

## FIGURES 3 - 17

### VARIOUS SCREEN SHOTS FROM OUR FOLLOW-UP DATABASE

(From George W. Bock, M.D.,C.M.)

#### INTRODUCTION

We provide Figures 3-17 only for those interested in database structure, and our Forms, Menus, Dialog boxes, and Tables. These are “screen shots” taken from our mature, active database in October of 2005. The Forms come from actual patient records, but their identification, demographic data, and medical data have been changed somewhat for confidentiality. The “Flow Sheet Tables” shown in Figures 13, 14, and 15 are from actual patients. Hopefully you will get some useful ideas from this presentation.

#### SECURITY

We show these Forms in approximately the order in which one might use them when working with this database. The Forms and Menus (and the code behind them) are the so-called “front end” database, which resides on the individual desktop computer. They are not only all password protected, but they require what is called a “workgroup file,” which controls permissions on the Forms and Macros (small programs written to carry out a single task or two, or test data, or set up a printing session, for example). Using these restrictions, we assign permissions that vary from nothing (for a person trying to use someone else’s running computer), to read-only, up to add-only, and up to those of the database manager who can run all processes and reports (short of those reserved for the owner/author). Without the shortcut to the database being on your *own* desktop, there is no access to the workgroup file, and therefore none to any database files.

#### DATA

The actual demographic data and medical data are in a file on a server (computer) in our secure hospital computer room. There is additional security set on the server—one needs to have assigned permissions to access the *directory* (folder) containing the data file, to access the individual *file* itself (with read and write permissions), and finally within MS Access to reach into each individual data *table* within that file.

#### LOGS

The database keeps 3 log tables per user session. It records who logged on and when; how long the session lasted, how many times the user visited each form, how many cases had data changed or added, and how many letters they printed or left pending; finally, there is a list by unique key (identifier) of each record viewed and each letter printed.

#### COLOR

We use form and header color as a cue to the database user—*turquoise* for Menu (“switchboard”) Forms, *blue* for demographic data, *red* for the medical data form, and *white* to indicate that you are about to print something out on paper (white paper).

Microsoft Access - [REPORTS' DATES CHECK FORM]

**PLEASE UPDATE OUR MEDICAL FOLLOW-UP DATABASE:**

CHECKING LAST-PRINT DATES FOR REPORTS and BULK LETTERS:

REPORT NAME*	DATE LAST RUN	BULK LETTER*	DATE LAST RUN
CRITICAL cases	10/08/2005	1 <sup>st</sup> RESULTS	10/05/2005
DELINQUENTS	09/30/2005	PLEASE sched.	09/17/2005
FINAL DATA=?	10/08/2005	NOTIFY of appts	09/30/2005
NOTIFY-needed	09/30/2005	CONFIRM appts	10/08/2005
OVERDUE FUPs	12/04/2000	REMIND appts	09/30/2005
SCHEDULING	12/04/2000	Final Dx / 'NEXT'	10/05/2005
PURGE (closed)	07/30/2005		

\* RED-TITLES, RED-DATES = THOSE DUE TO BE RUN.  
\* (CLICK ANY TITLE TO GO STRAIGHT TO THAT MENU)

TOTAL # DUE TO BE RUN:  LAST-PRIOR LOG ON/OFF=10/14/2005

COURTESY OF GEORGE W. BOCK, M.D.C.M. ©1998-99 ©2000-01  
[F8-1 - 20040214L'] 3378 ttl. pts. 6158 ttl. fol-ups; 2102 =active.

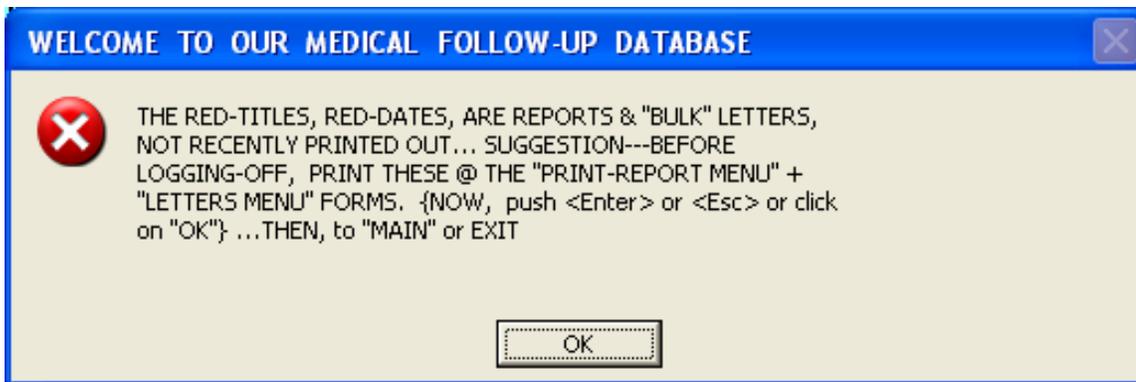
Push "Enter" key, or click "MAIN" button, to go to MAIN MENU; -or- click EXIT (or Exit Door) to EXIT

