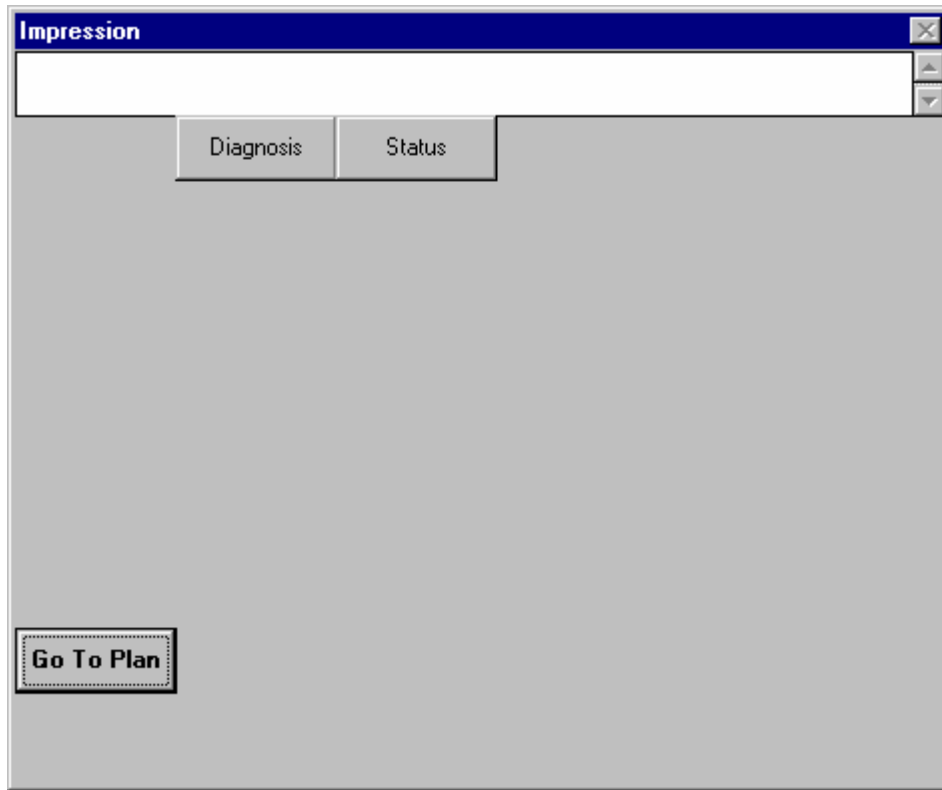
Weber

lat. to R midline lat to L

Rinne

<p>right</p> <input checked="" type="radio"/> air > bone <input type="radio"/> bone > air <input type="radio"/> equal	<p>left</p> <input type="radio"/> air > bone <input checked="" type="radio"/> bone > air <input type="radio"/> equal
--	---

Chapter 11 - Impression Module



Diagnosis button

Tapping the *diagnosis* button will cause two things to appear on the screen. First, a list of the most common diagnoses in a general otolaryngology practice will appear at the center of the screen. Any of these diagnoses can be selected by directly tapping on them. If the desired diagnosis is not visible, the buttons on the left side of the screen can be chosen to bring up a much more detailed list of diagnoses pertinent to that anatomical area.

Impression			
more dx:	Diagnosis	Status	
Ears	====EARS====	====NOSE====	====SINUS====
Nose	cerumen impact	allergic rhinitis	acute sinusitis
Oral	eust. tube dys.	epistaxis	recur. sinusitis
Sinus	external otitis	nasal polyps	
Neck	labyrinthitis		====NECK====
Other	otitis media	===THROAT===	lymphadenitis
	rec. otitis med.	adenoid hypertr	laryngitis
	serous otitis	pharyngitis	
	SNHL	tonsillitis	=====
	tinnitus	tmj syndrome	ICD-9 Short Lis
			ICD-9 Long List
Go To Plan	clear		

Once the primary diagnosis has been chosen, it will be placed into the text box and a series of additional lists will appear that will allow further detail to be added to the base diagnosis. The list box on the left will add words that will precede the main diagnosis and the lists on the right will add words that follow the main diagnosis. By choosing the additional items it is possible to change the diagnosis from something like OTITIS MEDIA into a more descriptive phrase such as CHRONIC MILD RIGHT OTITIS MEDIA THAT IS NOT RESPONDING TO TREATMENT. The modifying words on the far right list such as *and*, *with*, *due to* etc. will allow the inclusion of more than one diagnosis on a single line. An example would be RECURRENT LABRYNTHITIS VERSUS MENIERE'S DISEASE. If desired, multiple diagnoses can be entered on separate lines by tapping on the *Enter* button after each diagnosis is selected.

The screenshot shows a software window titled "Impression" with a text field containing "otitis media". Below the text field are two tabs: "more dx:" and "Diagnosis". The "Diagnosis" tab is active, displaying a list of modifiers on the left and a list of clinical phrases on the right. At the bottom are "clear" and "Enter" buttons.

Diagnosis Modifiers:

- acute
- chronic
-
- mild
- moderate
- severe
-
- left
- right
- bilateral
-
- probable
- possible
- recurrent
- resolved
- unresolved
- early
- history consistent
- no evidence
- persistent

Clinical Phrases:

- worse...
- better...
- unchanged
- responding to treatment
- not responding to treatment
- unlikely
- not bad enough, treat.
- not bad enough, surg.
- well tolerated
- has resolved
- and
- or
- with
- due to
- versus
- which is cau

ICD-9 Short List and ICD-9 Long List

One of the items on the common diagnoses lists is ICD-9 Short List. Selecting this item will bring up an alternative method of indicating the diagnosis. A list box of diagnoses with ICD-9 numbers will appear in alphabetical order. By scrolling up and down the list, the desired diagnosis can be found quickly. The 60-70 most common diagnoses are grouped together on the short list to make them easier to find. The long list contains the full list of all diagnoses in the database (appx. 400 entries at the time this manual was printed). It is possible for the physician to update and customize the list of diagnoses.

NECK CELLULITIS (682.1) ↑

NECK CONTUSION (920)

NECK MASS (784.2)

NECK WOUND (874.8)

NECROSIS (785.4)

NEURALGIA (729.2)

NEURONITIS (357.0)

NO DISEASE FOUND (V71.9)

OBESITY (278.0)

ORAL BURN (947.0)

ORAL CANDIDIASIS (112.0)

ORO-ANTRAL FISTULA (473.0)

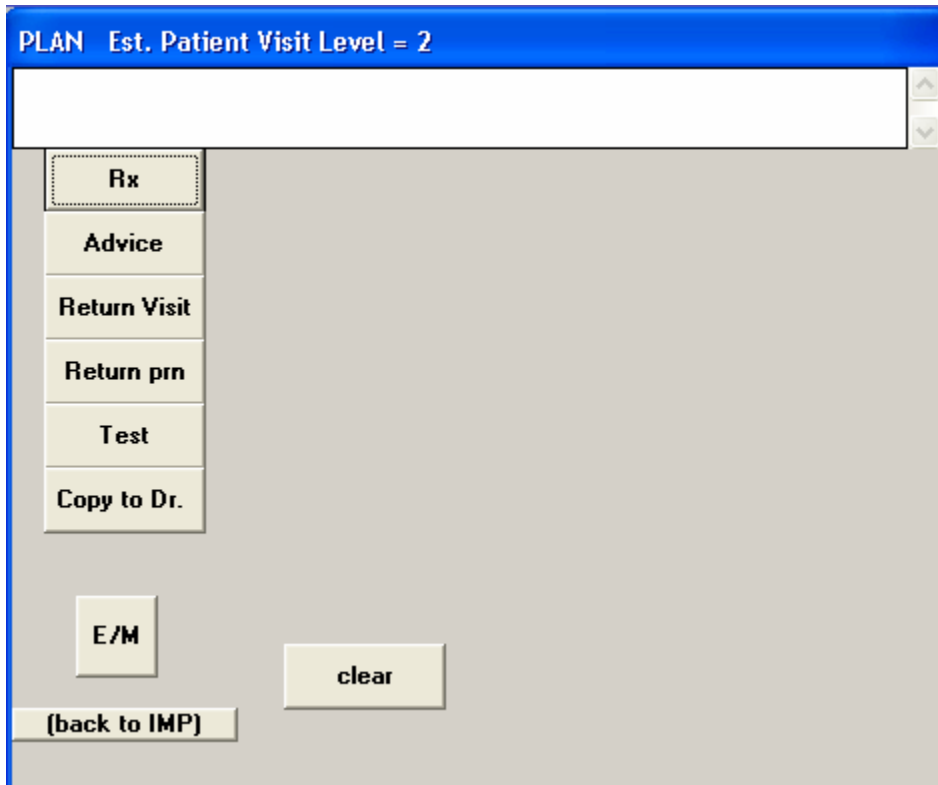
OSSICULAR ANKYLOSIS (385.22)

OSTEOMYELITIS (730.2)

OTALGIA (388.70)

OTITIS (382.9) ↓

Chapter 12 - Plan Module



Rx button

This button will bring up a list of categories of drugs that can be selected. After choosing the category, a list of drug names will appear followed by a list of preparations. With 3 or 4 taps of the pen it is possible to document the medications prescribed in about 3-4 seconds.

After clicking on the Rx button, the initial list of drug categories will include three special items at the bottom. The first time that the Rx button is activated in the plan module, an additional sentence will be inserted into the record: "The patient was given a prescription for:" Normally the subsequent lines will include information about the details of the drugs that were prescribed. However, if "(samples only)" is clicked before the drug information, the previously inserted sentence will be changed to read: "The patient was given samples of:" Similarly, the previously insert sentence can also be changed to "The patient was given samples and a prescription for: " or "The patient was advised to continue:"

When the category has been selected, a drug list will appear on the right. The first item "ADD/DELETE..." will access a separate module that will allow you to add and delete drugs "on the fly" or while you are using the program. Once the drug name has been selected, a list of drug preparations will appear. Choosing the drug preparation will complete the drug entry. When drugs are entered into the database, you have the option of specifying default prescribing information such as "#30, i po t.i.d. x 10 days". If such information exists, it will be placed into the record at this time.

Drugs

claritin

	Drug Name	Preparations
COMPLETE LIST	claritin	10mg tablets
anesthetic	claritin syrup	10mg redivabs
antivertigo agent	claritin-D	
antianxiety agent	claritin-D 24 h	
antianxiety, muscle relaxant	comhist la	
antibiotic	deconamine	
antiemetic	deconamine 5	
antiepileptic	deconsal	
antifungal	dimetane	
antihist/decon.	dimetapp	
anti-inflammatory		
antimigraine agent		
antitussive		
antitussive-anticholinergic		
antitussive-expectorant		
antiulcer agent		
antiviral		
bronchodilator		
diuretic		
ear drops		

Recommended Adult Dose:

Done Clear Enter

This is the drug screen after selecting a particular drug, in this case Claritin. You would next choose which preparation you are prescribing, such as 10mg tablets.

Drugs

claritin 10mg tablets, #30, 1 PO qday

Categories	Drug Name	Preparations	Dispense	by 1's
COMPLETE LIST	claritin	10mg tablets	5	<input type="checkbox"/>
anesthetic	claritin syrup	10mg reditabs	10	by 5's
anitvertigo agent	claritin-D		15	
antianxiety agent	claritin-D 24 h		20	
antianxiety, muscle rel	comhist la		25	
antibiotic	deconamine		30	<input type="checkbox"/>
antiemetic	deconamine 5		35	by cc
antiepileptic	deconsal		40	
antifungal	dimetane		45	
antihist/decon.	dimetapp		50	

Recommended Adult Dose: **Refill**

Amount	Route	Frequency	Duration
1	PO	qday	

PRN

Several new controls appear once you have chosen your drug preparation. The dispense list box is used to specify how many pills or cc's of medicine is being prescribed. If you want to prescribe an odd number of pills, such as 7, click on the "by 1's" button.

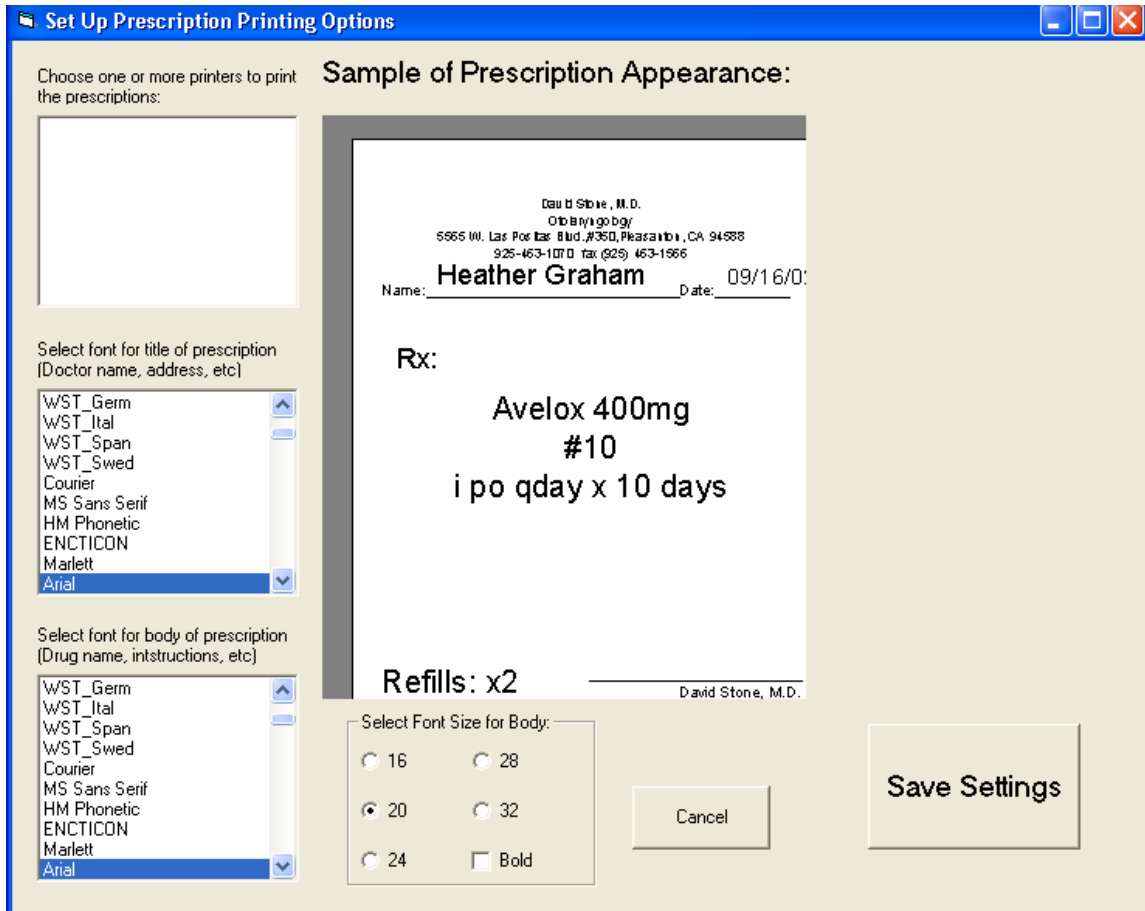
The Recommended Adult Dose area is used when you wish to give yourself a reminder about using this medicine such as the normal dose for an adult, etc. This information is entered when you add a custom drug.

