Instructions for the FPM ICD-9 Reference for PDA (Pocket PC version)

This PDA file was created to enhance the *FPM* Long List and to make it more portable and usable at the point of care.

The program used to create the *FPM* ICD-9 Palm file is called HandyShopper. It was chosen because it is freeware, created by Christopher Antos, and it has several features that make it ideal for ICD-9 coding:

• HandyShopper uses a filtering mechanism for searches. In other words, when you enter a search term using HandyShopper and the ICD-9 database, the list of more than 2,400 codes is shortened to only those matching the search. Thus, *all* the results for a search are listed at once, making it easier for you to quickly choose the most relevant code.

• HandyShopper's filtering function is extremely fast. The filtering is almost instantaneous on Pocket PCs.

• ICD-9 entries can be customized by the user, including user-defined shortcuts to frequently used codes.

Installation

1. The HandyShopper program for Pocket PC can be downloaded from the HandyShopper site at http://home.comcast.net/~chrisant/hs3/hs3.htm#Download. There are also links to this download at the HandyShopper Wiki page at http://www.ggaub.com/hswiki/tiki-index.php
Click on the **Windows Mobile** link to download the InstallHandyShopper.msi installation file. Double click on this file on your computer to install the program.

2. Install the *FPM* ICD-9 PPC file onto your device. The full file name is HS2_FPM_ICD-9_PPC.PDB.

Using the Pocket PC version

Figure 1 shows what the ICD-9 program looks like In the Programs screen. Tap the HandyShpr icon to open the program. The Database screen is shown in Figure 2. Tap "FPM ICD-9 PPC" to open the file.
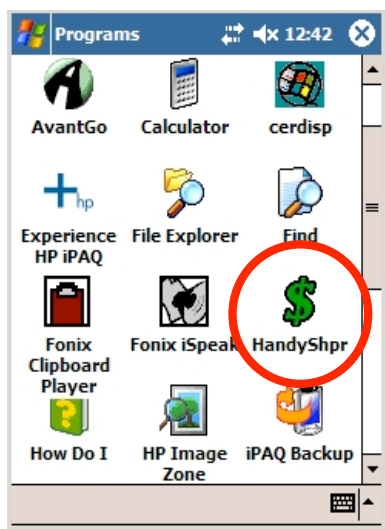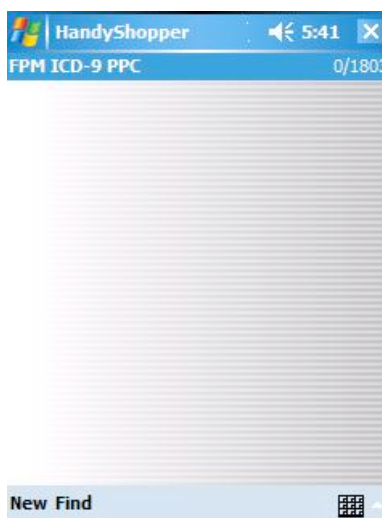
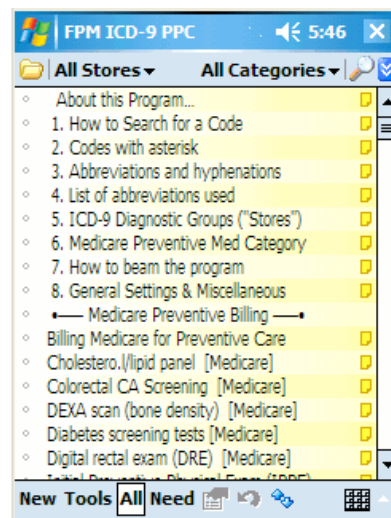

Figure 1

Figure 2

Figure 3

Each entry in the list has a bullet in front of it, and some entries have an attached note (accessed by tapping the yellow note icon at the far right of the entry). There are over 1800 entries in the ICD-9 file, with over 2,400 ICD-9 codes. Please note that there are many features in the HandyShopper program designed for the list/shopping function. **In general, the "All" button should remain selected when using the ICD-9 file**.