NUM

**FIGURE 3. DATABASE MANAGER'S MENU:** This is the opening menu, appearing first to Database Managers, every time they log on. The red colors above show which reports or letters groups are due to be printed as of this date. The database runs Queries every time this form is loaded. They check the data files and set the appropriate button labels **red**, according to preset criteria. Clicking on one of those labels takes the manager directly to the appropriate menu form. [Restrictive setting of permissions prevents non-managers from getting to this form—they go directly to the Main Menu Form, shown in Figure 5 below.]

The reddened “1<sup>st</sup> RESULTS” label above indicates that there are letters ready to be printed out informing patients of their lab results—someone forgot to print them out before logging off. This and the “PLEASE schedule an appointment” letters would be the most common steps one would take to “update our medical follow-up database.”

The bottommost line (showing the numbers) is a tally of the total number of patients registered in the database, the total number of follow-up cases found, and the number out of those cases that are still active (non-closed). This information comes from a permanent log file that is written to during every database session.

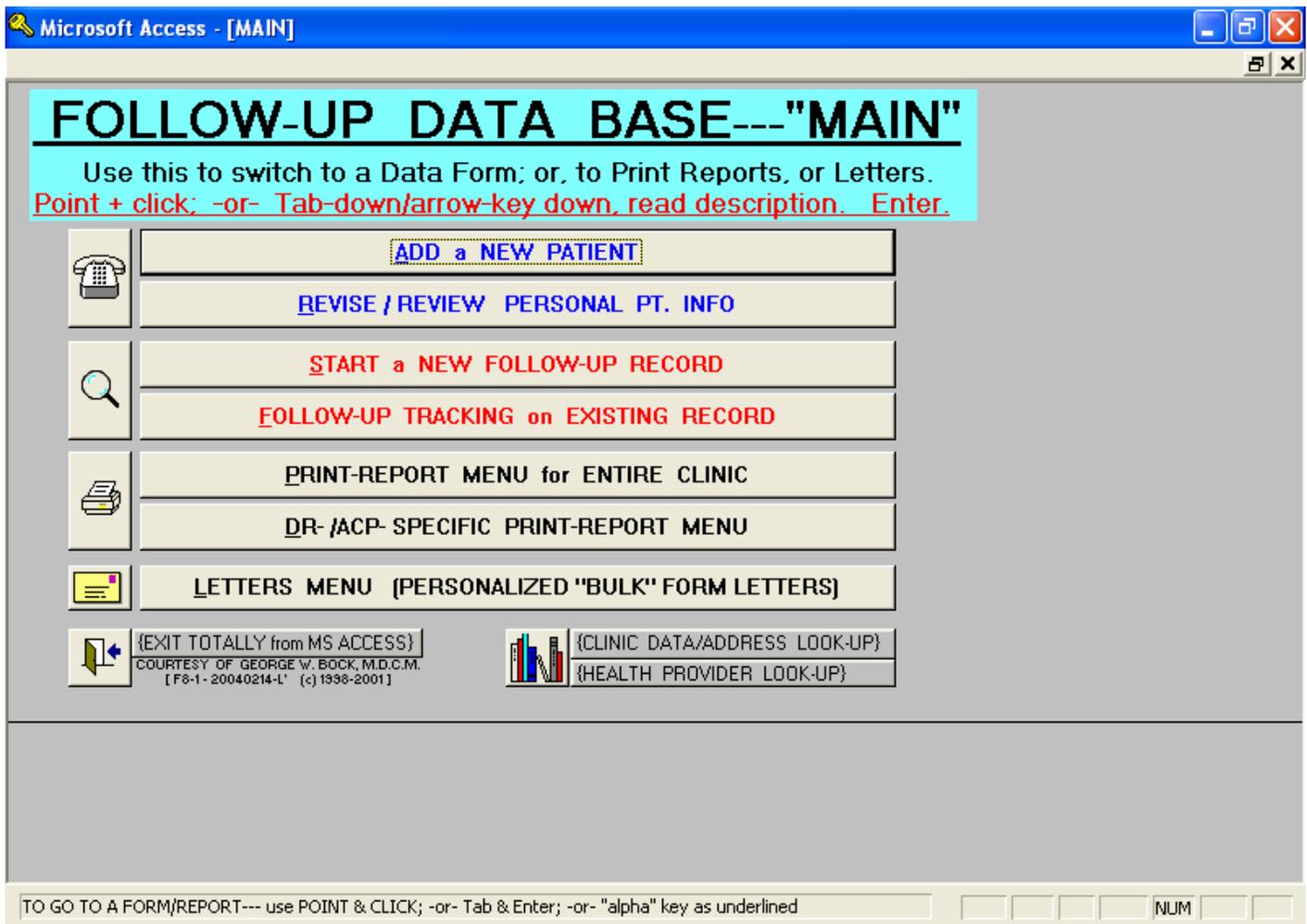


**FIGURE 4. A PROMPT:** This is one of the first (pop-up) Prompts (“Dialog Boxes”), seen by database managers only. This pop-up appears in *front* of the form shown in the prior figure (Figure 3), to create a pause, and hopefully slow down the “rapid clicker” so that they will take the recommended steps. It is seen only if the database finds any reports or a letters group that is overdue for printing (that is, a category of letters still “pending” from a prior user session). [Figure 3’s form shows these suspect reports and letters in a **red** color.] Completing those recommended steps is not, however, mandatory. Messages like these help the database users keep the database and its functions up to date. The above Prompt also appears at the time of a manager’s logging off, if cases or reports remain overdue. Again, it does not force any specific action. We tried to keep so-called “nag screens” to a minimum, but felt that they were needed to keep our data cleaner and to help keep the database functions up to date.

The database itself does monitor staff performance by checking and logging the status of each Report and each Letters Group at the time of each log off. Therefore, the database administrator (programmer) can get a view of how current our database is.