The Refill, Amount, Route, Frequency, Duration and PRN controls are used to finish off the details of the prescription. When you enter a new drug into the database, you are given the opportunity to set default values for these items. If defaults have been set, they will popup automatically. You may also save the current prescription details for use as your future default values.

(Samples Only), (Samples Rx) and (Continue Rx) will insert the appropriate text after the drug information.

Printing Prescriptions

You have the option of handwriting the prescriptions or having the program print them out for you. In order for this to be practical, you must either have a printer connected to the computer you are currently using or a wireless network. Before using this feature, you must set up which printers you wish to use and which fonts and font sizes you will be using. If you have multiple printers on your network, you may choose one or more than one printer to print the prescriptions. It is possible to have a printer in every room and each of the printers can be accessed via the program by clicking on a different button.



Test Module

This module will allow for specifications of tests that are being ordered such as laboratory tests or xray studies.

Advice button

The *Advice* button brings up a list of the types of advice that may be commonly given to someone by an otolaryngologist. The See Dr... item will access the database of referral doctors and allow a specific name to be entered. Also the Surgery... item will bring up a list of possible surgeries that can be proposed as well as options to indicate whether the patient wishes to proceed with surgery, wishes to consider surgery for a while before making a decision, or wishes to not have surgery. The items couns: diag, etc. are used to indicate that more extensive counseling of the patient was done. This may be necessary if more advanced levels of E/M codes are being used.

Return and Return PRN buttons

The return button will bring up a list box that allows specification of a return visit in 1 week, 2 months, etc. This sentence will be built piece by piece and the *Enter* button will be used to post the information. The *Return PRN* button will post the information directly to the patient record without using the *Enter* button.

The screenshot shows a window titled "Plan" with a blue header bar. Inside the window, there is a button labeled "Advice" on the left. To the right of the button is a list of advice items: "allergy eval.", "continue meds", "keep ear dry", "see Dr. ...", "stop medicines", "surgery...", "use nasal ointment", "use saline irrigation", "hearing aid", "stop smoking", "couns: diag", "couns: diag/treat.", and "couns: treat.". At the bottom right of the window is a button labeled "clear".

Copy to Dr.

If it is desired to send a copy of the record to a referring doctor, the name may be selected from the list. If the desired doctor's name is not in the database, it is possible to add it by tapping on the *Add New Doctor* button. In the above screen, there is an indication already the Dr. Leonard Chuck is the referring doctor since that information was entered when the patient's record was first started. To send a copy of the office visit notes, just click on the button entitled "copy: Chuck, Dr. Leonard".

When the records are printed, if a referring doctor has been specified for that patient's visit, the program will automatically generate two additional pages in addition to the copy for the primary doctor's chart. The first extra page is a cover letter to be sent to the referring doctor. The cover letter will pull out the referring doctor's address from the database and place it on top of the referral cover letter. The second extra page printed is an additional copy of the patient's office visit. Both of these extra pages are printed on plain white paper but the program will generate a letterhead for both of the extra pages. Once these pages are signed by the doctor, they are ready to drop into a window envelope and be mailed immediately. It is actually possible to have all of your referral letters ready to mail out a few minutes after seeing your last patient of the day.

There are four different versions of the referral letter that can be sent, each with slightly different wording and each customizable. Click on the appropriate option to send the version of the cover letter that you would like to send.

Chapter 13 - Surgical Procedures Module

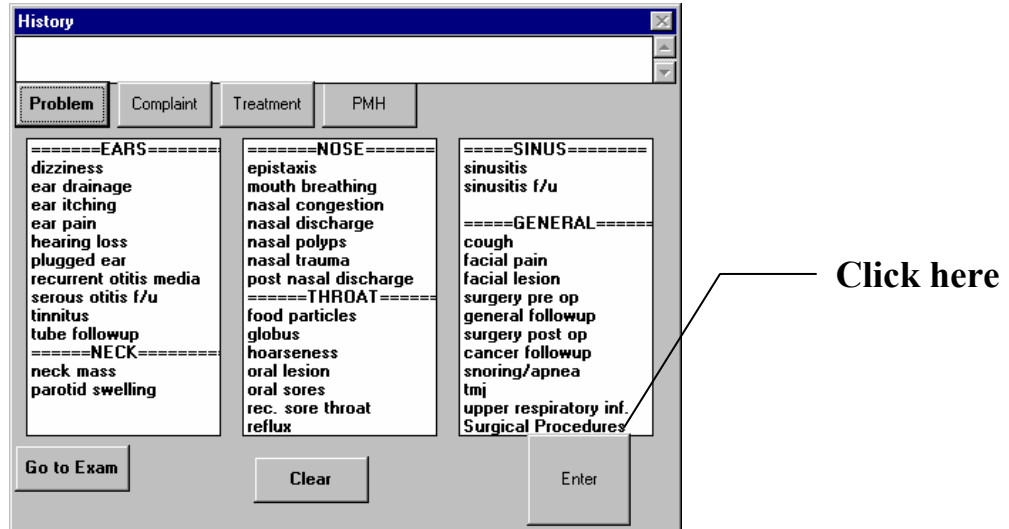
ENT Medical Dictator© has the capability of generating surgical reports, both for surgical procedures done in the office as well as procedures done in the operating room of a hospital or surgery center. Each of these reports occur on a separate page and are useful when insurance companies wish documentation of procedures that are being billed.

Several sample procedure notes are included with ENT Medical Dictator© and the procedure notes are completely customizable. The doctor using the program can set up his own default values for each of the procedure parts. Also, for each procedure recorded, the program will pause at each part to see if the user would like to use the default value, one of the predefined alternative values or a completely new alternative value. This is a sample of a procedure report:

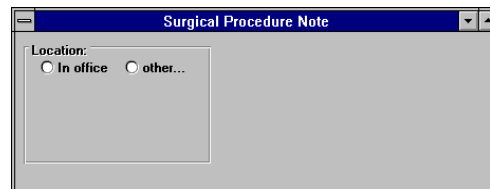
Smith, John May 18, 1996
PROCEDURE REPORT
PRE OP DX: recurrent otitis media POST OP DX: same PROCEDURE: bilateral myringotomies & tubes - local SURGEON: David S. Stone, M.D. ANESTHESIA: local - 1% lidocaine with epinephrine EBL: less than 5cc
INDICATIONS: The patient has had recurrent otitis media that has not been responding well to antibiotic therapy. The patient is now electively undergoing bilateral myringotomies and tubes under local anesthesia.
FINDINGS: Air was found in the left middle ear space. Air in the right middle ear space.
PROCEDURE: The patient was placed in the semirecumbant position. Local anesthesia in the form of 1% lidocaine with epinephrine was infiltrated into the posterior ear canal skin without complication. Initially the right ear was approached and cleaned of cerumen. A myringotomy was made in the anterior inferior quadrant. The above mentioned findings were noted. A Reuter-Bobbin tube was placed without complication. The opposite ear was approached in a similar manner with again the above findings. Again a Reuter-Bobbin tube was placed. The patient tolerated the procedure well.

Using the Procedure Module

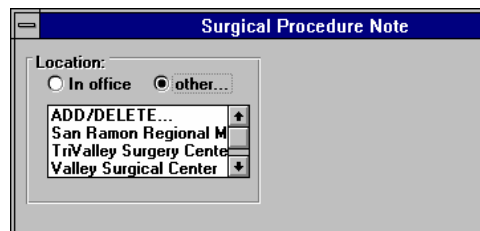
The procedure module is accessed as any other problem module, just click on the item “Surgical Procedures”.



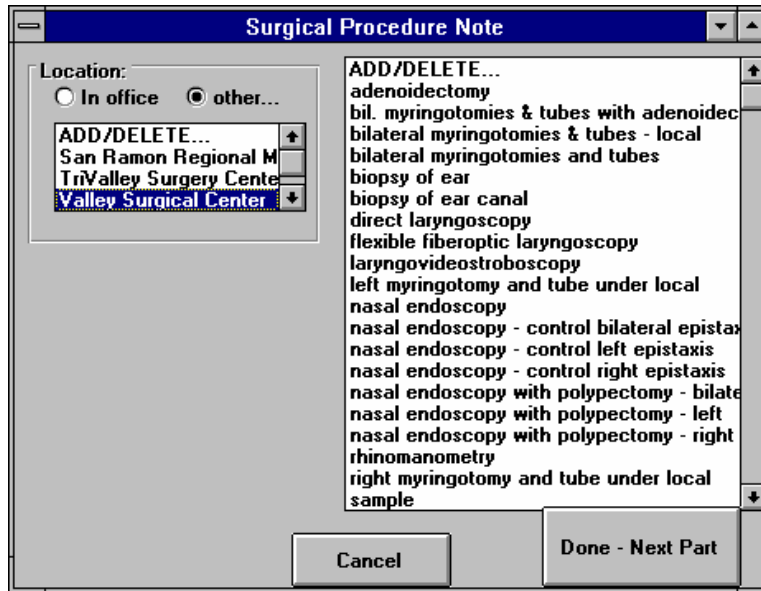
This will bring up the opening screen of the procedure module:



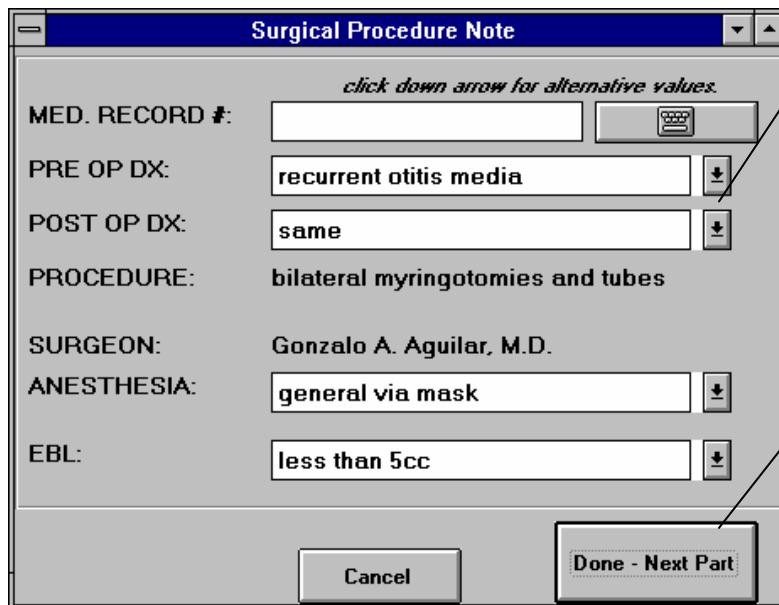
At this point, you must choose between in office procedures and other locations such as hospitals or surgery centers. If you click on other, a list of facilities will pop up. Items can be added or deleted from this list. The main difference between specifying in office versus other facility is the appearance of the surgical procedure report. The in office report will have the same format as an office visit note and the other will have a heading that includes the facility name.



The next step is to choose the name of the surgical procedure. Pick the appropriate procedure from the list on the right. The ADD/DELETE feature will be explained later.



After the procedure has been selected, the next screen comes up. If you choose a hospital or surgery center, there will be an optional field to fill in for the patient record number. If this field is left blank, that item will not appear on the final procedure report.



Use these dropdown button to choose alternative values for each item.

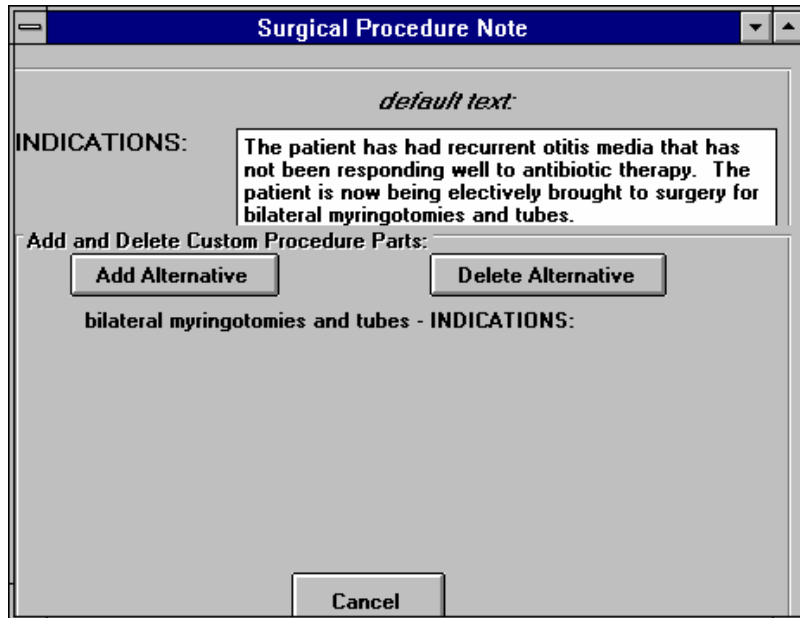
When done, click this button.