Additional information can be put into notes attached to each entry. This is accessed by tapping on the yellow rectangle at the far right of the entry (Figure 3). The Pocket PC has an option that allows you to open and edit each main entry. To do this, tap the "Tools" button (Figure 4, blue arrow) and check the box that says "Enable in-cell editing" (Figure 5, red arrow, and Figure 6). Now, tapping a cell allows full viewing of the contents rather than jumping straight to the note section.
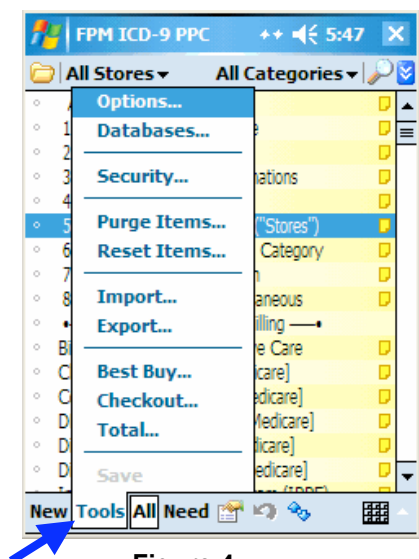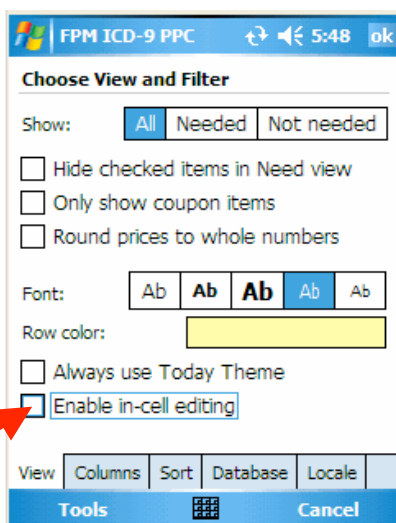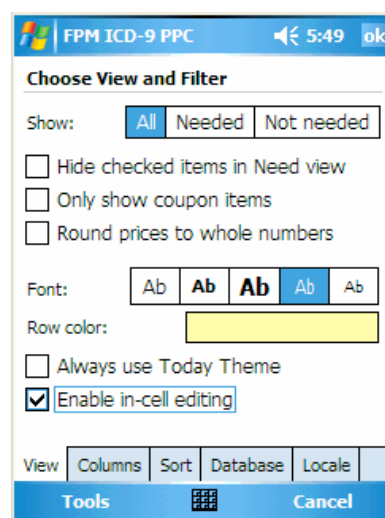
Figure 4   **Figure 5**   **Figure 6**

Searching/filtering

To search or filter the ICD-9 list, tap the magnifying glass icon in the upper right-hand corner to the right of the "All Categories" drop-down list. This opens the keyboard and the search box (Figure 7, blue arrow). Type any search phrase into the box. Figure 8 shows the results of typing "abd." The list of more than 1,800 items is filtered down to 13 ICD-9 entries. HandyShopper searches through every entry in the List View and every Note for any word beginning with the letters typed in the Lookup field, and filters the entire list to only entries that contain words beginning with those letters. Searches are not case-sensitive, so all search terms can be entered in lower case. Note that all occurrences of "abd" are highlighted, and the yellow note icons are shaded if the term "abd" is contained in that note.