The screenshot shows a window titled "Surgical Procedure Note". Inside the window, there is a section labeled "INDICATIONS:". To the right of this label is a text box containing the following text: "The patient has had recurrent otitis media that has not been responding well to antibiotic therapy. The patient is now being electively brought to surgery for bilateral myringotomies and tubes." Above this text box is the label "default text:". Below the text box is another section labeled "alternatives:". To the right of this label is a list box containing the following items: "ADD/DELETE...", "chronic serous otitis", "conductive hearing loss", and "severe retractions". At the bottom left of the window is a "Finish" button. At the bottom center are "Skip This Part" and "Cancel" buttons. At the bottom right is a "Done - Next Part" button.

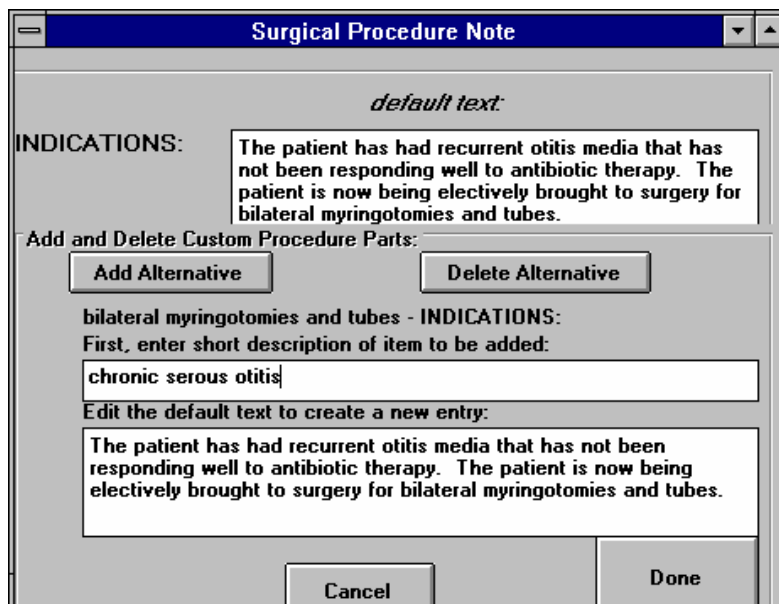
After the previous information has been entered, the screen for the indication may appear. There are several sections of the surgery procedure note that are optional. When the surgery note is first designed, the parts that are to be included are specified. The INDICATIONS, FINDINGS, and IMPRESSION are examples of portions of the procedure note that can either be included or excluded. Some other parts, including PREOP DX., POSTOP DX. and PROCEDURE are included in all notes. The above screen shows an example of the default indication for this procedure. Clicking on the Done-Next Part button will insert the selected text into the report. Commonly used alternative indications can be selected from the lower list. It is also possible to edit the text in the Default Text window. If you do, you will be asked if you wish to make this the new default indication value for this procedure in the future. In either case, you edited text will appear in the procedure note that is being created at this time.

The remaining parts of the procedure note may be completed in a similar manner. The FINISH button will complete the procedure note using the default values for each of the remaining parts of the report. This is useful for very common procedures such as tubes where in most cases, only the patient's name and the findings differ from patient to patient with the remainder of the procedure note the same. This way you do not have to confirm each part of the procedure; instead the report may be completed very quickly. In many cases, this report may be completed in less time than it would take to dictate the equivalent information.

Adding and Deleting Alternative Values



Most of the alternative lists include the option of ADD/DELETE. Clicking on this item will bring up a screen similar to the above screen. Clicking on the DELETE ALTERNATIVE button will bring up a list of the existing alternatives so that the appropriate one may be deleted. Clicking on ADD ALTERNATIVE will bring up the following screen:



You must first enter a brief description of the alternative being added. This brief description will be used in the list of alternatives. Once the name has been specified, the existing default value for this item will be displayed. Usually it is easiest to make a few changes to the default value rather than completely retyping a new entry. However, if the default value is no where near what you wish to say, you may completely

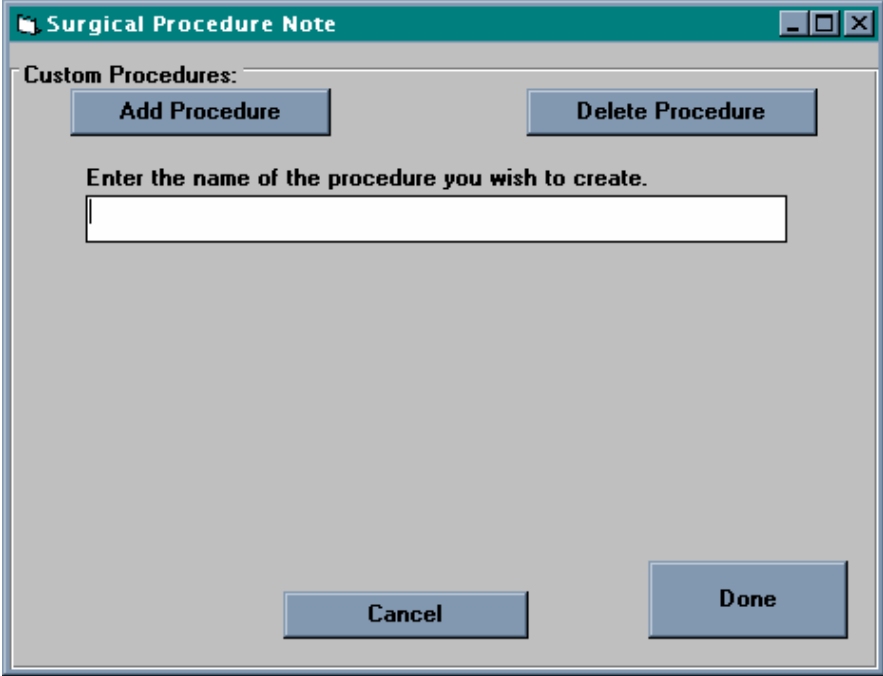
erase it and start again. In either case, when you are done click on the done button to add the new procedure.

The program is designed to make it easy to add new alternatives “on the fly”. In other words, it is not critical that you think of all possible alternative values for a particular procedure before you begin to use it. It is possible to be creating a real procedure report for a real patient when you suddenly think of an alternative value that may be useful in the future. You can add this value while you create the report and it will be available for future use. In this manner, the longer that you use the program, the more extensive the list of alternatives.

Adding a New Procedure

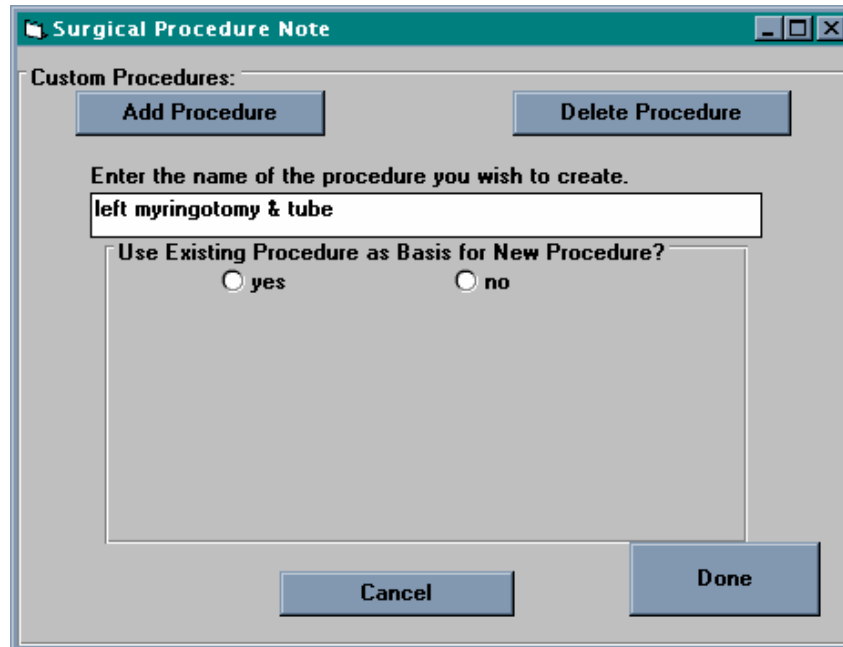
The ENT Medical Dictator© comes with an extensive list of surgical procedures that have already been created. Some of these procedures will be close enough to your actual pattern of practice to be used “as is” straight out of the box. However, in most cases, there will have to be some modifications made to adapt them to your pattern of practice. If there is an existing procedure report that is close enough, the best way is to edit those few default values that need to be changed.

If a completely new report is to be created, you must choose ADD/DELETE from the list of procedures available. Doing so will bring up the following screen:



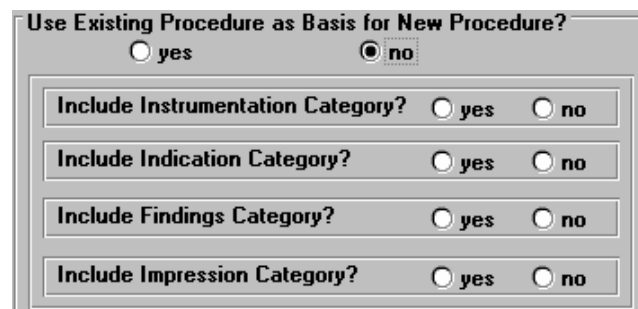
The screenshot shows a window titled "Surgical Procedure Note" with a standard Windows-style title bar (minimize, maximize, close buttons). The main content area is titled "Custom Procedures:" and contains two buttons: "Add Procedure" and "Delete Procedure". Below these buttons is a text input field with the prompt "Enter the name of the procedure you wish to create." At the bottom of the window are two buttons: "Cancel" and "Done".

After clicking on the ADD PROCEDURE button, you will be prompted to provide a name for the newly created procedure. Once the name is provided, you will be given the choice of whether to base the new procedure on an existing procedure or start from scratch.



In this particular example a new procedure titled “left myringotomy & tube” is being created. If there was already an existing procedure titled “right myringotomy & tube”, you would want to respond “YES” so that you could use the existing procedure as a basis for the new procedure. This would save additional typing because many of the procedure parts would be identical in both cases.

On the other hand, if a completely new procedure was being created, the other alternative, “NO” would be selected. As soon as “NO” is selected, you must specify which categories will appear on the procedure report:



Each of these categories are optional and may be included or excluded as needed. For example, the impression category might be appropriate as the last item in an office procedure such as a diagnostic flexible fiberoptic laryngoscopy.

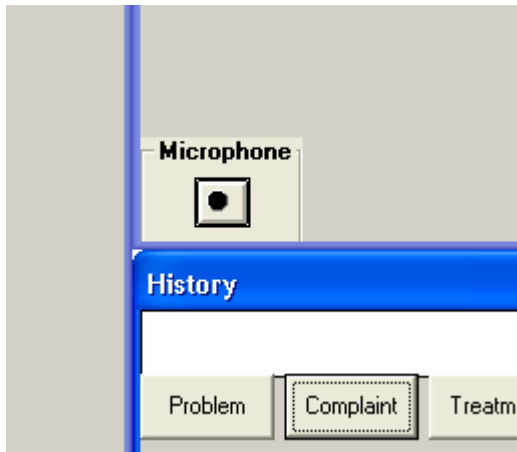
The outline that the procedure report would follow if all possible components were selected would be this:

Patient Name date medical record # (Optional) Pre-Op diagnosis Post-Op diagnosis Procedure Name Surgeon Anesthesia EBL Instrumentation (Optional) Indication (Optional) Findings (Optional) Procedure in detail Impression (Optional)
--

The surgery module is one of the most complicated modules in the ENT Medical Dictator© . This is necessary for the module to be powerful enough to be completely customizable and flexible. The easiest way to learn the new module is to first read the instructions once, then try creating several sample patient procedure notes, then read the instructions once more.

Chapter 14 – Dictating into the Program

The program has the capability to capture dictation as sound files and store them on the computer. After being stored, the transcriptionist will retrieve the sound files, type the text, then save the text back to the computer. The process of dictating into the program begins with clicking on the microphone button:



As soon as the button is clicked, the left side of the screen changes and multiple areas of the patient's record are available as insertion points for the dictation. Begin dictating immediately and when done, click on the appropriate spot to stop the recording and specify where you want the transcribed text to go.

Duncan, David
September 16, 2002

HISTORY

The patient is here for evaluation of ear pain. [INSERT HERE]The problem was noted intermittently beginning 2 weeks ago. [INSERT HERE]The patient reports that the pain is in the right ear. [INSERT HERE]The patient has taken Cipro HC which helped. [INSERT HERE]The patient has not had a hearing loss, or had ear drainage. [INSERT HERE]
[INSERT HERE]

EXAMINATION

ears- Both pinnas are normal in appearance with no scars, lesions or masses. [INSERT HERE]Both ear canals clear and tympanic membranes intact, noninflamed and mobile. [INSERT HERE]

nose- Nasal mucosa is noninflamed with no polyps. [INSERT HERE]
Septum and turbinates are normal.

oral- Oropharynx normal in appearance with no lesions or inflammation. [INSERT HERE]Lips, teeth and gums appear normal. [INSERT HERE]Pharyngeal walls and pyriform sinuses normal with no lesions, asymmetry or pooling of saliva. [INSERT HERE]

neck- No masses, asymmetry or cervical lymphadenopathy noted. [INSERT HERE]Trachea is in the midline and thyroid has no enlargement, tenderness or mass.
[INSERT HERE]

To stop recording, click on [insert here] or cancel button:
09160001.wav

Dictating...