To speed searches, code entries have been modified to keep closely related codes in the notes section of each entry. For example, in Figure 8, "Abdominal pain" shows up as "789.0*" – **the star indicates that the code requires another digit**, which can be found in the note. Tapping the yellow note icon at the right of the "Abdominal pain" entry brings up the screen in Figure 9, from which the specific code desired can be chosen. Many similarly related fourth- or fifth-digit codes are grouped in this way. Without grouping related codes, a search with the term "abd" would produce a list of 45 entries; by putting related codes in the Note section, the search result is shortened to 13 entries, thus easing your ability to find a code within a short, easily viewable list. Tap "OK" in the upper right-hand corner to close the screen and return to the List View (Fig. 8). Tap the small blue arrow to the right of the search field to clear the search.
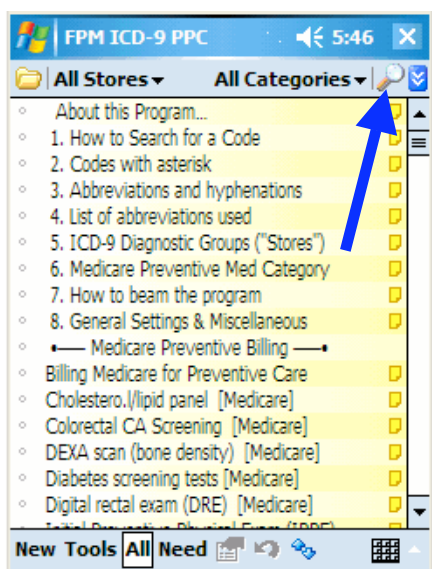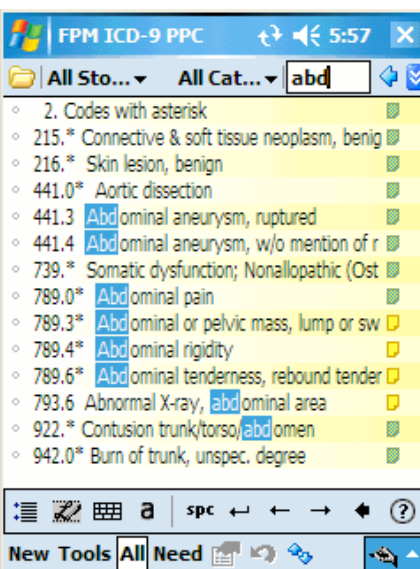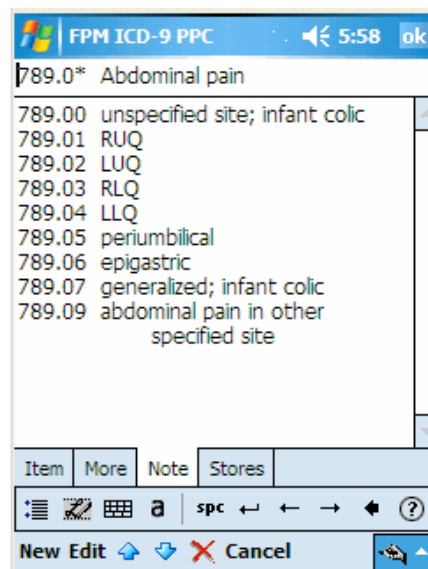

Figure 7   **Figure 8**   **Figure 9**

Please note the four tabs at the bottom of the screen in Figure 9: "Item," "More," "Note" and "Stores." The first time an entry is opened, it might default to the Item tab. However, once the Note tab is chosen, all additional entries opened during that session will default to the Note tab.