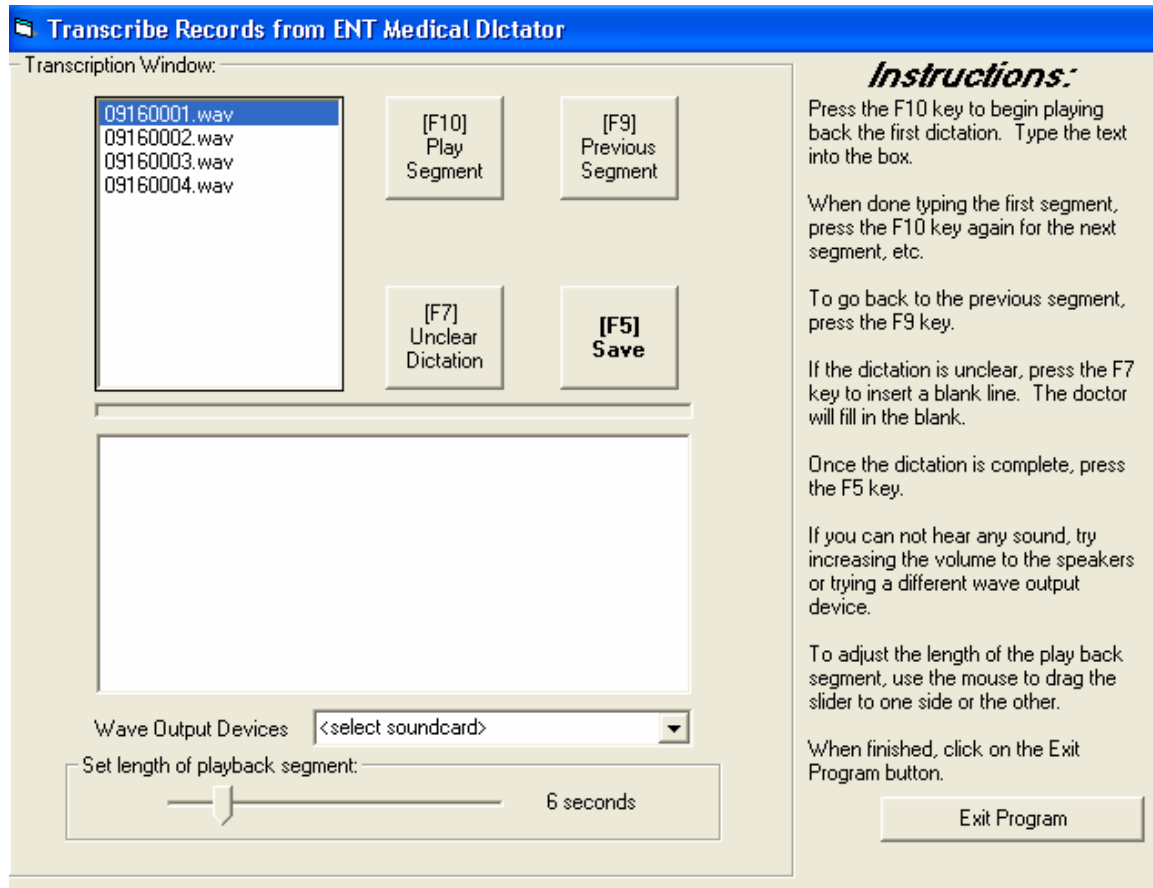
Name of the wave file being saved.

Each of the red [INSERT HERE] areas are potential places for dictation.

The doctor may insert dictation into multiple places within the same record. When the record is saved, instead of being stored as a complete record, it will be marked as awaiting transcription and saved as an incomplete record.

Transcribe Program

This is the separate program that your transcriptionist will be using and can either be used on the same computer where the dictation was created or another computer on the network. Her opening screen will look like this:



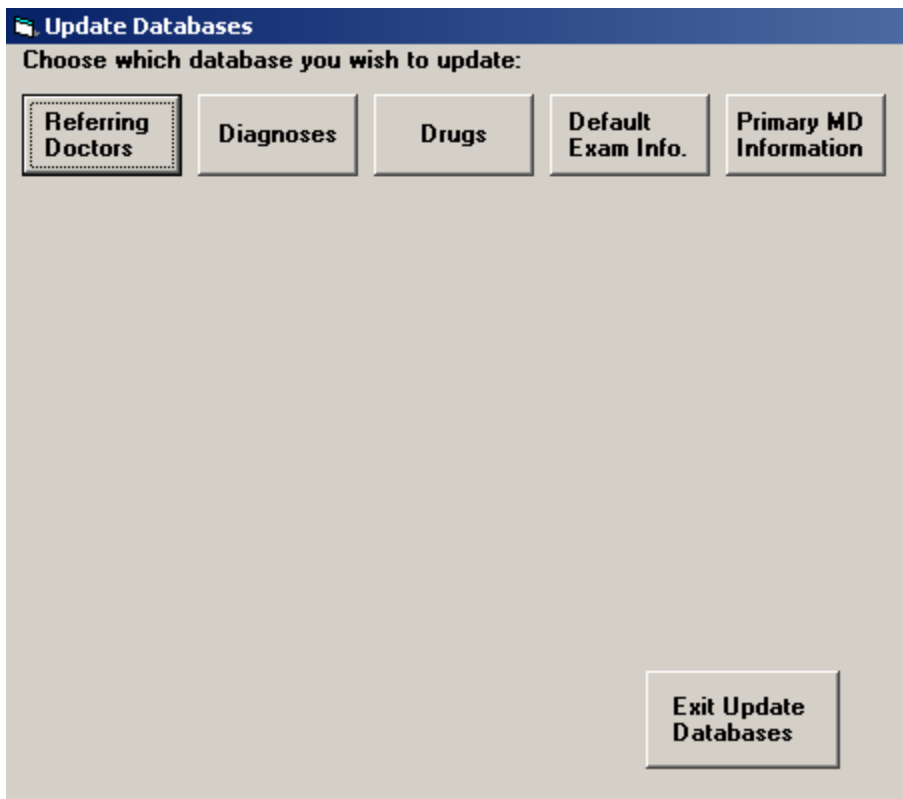
Pressing the F10 key will automatically start playing the first part of the first sound file. The transcriptionist will then type the information into the text box for each segment until entire file is transcribed. If there is a part of the transcription that is not clear, the F7 key will place a series of underscore characters into the transcribed text and this patient's record will have to be reviewed by the doctor before it can be saved. The program will keep track of where each segment of dictation should go and will merge it back in automatically.

Chapter 15 - Customizing the Program

There are several features that are customizable by the end user of the program. The main categories are:

- **Referring Doctors**
- **Diagnoses**
- **Drugs**
- **Default Normal Exam Terminology**
- **Surgical Procedures**

To update or customize any of these databases, click on the *Update Databases* button that appears in the lower portion of the very first screen that appears when the program is started. If the program is running, and you wish to update a database, exit the program and immediately restart it by tapping the Dictate Icon. Tapping on the *Update Databases* button will show this:



The five main categories that are capable of being updated by the end user are shown by their corresponding buttons. Tapping on one of these buttons will bring up a submodule that can be used to modify the contents of the corresponding database.

In addition to the five main categories, many of the lists in the program are customizable on the fly as the program is being run. The technique for doing that is described at the end of this chapter.

Doctors

First you will be asked whether you wish to add a new doctor or edit (or delete) an existing doctor's record. Tap on the appropriate button:

Choose which activity you wish to perform:

Add New Doctor **Edit Doctor**

If Add New Doctor was chosen, next will appear the submodule to actually enter the information.

Enter the information in each field, then press Enter. Use the TAB key to move from one field to the next.

First Name:

Last Name:

Address:

City, State, ZIP:

Send Cover Letter?
 Yes No

Cover Letter Greeting:
 First name Last name Other

Cancel **Enter**

If the keyboard is attached to the pen based computer at this time, just enter the information in each field and use the TAB key to move from field to field. If the keyboard is not attached, bring up the virtual keyboard to enter the information, and tap with the pen to move from field to field. The referring doctor may be referred to in a number of ways. For example, William Smith, M.D. may be referred to as: Dear Dr. Smith, Dear William or Dear Bill. When the information is complete, tap on the *Enter* button to save the information.

If it is elected to edit an existing doctor, the following will appear first:

After the last name is entered, the program will bring up that doctor's information so that it can be edited in a screen similar to the one that is used to add a new doctor.

Edit a Doctor's record

Enter the last name of the Doctor

OK

Cancel

Choose which activity you wish to perform:

Delete Doctor

Edit the information in the fields, then press Enter. Use the TAB key to move from one field to the next.

First Name:

Last Name:

Address:

City, State, ZIP:

Include Cover Letter? Yes No

Cancel **Enter**

This will delete the current doctor's record

Moves to the last doctor

Moves to the first doctor in the database

Moves to the previous doctor

Moves to the next doctor

Diagnoses

Choose which activity you wish to perform:

Enter the information in each field, then press Enter

Diagnosis:

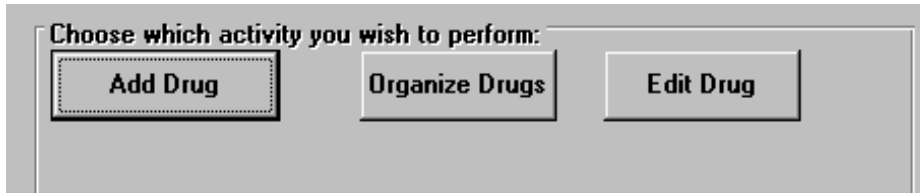
ICD-9 Code:

Include on ICD-9 Short List?

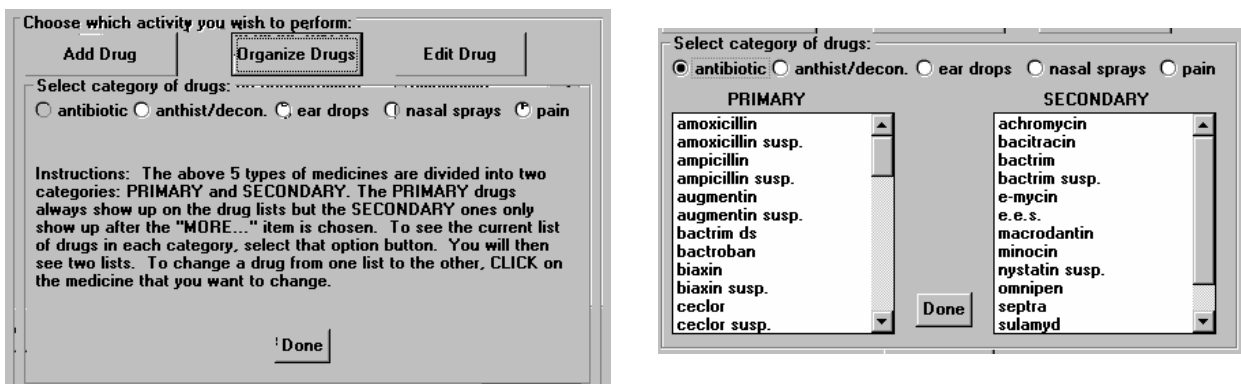
Cancel **Enter**

To add a new diagnosis, enter the information into the requested fields. The check box to include on the ICD-9 short list refers to the feature that was described in the chapter on the impression module. The default value is to include new diagnoses on the long list only.

Drugs



The above three choices appear when the Drugs button is chosen in the Update Databases module. Choose Add Drug if a new drug is being added and Edit Drug if the details are being changed for an existing drug. The button for organizing the drugs is used to designate whether a drug will be primary or secondary. The most common categories of medicines for ENT, namely antibiotics, antihistamines, decongestants, nasal sprays and ear drops, etc. can be organized into a two tier system: The primary medicines are the ones you see frequently in your community and are the first ones to show up on the list. The secondary medicines will only show up after you click on the “MORE...” item on the list. This was you don’t have to sort through uncommon antibiotics such as acromycin, or vantin on your way to find augmentin.



The information for the Add Drug module is filled in on a field by field basis as before. When drop down lists are available, it is generally advisable to use them. This will insure that consistent terminology will be used for all the drugs in the database. For example, in the category field it is possible to either enter a new category directly into the field or choose an existing category from the drop down list. If you enter the categories directly, it is possible that one time you might enter ANTIBIOTIC, the next time ANTIBIOTICS, and still another time ANTI-BIOTIC. If you were to do this the computer would think that you are referring to 3 different categories rather than the one that was intended.

The default prescribing information is the information that the physician normally uses when that particular drug preparation is prescribed. Any of these values may be modified when the prescription is entered but it speeds up the process to have a set of default values preset.

The opening screen of the program also has a button titled: Drug Disk Update. This is designed to update a large number of drugs at once, such as an annual update disk. Click on this button and follow the instructions to perform this action.

Defaults

The *Defaults* button refers to two categories of information: the primary doctor information and the default terminology for the normal exams. Choose the appropriate button to move on to the next step.