The Note tab allows for a variety of alternate terms and abbreviations to be entered for a single item. For example, the code V06.1, "Immunization, Diphtheria-tetanus-pertussis, combined," also contains the abbreviations "DTaP," "DPT," "DTP," "Tdap" and "Dtap" in the entry line and its note. Searching for any of these abbreviations produces a search result that includes V06.1. Additional shortcuts or phrases can be added to any entry. Because HandyShopper considers a period or a hyphen to indicate the start of a new word, a hyphenated version of most long words starting with "hyper-" or "hypo-" or "hyperpara-" has been put into the file. For example, rather than typing "hyperparathyroidism" to find its code, only "para" is typed in the search box (Figure 10). This brings up a short list that includes "252.0* Hyperparathyroidism." Tapping on the note icon at the end of the entry (or on the generic note icon to the right of the Need button near the bottom) opens a screen (Figure 11) from which the desired code can be chosen. Note that the extra hyphenated search term, "hyper-parathyroidism," appears below the line. Most such extra terms are placed at the bottom of the note section.
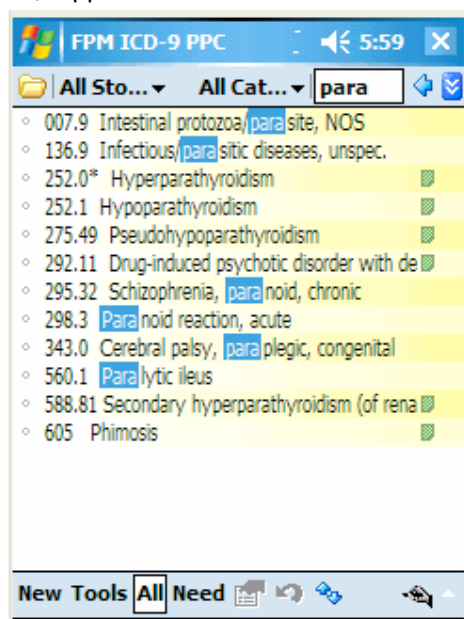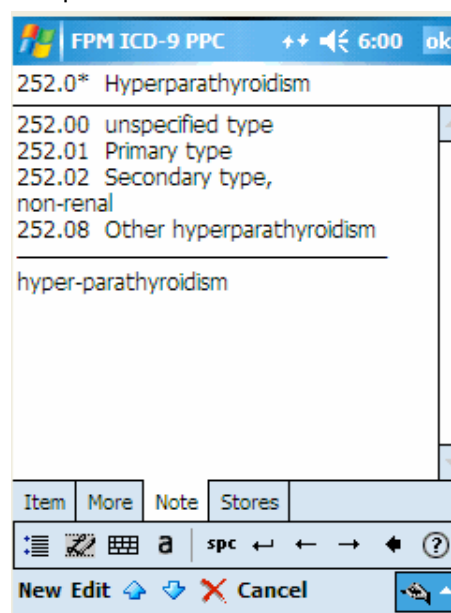

Figure 10

Figure 11

Similarly, to search for hyperkalemia, typing "kal" will work just as well as typing "hyperkal." A list of standard shortcuts used in this file (such as "HTN" or "CHF") is included as an entry in the Help section at the top of the list.

An additional benefit is that you can subfilter the ICD-9 list into category sections by tapping on the "All Stores" title (Figure 12, blue arrow). This activates a drop-down list, showing the diagnostic category headings from which you can choose.
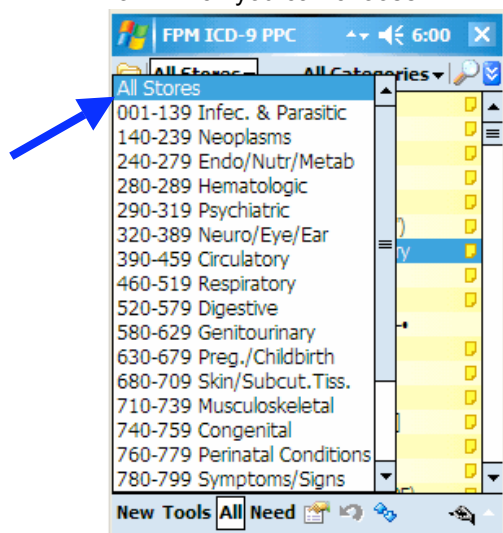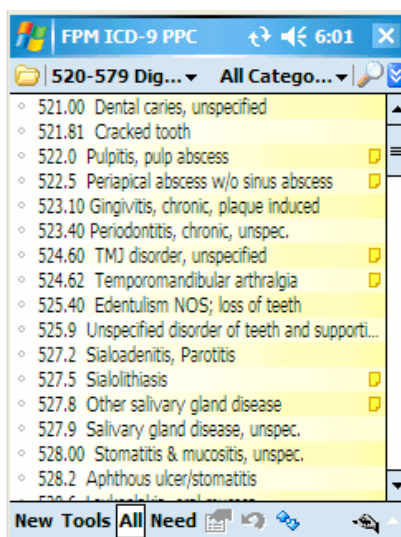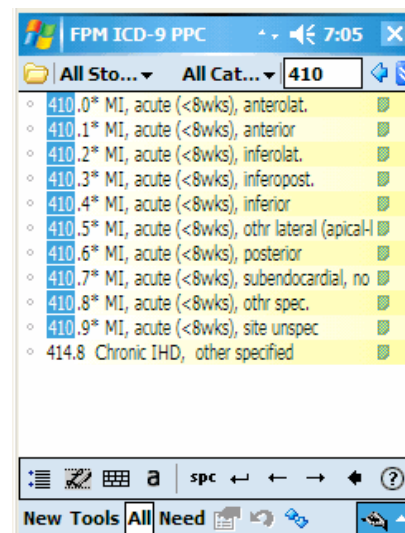

Figure 12

Figure 13

Figure 14

Scrolling down and choosing the category "520-579 Digestive" filters the entire list to only codes in that range (Figure 13). Tapping on the **Stores** heading and choosing "All Stores" (top of Figure 12) returns you to the entire list of entries. The subcategory list can be useful if you want to scroll through several different related codes within a diagnostic category. However, this can also be done by typing the first few numbers of a code in the search box. For example, using the search term "410" produces the results seen in Figure 14. However, using the search term "AMI" (abbreviation for acute myocardial infarction) would produce almost the same results.

Bonus: Medicare preventive care
Because billing for preventive care for Medicare patients is somewhat complicated, I have added a reference section with instructions for billing such items as Pap smears, PSA tests and bone-density scans. This is listed at the top of the file as "Medicare Preventive Billing," but you can also use the Categories tab at the top to access it. The Categories tab is shown in Figure 15. When tapped, the Categories drop-down list appears. Selecting "Medicare prev" restricts the list to only entries concerning Medicare preventive med billing (Figure 16). Selecting "All" returns you to the complete list. The "Unfiled" category is the default for only the ICD-9 codes. The first entry in the "Medicare prev" section, "Billing Medicare for Preventive Care," contains some general principles (Figure 17). The other entries contain specific information about permitted **frequency** of billing for that test or tests, **who is covered**, and what **ICD-9** and **HCPCS/CPT** codes to use.
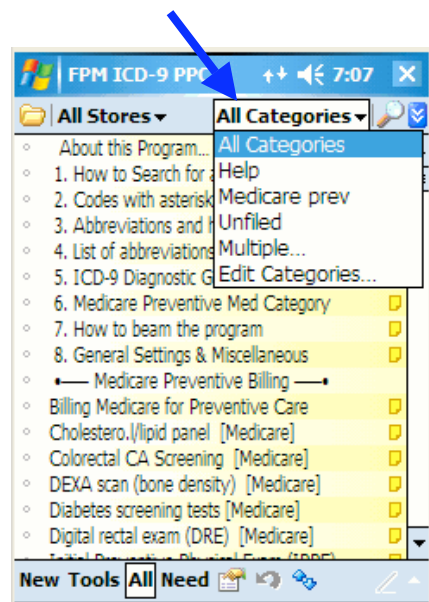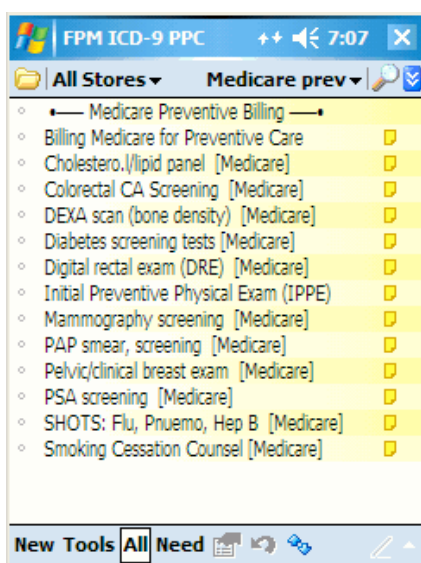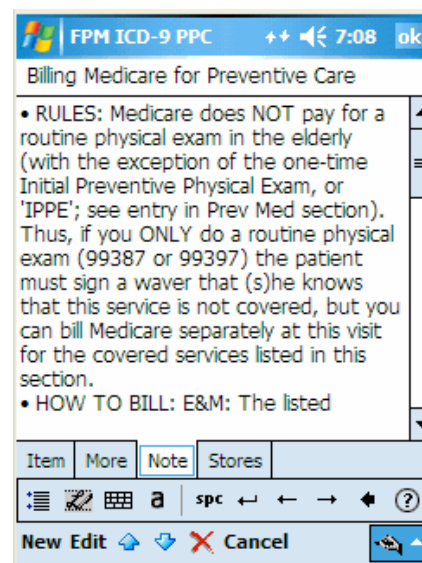