Choose which activity you wish to perform:

Primary Doctor Information

Update Databases

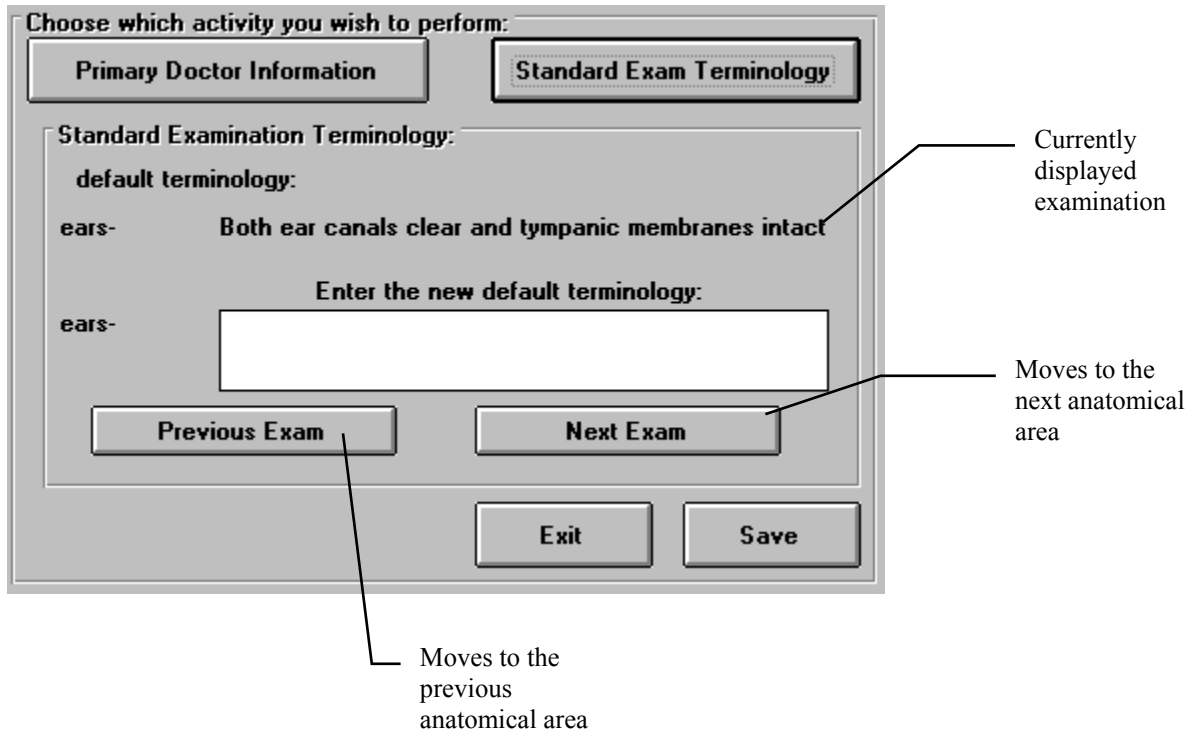
Choose which activity you wish to perform:

Primary Doctor Information:

Doctor Name and Title:
 Group Practice Name:
 Software Code:
 Specialty Description:
 Address/City/St/Zip:
 Phone/Fax:

The primary doctor information is mainly used to produce the letterheads that go out to the referral doctors. It is possible to change to primary doctor's address, phone number and specialty description. The one thing that it is not possible to change is the doctor's name. Each physician who uses this software must have his or her own licensed copy. The physician's name must match the assigned software code or the program will not run. The trial version does allow you to change the doctors name however. This is our version of copy protection. It is permissible for the physician to make back up copies of the software for his or her own use only.

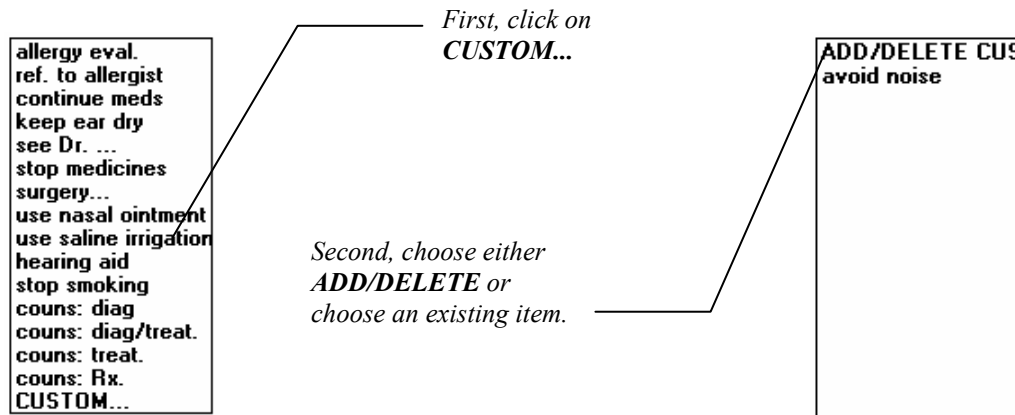
Standard Exam Terminology



Each of the various anatomical areas that can be examined has a default terminology for the normal exam. If required, this terminology can be changed by the end user. Simply use the Next Exam and Previous Exam buttons to move through the various anatomical sites until the desired one appears. At that time, enter the new default text into the text box.

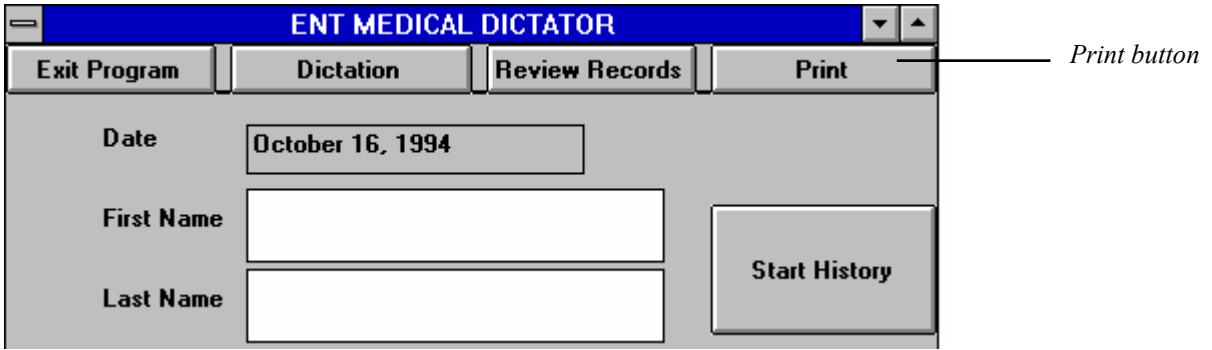
Customizing Lists Within the Program

Many of the lists within the program can be customized as the program is being used. The lists that are capable of being customized have the item **CUSTOM...** as an item on the list. Tapping on **CUSTOM...** will bring up another list that has all of the previously added items for this list as well as options for adding or deleting items from the list.

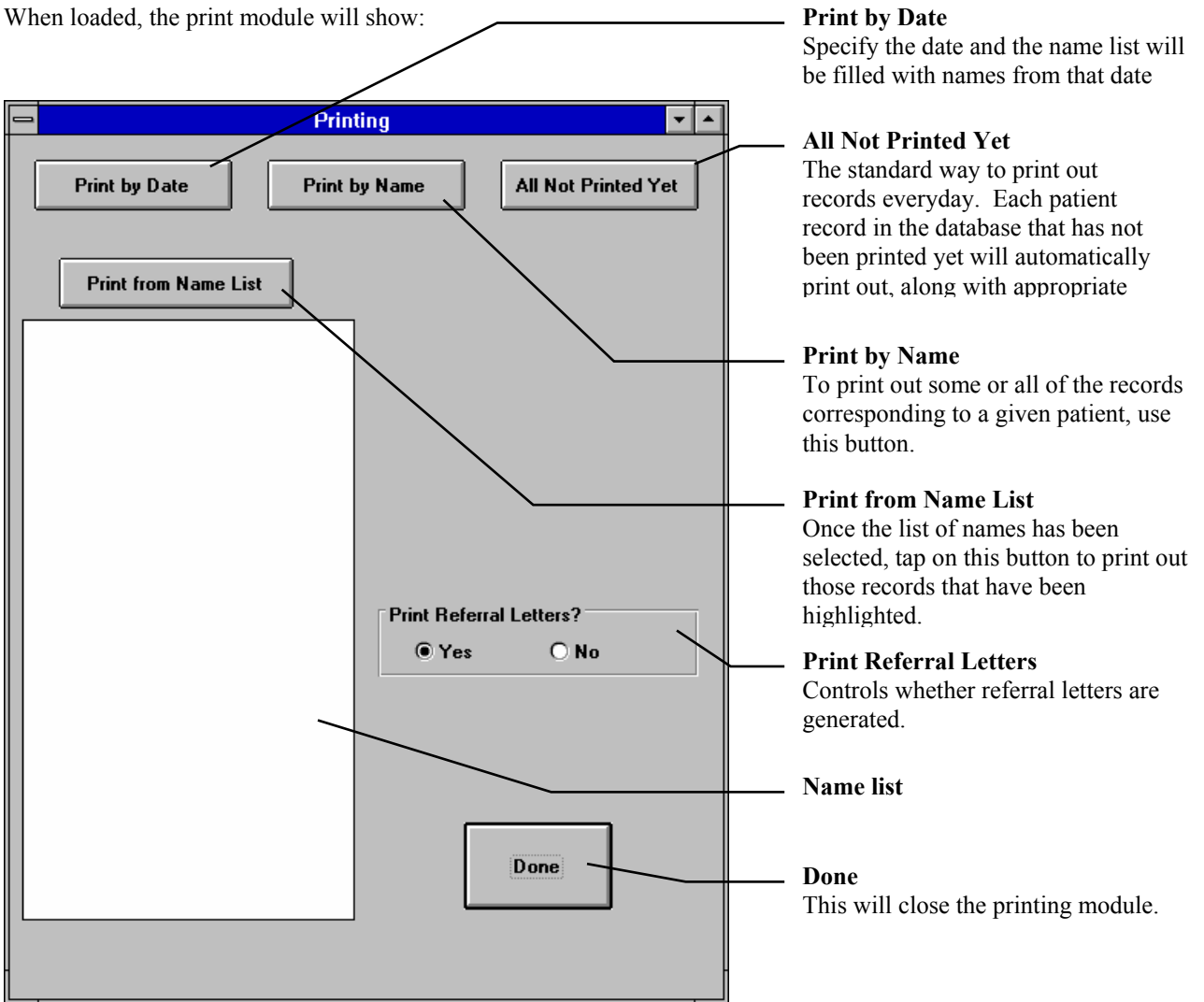


Chapter 16 - Printing Records

The printing module is accessed by selecting the *Print button* on the opening screen:



When loaded, the print module will show:



Selecting a Patient Name to Print

The screenshot shows a software interface titled "Printing". At the top, there are three buttons: "Print by Date", "Print by Name", and "All Not Printed Yet". Below these is a search section with the prompt "Enter all or part of last name of patient:" followed by a text input field containing "wil", a "Search" button, and a keyboard icon. The search results are displayed in two columns. The left column lists patient names: Wilder, Art; Wilder, Arther; Williams, Joe; Williams, Laura; Williams, Laurel; Williamson, Nancy; Willis, Ramona; Willows, James; Willows, Mary (highlighted in blue); and Wilton, Mark. The right column lists dates: Feb 7, 1994; Mar 21, 1994; Apr 18, 1994 (highlighted in blue); May 19, 1994; and Jun 23, 1994. At the bottom, there are three buttons: "Print All Records", "Print Selected Records", and "Done".

First
Tap on this button to expose the module for searching for a patient to

Second
Enter all or part of the last name that you wish to search for, then tap on the *Search* button which will bring up a list of patients meeting that criteria of starting with the letters specified.

Third
Select the specific name that you are looking for.

Fourth
Select one or more of the records to print. In this particular example only the last three visits will be printed out.

Fifth
Tap on this button to print out the record visits that were selected.

Finally
Tap here to close this module.

Optional
Tapping on this button will automatically select all the records for a patient and print out the complete set.

Printing Records by Date

The screenshot shows a window titled "Printing" with a blue header bar. At the top, there are three buttons: "Print by Date", "Print by Name", and "All Not Printed Yet". Below these is a "Print from Name List" button. The main area is divided into two columns. The left column contains a list of patient names, with several names highlighted in blue: Robertson, Alicia; Hill, Laura; Ott, Melissa; Otte, Katie; Lozada, Lani; and Miller, Mike. The right column is titled "Select Date:" and contains a list of dates from 29-Jun-94 to 18-Jun-94, with 20-Jun-94 highlighted. Below the date list is a "Print Referral Letters?" section with radio buttons for "Yes" (selected) and "No". At the bottom center is a "Done" button.

First
Tap on this button to have the date list appear.

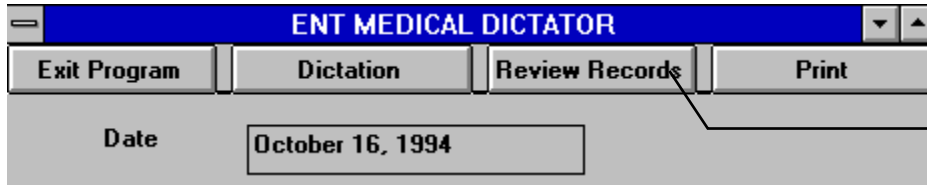
Second
Scroll up or down the list until the desired date appears then select it.

Third
Select one or more of the patient from that day to be printed out.

Fourth
Tap on this button to start printing the records that have been selected

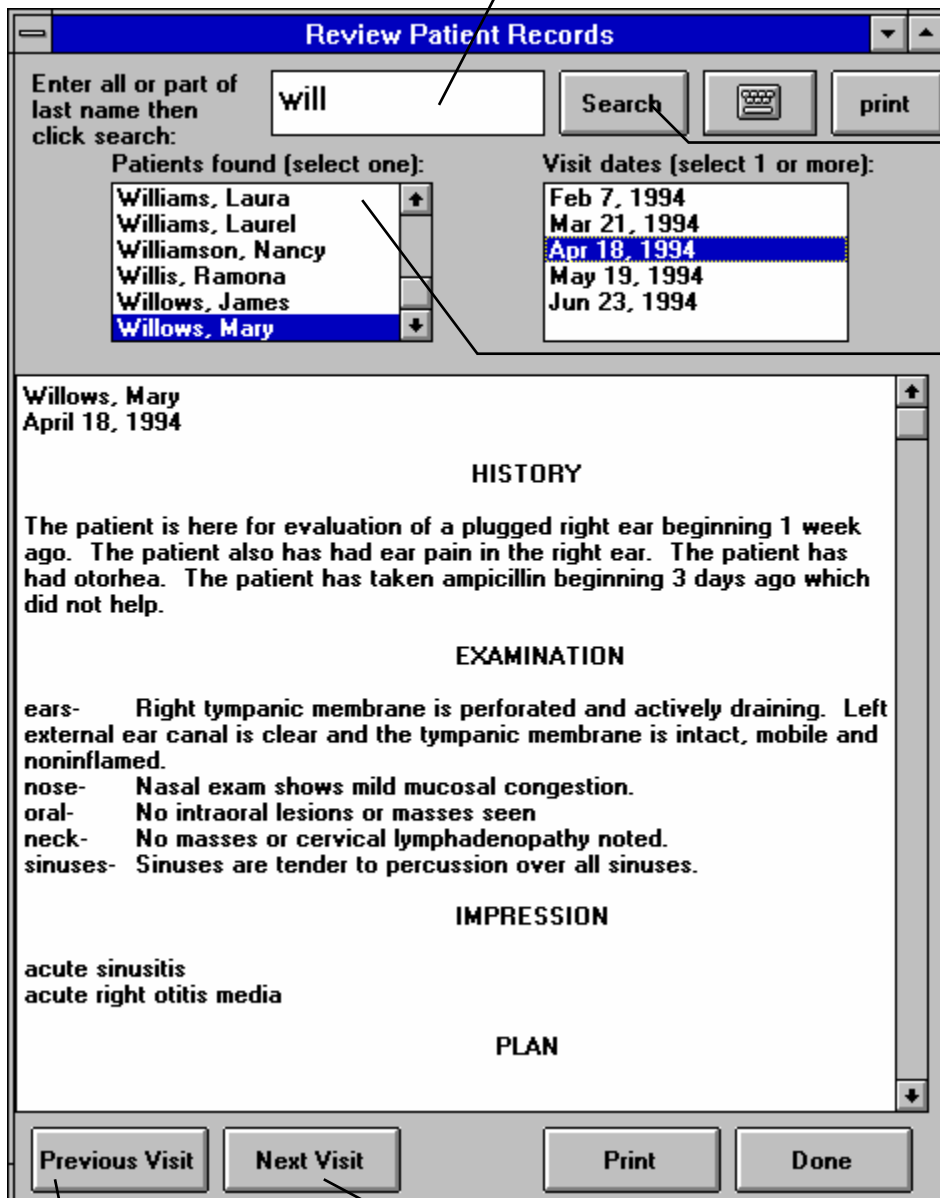
Chapter 17 - Reviewing Records

It is possible to review records that have been stored in the computer previously. To use this feature, click on the *Review Records* button on the top of the opening screen:



Review Records Buttons

Clicking on this button will bring up the full screen for reviewing the patient records:



First

Enter all or part of the patient's last name.

Second

Click on the search button

Third

Select the patient name then select the date of the visit that you wish to review.

Previous Visit
Moves to previous visit

Next Visit
Moves to the next visit date for this patient.

Faxing from the Review Module

To fax records from the review module, you must first specify the patient's name and choose one or more visit dates from the list. Once you have done this, an addition button titled "Fax" will appear on the upper right of the screen. Clicking on this button will start the fax process.

Review Patient Records

Enter part of last name or acct. #

then click search:

Patients found (select one):

Visit dates (select 1 or more):

Henderson, Patricia
 August 27, 1996

HISTORY

The patient is a 46 year old female who is here for evaluation of a plugged sensation in the ear. Both ears have been plugged up beginning Jun 1996. The patient has a past history of otitis occasionally. Additionally, the patient has had a recent upper respiratory infection with symptoms of sore throat and post nasal drainage a few days ago. The patient reports recent swimming. The patient also has had hearing loss in the both ears. The patient has not had ear pain, had otorrhea, or had a similar previous problem. The patient has taken antihistamines which helped a little. The patient has taken amoxicillin which did not help.

EXAMINATION

ears- Both ear canals clear and tympanic membranes intact
 nose- No intranasal masses, polyps or inflammation seen.
 oral- No intraoral lesions or masses seen
 neck- No masses or cervical lymphadenopathy noted.
 nasoph.- No masses or lesions noted.
 hypoph.- No inflammation or lesions noted.

TESTS

audio.- normal hearing bilaterally
 tymp.- Left tympanogram has a small peak. Right tympanogram has a

The Fax Information screen will appear that allows you to input the name of the fax recipient as well as their fax number. If you click on Yes for Attach Cover Sheet?, an additional window will appear that allows you to place a personal note on the cover sheet. Clicking on Start Fax will begin the fax process and will give you updates on the status of the fax transmission.

The screenshot shows a software window titled "Review Patient Records". At the top, there is a search bar with the text "hend" and buttons for "Search", "Keyboard", and "FAX". Below the search bar, there are two sections: "Patients found (select one):" with a list box containing "Henderson, Nancy", "Henderson, Patricia" (highlighted), "Henderson, Penelope", "Henderson, Victoria", and "Hendertilo, Victoria"; and "Visit dates (select 1 or more):" with a list box containing "Aug 27, 1996".

Below these sections is the "Fax Information:" section, which includes:

- "To:" field with the text "Dr. John Brown"
- "Fax Number:" field with the text "555-1212"
- "Attach Cover Sheet?" with radio buttons for "Yes" (selected) and "No"
- "Note for Cover Sheet (Optional):" with a text area containing the text "Here are the records that you requested."

At the bottom of the window, there are two buttons: "Cancel Fax" and "Start Fax".

Chapter 18 – Retrieving Followup Information

In versions of ENT Medical Dictator[®] 5.0 and later, there is an option on the opening screen to retrieve information from the last visit in order to insert into the current visit record. This would most commonly be used when the patient is being seen on a followup visit. To use this feature, start with the opening form and click on the button labeled “Get Followup Info”

Once the Get Followup Info button is clicked, the following screen will appear giving you the option to begin the followup visit with the suggested text. The program tries to extract information from the most recent visit and it generates what it considers to be an appropriate opening paragraph.

Chapter 19 - Troubleshooting

Backup of Data

It is strongly encouraged that backup copies of the files in the C:\DICTATE\DATA subdirectory be made at regular intervals. The files in this subdirectory includes all of the databases discussed so far, including patient records, referring doctors, custom drugs, etc. If for some reason there is a mechanical failure of the hard drive in the pen based computer, it would be possible to lose all the data on the hard drive. For this reason, backups are important and need to be done on a regular basis. The data in the C:\DICTATE subdirectory includes the program files that do not change from day to day. It is only necessary to back up those files once, when you first receive the software or when the software is updated.

MS-DOS includes utilities for backup of the hard disk and please refer to the manual on MS-DOS for further details on how to backup your data. There are also several other excellent third party backup software products that can be used on the computer. Refer to the instructions that come with that software for full details of how to use those products.

The ENT Medical Dictator[®] program also has a backup method within the program itself. On the opening screen, click on the button titled: **BACKUP DATABASES**. The following screen will appear:



Tapping on the **BACKUP DATABASES** button will reveal the screen on the right. The list will include that months that have not been backed up yet. Each month's data is stored on a single 3.5 inch 1.44 M floppy diskette. If a partial backup has been made of a given month already, then only those records that have been added since the last backup will be added.



Computer Lockups, Etc.

If the computer freezes up or otherwise becomes unstable, try to exit the program, exit windows then turn the computer off and on to restart the computer. Make a note of what you were doing when the program malfunctions and attempt the same action the next time the computer is turned on. If you can reproduce the behavior in the ENT Medical Dictator[®], this would indicate a possible bug in the program. If this occurs, contact Stone Enterprises Medical Software, Inc. to obtain a corrected version of the program. Before calling, please make a note of exactly what you were doing before the program malfunctioned.

If the computer malfunctions occur randomly and cannot be reproduced, this is a possible sign of a hardware malfunction and the computer manufacturer should be advised. Occasionally the pens used with the pen computer will have their batteries run low and this can cause unpredictable behavior.

Computer Warranties

The computer hardware is generally covered by its own warranty. Please refer to the documentation that came with the computer for terms and conditions of the hardware warranty.

Repairing Databases

Very rarely, if there is a program or hardware malfunction while the program is storing data into one of the databases, it is possible for the database to be "corrupted". The data is still there, except possibly for the one record that was only partially saved before the malfunction. If such an event occurs, the program may

give you an error message indicating the one of the databases is not a Microsoft Access database or is corrupted. If you receive this message, you should exit the program and restart it again. On the opening screen, there is a button in the lower left corner labeled Repair Databases. Tap this button and follow the instructions on the screen to repair your databases.

Chapter 20 – E/M Coding Features

The ENT Medical Dictator has been modified to conform to the latest regulations for Evaluation and Management (E/M) coding guidelines.

Terminology matches E/M coding requirements

Several areas of the program have been changed to match what is expected in the E/M rules. For example, the Review of Symptoms has been expanded and modified to match the categories in the published coding rules.

Default exam terminologies have been extensively modified

Now that the complete ENT exam has been specified, the default normal exams have been changed to reflect the information that is expected to be present. You will still have the option, as always, to modify the default exam terminologies. With the new E/M code tracking features, it is imperative that any custom phrases used in default exams cover all of the anatomical area that the default phrases uses. For example, the default oral exam phrase describes the lips/teeth/gums, the oropharynx and the pharyngeal walls. Clicking on the normal oral button will give you credit for 3 items or bullets for the complete ENT exam. If your new default oral exam phrase does not cover all three areas, your exam level may be coded too high and you might be using incorrect visit levels. It is strongly recommended that you review all of your custom exam terminologies if you plan on using the E/M tracking features.

Compatibility with patient sign in questionnaires

The new version of the program makes it easy to completely document the patient's past medical history, family history, social history and review of systems. Some physicians may prefer that this information be captured by a patient sign-in form that the physician reviews. The new E/M coding rules allow this but require very specific terminology on the medical record. The program's complete past medical history module has a new button titled: ***PMH information reviewed...***. Click on this button will bring up 5 choices. The first two choices are to be used on the patient's initial office visit. The first choice simply states that the questionnaire was reviewed. The second choice states that the questionnaire was reviewed with some pertinent findings that can be listed in the PMH section as they have been in previous versions of the program. The last three choices are used for followup visits where previously captured information is reviewed. With all of these choices, the terminology is carefully chosen to satisfy the E/M coding rules. The E/M tracking features of the program will assume that the patient questionnaire represents a complete PSFH (past history, social history and family history) and a complete review of systems. You may wish to review your current patient questionnaire to make sure that it satisfies these requirements.

E/M tracking features

The program will keep track of the information entered and which requirements have been satisfied for the various visit levels. As the information is being captured, additional information will be presented in the title bars of various windows so that the physician can see where he stands with the various requirements.

There is also a button on the Plan form titled E/M that will bring up a more detailed form that includes what items are missing.

The screenshot shows a software window titled "DETAILED EXAM (14 of 18, 0/1E, 0/1R, 0/1C, 0/1N for Complete Exam)". The window contains a form with the following elements:

- A "Vital Signs" section at the top.
- A list of examination items, each with a "Normal" label and an "Abn." checkbox:
 - Normal Ears
 - Normal nose
 - Normal throat
 - Normal neck
 - Normal NP
 - Normal HP
 - Normal head
- Buttons for "Other" and "Procedures" below the list.
- A "Testing" button below "Other" and "Procedures".
- A "Go To Impression" button at the bottom left.
- "Clear" and "Enter" buttons at the bottom center and right, respectively.

This is an example of a modified exam module screen that is keeping a running account of the E/M level of examination. This particular example shows a detailed examination (more than 12 items or bullets). It also shows that to get the next level of exam – the complete exam, you have satisfied 14 or the 18 basic ENT exam items or bullets. It also shows you have not done the eye exam (0/1E), the respiratory exam (0/1R), the cardiac exam (0/1C) and the neuro exam (0/1N).

The program will suggest a visit level after the history and examination information has been entered. In many cases, the visit level will be conditional on the level of medical decision making. My program has no way to track that information. If the physician wishes, he may use the E/M button on the Plan form. This will bring up a series of option buttons for the various components of the medical decision making: the number of diagnoses/treatment options, the amount of data reviewed and the risk. By specifying the values for these three options, the program can then calculate the medical decision making level and ultimately, the visit level.

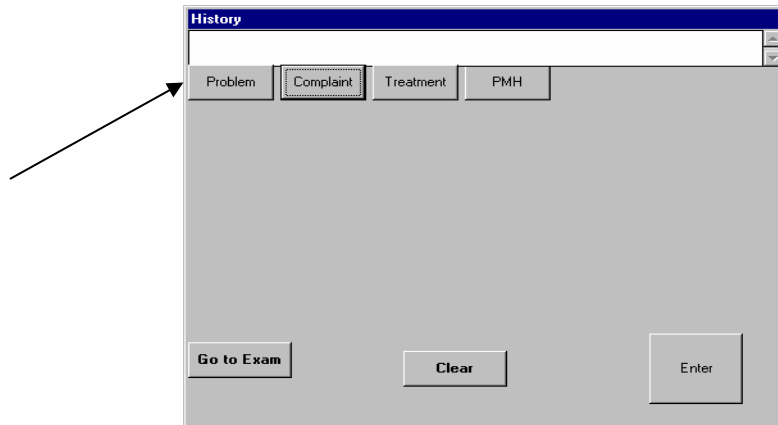
The opening screen also includes a new button for specifying whether the patient is new or established. If this option is not selected, the program will by default, calculate the visit level assuming that the patient is an established patient.