Figure 15   **Figure 16**   **Figure 17**

Adding entries
The simplest way to add an entry is either to tap the "New" button at the bottom left-hand corner of the screen, or to tap-and-hold on any entry with your PDA stylus. (The cursor must *not* be inside the entry when you tap-and-hold, or this won't work.) For example, if you wish to add ICD-9 code "V01.4 Contact or exposure to Rubella," you could tap-and-hold on a nearby code, such as "V01.71 Contact or exposure to varicella." Choosing "Copy item" creates an exact copy of the entry, which can then be modified. The advantage of this method is that the "Category" and "Store" are already preselected to match the copied item. If you press the "New" button, then subcategories must be assigned by selecting the "Stores" or "Item" tab at the bottom of the notes screen.

You should be aware that this program was designed as a checklist/shopping program, so it has some features ("Checkout," "Best Buy," "Total") that do not relate in any useful way to the ICD-9 file. However, some users might wish to explore these and create their own files for other uses. I have personally found HandyShopper to be outstanding to use as a To-Do list, and the program allows you set alarms as reminders.

Beaming the program and file to others
If you would like to share this file with friends and colleagues, you need to follow two steps:
_ First, you must beam the program. To do this, open the File Explorer program on your PDA. (see Figure 18).
Navigate to the HandyShopper program, which should be in the Program Files section (see Figure 19, red
arrow). Tap-and-hold on the filename with your stylus, and the pop-up menu appears, as in Figure 20. Select
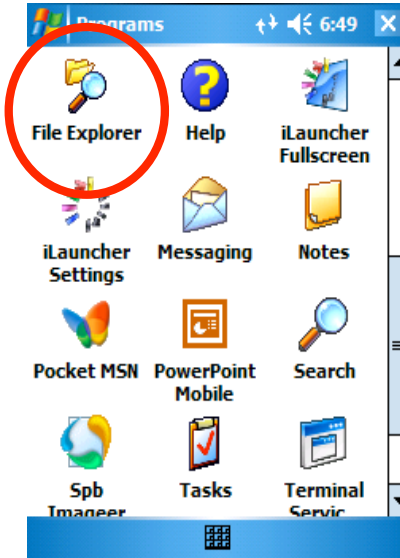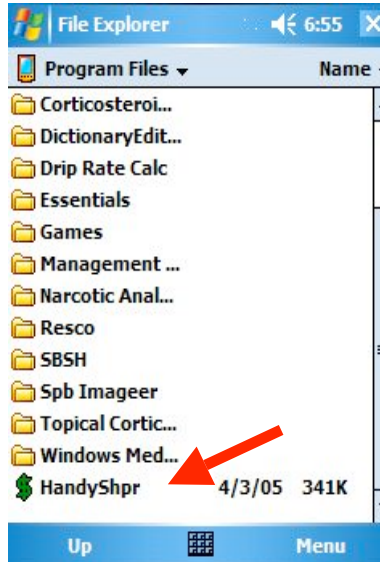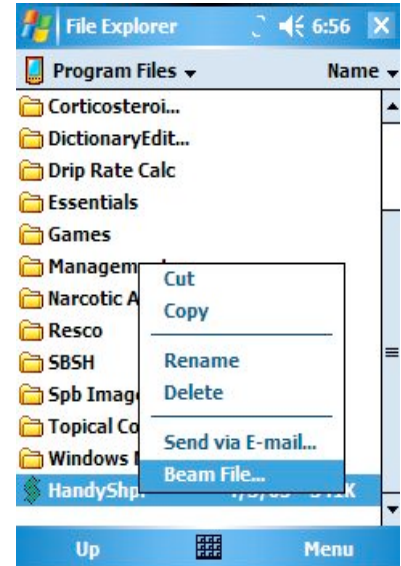"Beam File…" to beam the program.