Example of the screen that comes up after the E/M button is clicked:

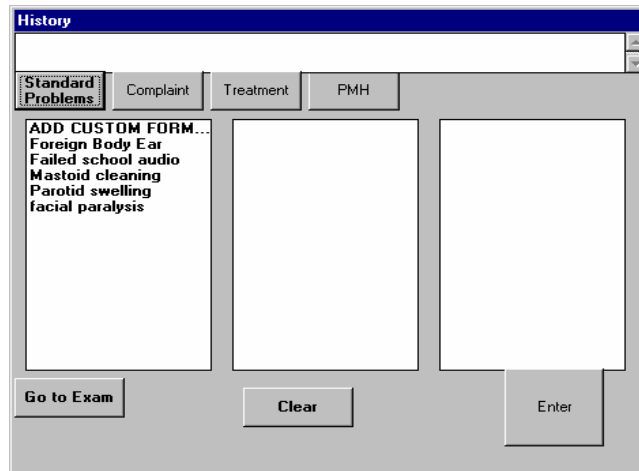
Est. Patient Visit Level = 2 (level 3 if MedDec=low)				
HPI = BRIEF (3 of 4 for EXTENDED HPI)				
missing:	quality	timing	context	mod. factors
	assoc. sx.	chronic ill.		
PFSH = PERTINENT				
missing:	family history	social history		
ROS = EXTENDED (2 of 10 for COMPLETE ROS)				
EXAM = EXPANDED PROBLEM FOCUSED (9 of 12 for DETAILED)				
missing:	vital signs	gen. appear.	communicate	head/face
	sinus	salivary glands	facial strength	clin. hearing
	larynx mirror	nasopharynx	eyes	respiratory
	cardiovasc.	neurological		
# of Diagnoses/Options				
	<input type="radio"/> minimal	<input type="radio"/> limited	<input type="radio"/> multiple	<input type="radio"/> exten.
Amount of Data Reviewed				
	<input type="radio"/> minimal	<input type="radio"/> limited	<input type="radio"/> moderate	<input type="radio"/> exten.
Risk				
	<input type="radio"/> minimal	<input type="radio"/> low	<input type="radio"/> moderate	<input type="radio"/> high
				<input type="button" value="Close"/>

Chapter 21 – Custom Problem Modules

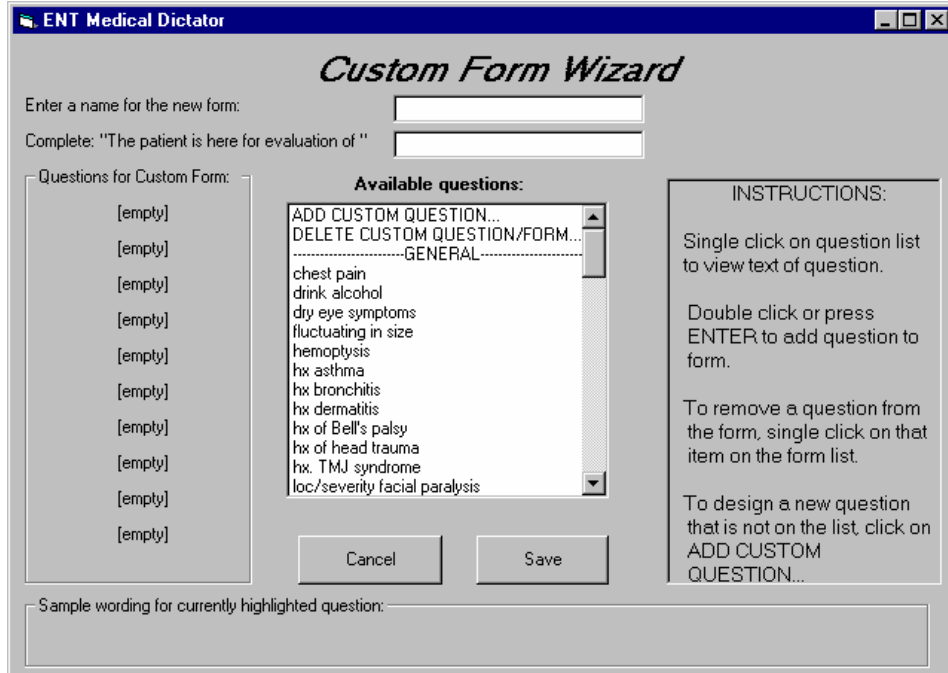
The ENT Medical Dictator comes with a large collection of prebuilt custom problem modules but you may also create your own problem modules to better fit your particular practice pattern. To access the regular problem modules, click on PROBLEM in the main history screen:



After you click the button once, it will change its caption to Custom Problems. Clicking on the button one more time will bring up a list of custom problem modules. These problem modules can be started and used just like the regular problem modules.



The top item on the custom module list is “ADD CUSTOM FORM...”. Clicking on this item will bring up the form you use to create custom problem modules:



The top box prompts you for a name for this custom problem module. The second box prompts you to finish the sentence that also forms the first sentence in the paragraph when this problem module is used. The left side of the screen shows which questions have been added to the problem module so far. Initially, all of these items will be empty as no questions have been specified.

To add questions to your custom module, you may either use the keyboard or a mouse/pen. If you use the keyboard, use the down arrow to scroll through the list of questions. As you scroll through the list, the box on the bottom will give you the full text of the question that you would be asking the patient. When you find a question you wish to add, press enter and that question will be added to the first empty slot in your problem module. If you use a mouse/pen, then single click to view the full text of the question and double click to add the question to the module. When you have added all the questions you wish to, click on the SAVE button.

Adding Custom Questions

If you do not see the question you want on the list, you may create it yourself. Clicking on ADD CUSTOM QUESTION will bring up a new form for that purpose:

ENT Medical Dictator

Custom Question Wizard

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6

name of question:

INSTRUCTIONS:
Enter a name for the new question, then press enter.

Cancel Save

The process to create a custom question is a bit more complicated and involves six steps. The custom questions you create go beyond simple yes and no responses and can include extended information including timing of the symptoms (the WHEN button), the result of treatments given (the RESULT button) as well as more detail for the positive response (the WHAT button). The first step in creating a custom question is to give the question a brief description that will appear in your custom problem modules. For most of the responses in the custom question wizard, you will be asked to type in information then press the enter key. Based on your responses, the wizard will guide you to the next step. The next step after entering the name of the question is to enter the full text of the question as you might ask a patient. This is helpful so that once you have a very large list of custom questions available, you can remember exactly what each question is about. After entering the complete text for the question, a new box will appear that allows you to enter a category for the questions.

ENT Medical Dictator

Custom Question Wizard

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6

name of question:

full text of question:

Pick a category for this question:

general ear nose
 oral sinus neck

INSTRUCTIONS:
Type in the full text of the question, then press enter.

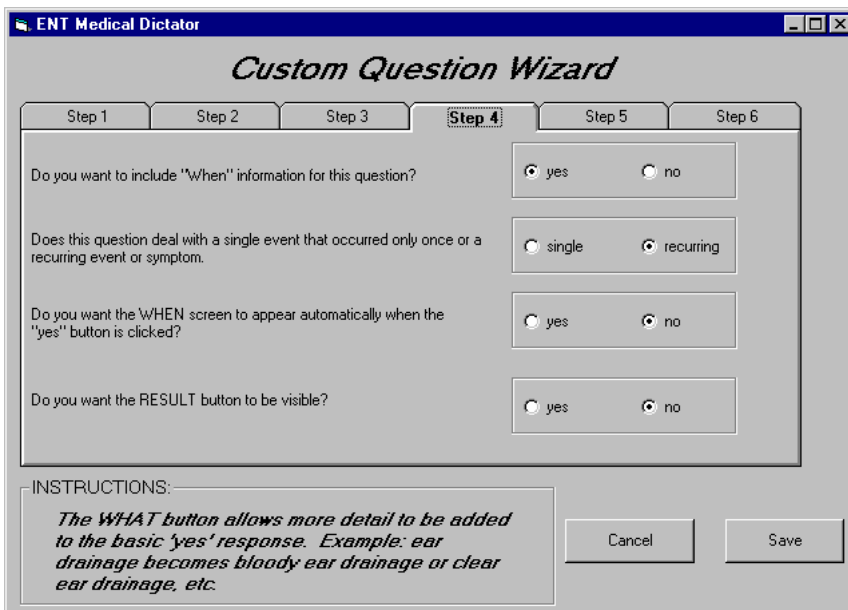
Cancel Save

This grouping of questions by category will facilitate choosing appropriate questions once you have a long list of questions. This will complete step one and a new screen will appear that has two options for

entering the basic response if the patient answers “yes” to the question. If you want the have the program start your sentence with one of the displayed options, then fill in the top box. Having the program start the sentence for you will avoid having a long string of sentences that each begin identically with the phrase “The patient has...” This makes your history more readable and makes it sound more like a transcribed dictation that a computer generated list of sentences. Some questions however do not lend themselves to beginning with “The patient has...” and the lower box allows for complete specification of the sentence. For example, if you are asking about the nature of ear drainage, you might want to start the sentence with “The otorhea was...”

After entering the information for the default yes response, you will be asked to provide a brief summary of the yes response. This information is used by the program to keep a running summary of the responses on the right side of the problem module screen. The summary should be limited to 3-4 words so that it will fit in the limited space available.

After completing step 2, the information for the “yes” response you will proceed to step 3 which is the same information for the “no” response. Enter this information in a similar manner. When this is complete, you will be presented with the following screen:



You will first be asked if you wish to include when information with your question. If you click yes, the WHEN button will appear for this question on your custom problem module. The next item asks you if the event was a single event or a recurring event. This is important to make sure the information makes sense once the sentence is created. For example, if the user of the program clicks “3 weeks” for the when information, the phrase inserted into the sentence has two possibilities:

- If “single event” then “3 weeks ago” is inserted
- If “recurring event” then “beginning 3 weeks ago” is inserted

When the wizard asks you if you want the WHEN screen to appear automatically, choose yes if your question is only about the timing of a symptom and that is all that you want to enter if “yes” is chosen. If your question involves some sort of treatment, enter yes for having the RESULT button visible. An example of a question that you would use a RESULT button would be “have you had ear surgery before?”

ENT Medical Dictator

Custom Question Wizard

Step 1 Step 2 Step 3 Step 4 **Step 5** Step 6

Do you want to show the WHAT button? yes no

Do you want the WHAT screen to appear automatically when the yes button is clicked? yes no

Are the WHAT items mutually exclusive? yes no

Do you want to include: LEFT, RIGHT, BILATERAL? yes no

Which word should LEFT, RIGHT, BILATERAL precede? (You can see the default wording of your sentence in the box below.)

INSTRUCTIONS:

Current yes sentence wording:
THE PATIENT HAS EAR DRAINAGE

Cancel Save

Step 5 of the program allows you to provide information for the WHAT button. If you have used the program before, you know that this is a powerful feature that allows much more detailed information be entered above and beyond simple yes and no responses. Click yes to show the WHAT button if you wish to activate this feature. When asked if you wish to have the WHAT screen appear automatically, choose yes if your question requires the user to enter more information, otherwise the response will not make sense. Choose no if you also want to include WHEN or RESULT information. An example of a question where you would want to have the WHAT screen appear automatically is:

“Where is your skin lesion located?”

To create such a question, your default yes response created in Step 2 would be “The skin lesion is located on”. Because this phrase would not make sense as a complete sentence, you want to force the user to enter the WHAT information such as “cheek, forehead, neck, scalp, etc”.

An example of a question where you do not need to show the WHAT screen automatically is:

“Have you had ear drainage?”

In this case, your default yes response would be “The patient has had ear drainage. “ Because this sentence makes sense, you do not have to force a WHAT response. However, you may include additional information under the WHAT screen such as “clear, purulent, bloody, etc.” so that the yes sentence can be modified to “The patient has had clear ear drainage” etc.

When asked if you want the WHAT items to be mutually exclusive, choose yes if you want to limit the choice to only one item in the WHAT list and choose no if you want to allow multiple items to be chosen. An example of a question you would want to be mutually exclusive is “Which ear has the foreign body?”

(left or right). An example where you would like to allow multiple choices would be “Have you had any cold symptoms? (runny nose, fever, cough, etc.).

There are many symptoms that can be localized to one side or the other, so you have the option to show a frame in your WHAT screen that includes left, right, or bilateral information. If you choose this option, you must specify which word in your default yes sentence you want “left” etc. to precede. You have a similar option for mild, moderate, severe. Using these features, it is possible to design more complex questions. The response to a simple question like “Have you had ear drainage?” can now be modified to a more complex sentence such as “He has had moderate left bloody otorhea beginning 3 weeks ago and occurring constantly.”

ENT Medical Dictator

Custom Question Wizard

Step 1 Step 2 Step 3 Step 4 Step 5 **Step 6**

Do you want to replace one or more words of the original sentence? If not, the 'new text' box entry will be added to the end of the standard yes sentence.

yes no

what item	text to replace	new text
clear	ear drainage	clear ear drainage
purulent	ear drainage	purulent ear drainage
bloody	ear drainage	bloody ear drainage

INSTRUCTIONS:

Current yes sentence wording:
THE PATIENT HAS EAR DRAINAGE

Cancel Save

The final step in creating your custom question is to tell the program exactly how to integrate the WHAT information into your sentence. You have two choices for this. You may replace one or more words of your default yes sentence or you may add the WHAT information to the end of the sentence. An example of replacing a word within a sentence is:

Default yes phrase: “The patient has had otorhea. “ Choosing ‘bloody’ will change the word “otorhea” to “bloody otorhea”

An example of adding to the end of a sentence is:

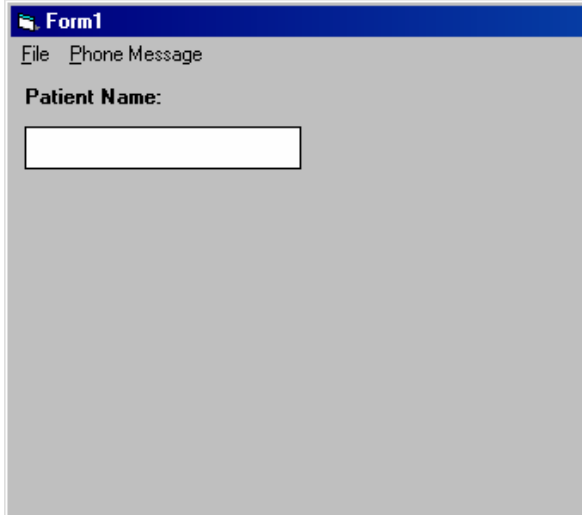
Default yes phrase: “The patient has a foreign body in the ear. “ Choosing “rock” will modify the sentence to “The patient has a foreign body in the ear in the form of a rock. “

You may specify up to 8 items to appear as choices under the WHAT screen. This does not include any left, right, bilateral or mild, moderate, severe information. The eight boxes on the left are the short phrases that will constitute the items that the user will see. If a word or words are being replaced, you will have a middle column of boxes for the old phrase and a right column for the new phrase. If the phrase is being

added to the end of the sentence you will be given a choice of what if any connecting phrase you want to use (i.e. “such as” or “in the form of”). Once all of the information has been entered, click on save and this question will now be available for the creation of custom problem modules.