| Figure 18 | Figure 19 | Figure 20 |

_ The second step is beaming the ICD-9 file. To do this, navigate to the location of your FPM ICD-9 list file,
which is named HS2_FPM_ICD9_PPC. (Avoid HS2_FPM_ICD9_PPC-bak; this is a backup file that Pocket PC
creates automatically for all files.) Tap-and-hold, and a pop-up menu will appear; select "Beam File…" (Figures
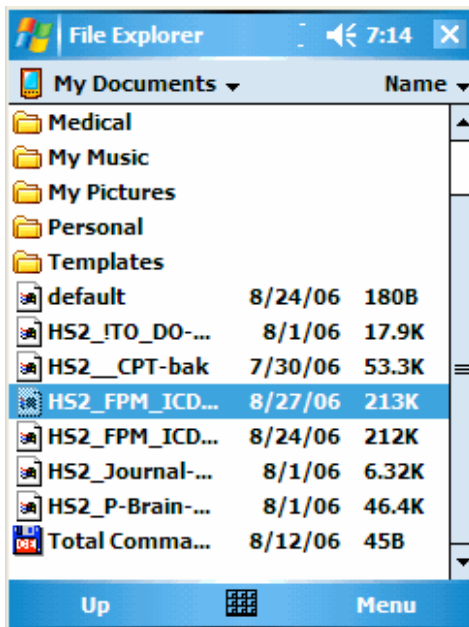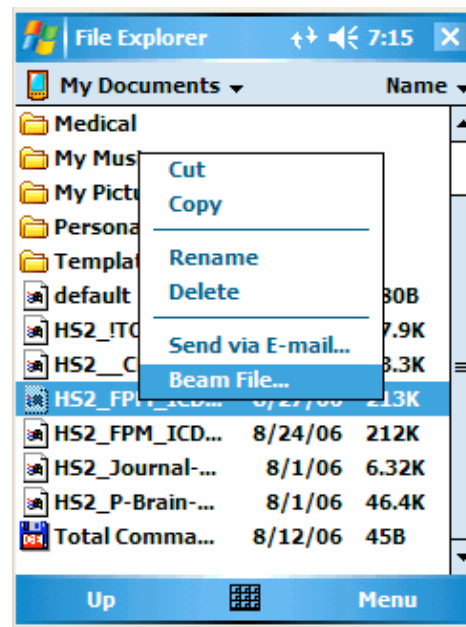21 and 22).

| Figure 21 | Figure 22 |

Questions and answers
Q. Can the program be modified to trim off the shopping part and thus be specifically designed for medical use?
A. No. The programmer has had many offers to do this from many sources and has refused. The program must remain exactly as is. The upside is that it remains free.

Q. Can I run the program from my memory card?
A. The program and databases will run well off a memory card.

Q. Can you put the entire ICD-9 coding system into a PDA file? Wouldn't this make the ICD-9 file more useful?
A. Yes, it can be done, and no, it would not necessarily make it more useful. The ICD-9-CM system has more than 12,000 diagnostic codes, and this would swell the database size to over 1.5 MB. That, in turn, would make the search function run intolerably slowly for Palm OS users (about 10-15 seconds per search). Also, there are simply too many codes to make such a file useful. For example, had I not grouped "abdominal pain," "abdominal mass," "abdominal rigidity" and "abdominal tenderness" into four-digit starred entries with the fifth-digit codes listed in the note sections, using the search "abd" would return 45 entries – and this is for a database with ~2,400 codes. Expanding the database to more than 12,000 codes could result in a filtered list of almost 200 entries for a simple search. PDAs have a limited amount of viewable screen area, which necessitates that searches use some type of sequential narrowing of focus to limit the amount of information on each viewable screen. Using the full ICD-9 set with this program would not be practical

Q. Where can I learn more about the HandyShopper program?
A. Details about other aspects of the HandyShopper program can be found online at the HandyShopper Wiki home page at: http://www.ggaub.com/hswiki/tiki-index.php

Still have questions?
If you have any other comments, questions or suggestions, please feel free to e-mail them to me or to fpmedit@aafp.org

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