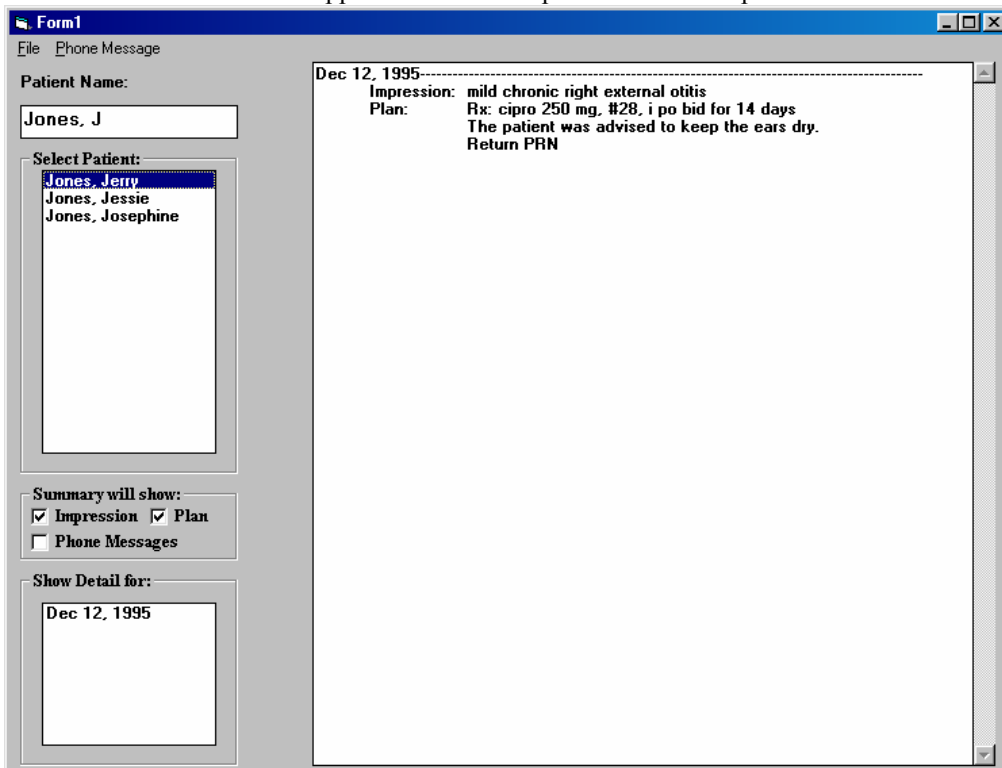
The Review Program

Beginning with version 7.00 of the ENT Medical Dictator program, an additional program, REVIEW.EXE will be automatically included with the default program installation. This is a separate executable program designed to be used by the office staff of the physician using the program. The physician will generate the records with ENT Medical Dictator and the office staff can use REVIEW.EXE to review records, print records and manage phone messages. The REVIEW.EXE is started similarly to other programs, by clicking on Start, Programs, ENT Medical Dictator then Review. This will launch the review program:



The screen starts out with a simple box to enter the name of the patient. You may enter the entire last name, part of the last name, or the last name with a first initial. Next press the enter key. This will bring up a list of patients that match the search criteria.

Several more windows will appear. Below the input box is a list of patients that match the criteria. You



may use the mouse or the down arrow key on the keyboard to move from patient to patient. As you do so, the list of patient visit dates (Show Detail For:) will adjust accordingly. The large window on the right will initially show a summary of previous activity for the patient. You may choose whether this summary includes the impression, the plan and or phone messages. Once you click on Show Detail For, the large box will fill the the full details of the visit.

Form1
File Phone Message

Patient Name:
Jones, J

Select Patient:
Jones, Jerry
Jones, Jessie
Jones, Josephine

Summary will show:
 Impression Plan
 Phone Messages

Show Detail for:
Dec 12, 1995

Jones, Jerry
December 12, 1995

HISTORY

The patient is a 33 year old male who is here for evaluation of ear pain. The pain was noted intermittently beginning 1 year ago. The pain is in the right ear only. The patient has not noticed any hearing loss, had a plugged sensation in the ear, or had tinnitus or vertigo. The patient also denies having had otorrhea, or had a history of TMJ syndrome. The patient has no other major medical problems.

EXAMINATION

ears- Left external ear canal is clear and the tympanic membrane is intact, mobile and noninflamed. Right tympanic membrane is intact, mobile and noninflamed. Right external ear canal is mildly inflamed medially.
nose- No intranasal masses, polyps or inflammation seen.
oral- No intraoral lesions or masses seen
neck- No masses or cervical lymphadenopathy noted.
nasoph.- No masses or lesions noted.
hypoph.- No inflammation or lesions noted.

TESTS

tymp.- normal (Type A) bilaterally

IMPRESSION

mild chronic right external otitis

PLAN

The patient was given a prescription for:
cipro 250 mg, #28, i po bid for 14 days
The patient was advised to keep the ears dry.
The patient was instructed to return as needed or if not better.

copy to Dr. Steven Simon

Using the File menu item on the top of the screen, you may print out the selected record or all of the records for this patient.

The program is designed with the office staff in mind and is designed to be more keyboard friendly than the ENT Medical Dictator which is designed for pen input. It is possible to do all of the navigation described here entirely with the keyboard. After you enter part of the patient's name, the focus of the program will automatically go to the patient list. There you can use the arrow keys to select the patient desired. Using the TAB key next will take you to the visit date list and will allow you to see the full detail. To go back to a previous list, use the SHIFT TAB key combination. The file menu can be accessed by using the ALT-F combination.

Phone Messages

One of the key features of the Review Module is to allow telephone messages to be logged on the computer. The program is designed so that previous clinical information can be retrieved by the office staff within the first 5-10 seconds of the telephone call from the patient. This will avoid the normal “Please hold while I get your chart...” Once the proper patient has been located in the REVIEW.EXE program, clicking on Phone Messages, New will bring up the phone message module:

Form1
File Phone Message

Patient Name:
Jones, J

Select Patient:
Jones, Jerry
Jones, Jessie
Jones, Josephine

Summary will show:
 Impression Plan
 Phone Messages

Show Detail for:
Dec 12, 1995

Jones, Jerry
December 12, 1995

HISTORY

The patient is a 33 year old male who is here for evaluation of ear pain. The pain was noted intermittently beginning 1 year ago. The pain is in the right ear only. The patient has not noticed any hearing loss, had a plugged sensation in the ear, or had tinnitus or vertigo. The patient also denies having had otorrhea, or had a history of TMJ syndrome. The patient has no other major medical problems.

EXAMINATION

ears- Left external ear canal is clear and the tympanic membrane is intact, mobile and noninflamed. Right tympanic membrane is intact, mobile and noninflamed. Right external ear canal is mildly inflamed medially.
nose- No intranasal masses, polyps or inflammation seen.
oral- No intraoral lesions or masses seen
neck- No masses or cervical lymphadenopathy noted.
nasoph.- No masses or lesions noted.
hypoph.- No inflammation or lesions noted.

TESTS

Phone Message:
Insert Pharmacy [] Insert Allergies none

Jones, Jerry
Sep 12, 1999 07:53 PM Phone message:

delete Save - Pending Doctor Review Save - Pending Further Action SAVE -Message Complete

The phone message window has several components. The large box in the middle is for the text of the phone message. The time of the call is logged in automatically by the computer. The patient’s preferred pharmacy can be retrieved from the drop down list of pharmacies and inserted with the button. Allergies can be inserted in a similar manner.

Once the office staff is done taking the message, they may click on SAVE – Message Complete if no further action is necessary. More commonly, the doctor will have to review the message and recommend some action such as a prescription to be called in. Clicking on Save- Pending Doctor Review will save a partially completed message for the doctor to review later. Once the doctor has reviewed the message, he or she may save the message as complete or click Save – Pending Further Action. For example this latter option would be used if the doctor specified a medication and wanted the office staff to call it into the pharmacy.

To review and act on the partially completed messages, use the menu at the top of the Review window and choose Phone Messages, Review. This will bring up a list of messages that are pending.

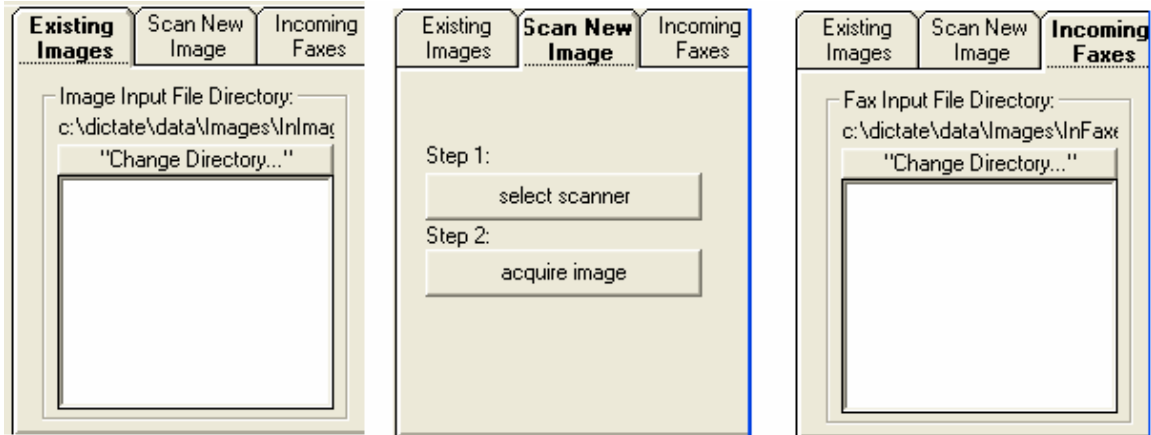
The screenshot shows a software window titled "Form1" with a menu bar containing "File" and "Phone Message". The window is divided into several sections:

- Patient Name:** A text input field containing the letters "st".
- Select Patient:** A list box containing the following names: Stackhouse, Charles; Stackhouse, Gerald; Stafford, Jason; Staley, Janice; Stallbaumer, Valerie; Stanley, Gordon; **Stanley, Jason** (highlighted); Stanley, Vaughter; Staples, Maureen; Stapleton, Estella; Stark, Joan; Starr, Justin; Starr, Karey; Stathis, Pete; Statter, Shirley; Stauffer, Judy.
- Summary will show:** A section with three checkboxes: Impression, Plan, and Phone Messages.
- Show Detail for:** A text input field containing the date "Jul 5, 1995".
- Pending Phone Messages:** A large text area containing two sections of messages:
 - Phone Messages Pending MD Review-----
Porter, Becky
Jones, Jerry
Zamary, Maria
 - Phone Messages Pending Action by Office Staff-----
Jabbari, Maryam
Nunez, Tony
Bachman, George
Stanley, Jason
- EXIT:** A button located at the bottom right of the "Pending Phone Messages" section.

The windows on the right side shows the current incomplete messages, divided by messages waiting for the doctor and messages waiting for the office staff. Clicking on a name will bring up the phone message window for completion of the record.

Chapter 23 – Scanning Documents and Images

The ENT Medical Dictator has the ability to store images and documents within the program for later retrieval, printing and faxing. The Review program is used to implement these features. The program can store black and white images such as scanned medical records as well as color images such as the output from a digital camera. These records and images become part of the patient's file that can be reviewed on screen as well as faxed or printed. The upper right hand corner of the Review program has a small box with three tabs. This is what you see when you expand each tab:



The left hand box will show a list of images that exist on the computer but have not yet been incorporated into the ENT Medical dictator database. These can be files generated by the scanner or digital camera. The software that comes with scanners and digital cameras often have software that will directly transfer the images to a directory on the computer's hard drive. The default directory to store these images is: "C:\dictate\data\images\InImages". The directory can be changed however by clicking on the appropriate button. It is not necessary for the TIFF files that the scanner generates be compressed before saving to the directory. The ENT Medical Dictator can compress the files before they are incorporated into the program.

The right hand box is similar to the left hand box except that instead of storing scanned images and digital camera images, it stores incoming faxes. Most PC's can be set up to receive incoming faxes and you have the option of either printing them out immediately as they come in or storing them on the hard drive for later review. If you use the latter option, you can use this list to pull up the faxes that you have received. At that point, they can either be printed, deleted or saved

The middle box is used if you want to use the ENT Medical Dictator to directly control the scanner. First you select which scanner you wish to use then the second button will scan it in and show it on the screen for you to print, delete or save.

Associating information with the scanned images

The images you are collecting would not be of much use unless you have a way to associate information with the images so that they can be searched for and sorted in a meaningful way. The following shows the type of information that can be associated with a scan:

Information to attach to image:

Date: 9 /14/2002

First Name: _____

Last Name: _____

date of birth _____

account #: _____

Doctor: _____

Description: _____

Result: _____

Comments: _____

Save File

Save File for Doctor Review

Delete PRINT

Information to attach to image:

Date: 9 /14/2002

September 2002

Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Today: 9/16/2002

Result: _____

Comments: _____

Save File

Save File for Doctor Review

Delete PRINT

The left box shows the type of information that can be stored. The first item is the date. By default, it will be the current date but it can be any date you choose. Clicking on the little down arrow to the right of the date field will expand a small calendar where an alternative date can be chosen quite easily. For example, if you received by mail the result of a sinus cat scan that was done 5 days ago, you would want to change the date to reflect the date of the actual test, not the date you scanned it in.

The First Name, Last Name, date of birth, account # fields are all self explanatory. The Doctor field is for the actual doctor who saw the patient, not the referring doctor. This will only be meaningful in multiple physician practices.

The Description, Result and Comments fields are for unique information for that particular image. An example:

Description: Sinus Cat Scan

Result: Normal

Comments: The patient was called on 9/4/2002 and advised scan was normal. Advised follow up prn

If you have been using the controls on the left side of the Review program to pull up patient records, then the program will automatically fill in the name of the patient for you.

After the information for the file has been entered, you have the choice of “Save File” or “Save File for Doctor Review”. The second option will mark the file as an image that the doctor needs to review before it can be saved permanently.



Clicking on this option will bring up a list of patients who have images that need to be reviewed. Additional comments can be added after reviewing the image.