Other “Dialog Boxes” give choices to the user, or are a branching point that requires specific input from the user. In this database, we offer options such as the following: jumping to another field to change other (preexisting) data; deciding whether to send out “recall” (“PLEASE”) letters at 30 vs. 60 days after the last batch went out; or seeing an optional chronological Flow Sheet Table display (the one shown in Figures 13-15) rather than seeing just the person’s oldest case record alone (as in Fig. 10). The presence of such “menu” dialog boxes means that the casual user can navigate this database without having to remember all of the ins and outs of various functions.

Additionally, we added “Control Tip Texts” to a large number of fields and to the clickable buttons on various forms—these “help messages” will “pop up” when the mouse pointer is paused over a given field or button. These messages inform the user of what the given field is meant to contain, or what a field entry or button click actually does. [See Figure 10 for one example of a Control Tip Text—it is the buff-colored rectangle shown over the right side of the final (“MEMO”) field of the form in Fig. 10.]



**FIGURE 5. MAIN MENU:** This Menu, shown to all users shortly after logging in, lists our 4 Data Forms (labels in **BLUE** for demographics and in **RED** for medical data) and our 3 Menu Forms (with black labels). [As with all forms and menus in Access, the message in the stripe at the very bottom of the screen (starting here with “TO GO TO A FORM...”)) gives guidance to the user throughout. This “Status Bar” is field- and form-specific. We use it to give suggestions and explanations about the field where the cursor is, and to help the user remain oriented even if they do not use the database very often.]

From here, the user clicks one of the rectangular buttons to do what the label on the button says. When that task is done, all forms send the user right back here. This is like a “home page” on an internet site. The buttons in the lower right corner are for looking up specific provider information (e.g., home clinic, office phone number, pager number, or provider number), and for looking up data on a specific clinic (address, zip code, or fax number). An associated database file contains this system data, and also feeds information to the top of the letters we send out (giving clinic name, full mailing address, main telephone number, and specifically whom and what number to call for any questions and for help scheduling a follow-up appointment, etc.).

Microsoft Access - [FUP PRINT-REPORT MENU]

## FUP "PRINT-REPORT MENU" MAIN

USE THIS TO CHOOSE WHICH "REPORT" TO PRINT...

**"Tab" FOR REPORT DESCRIPTIONS-->CLICK TO PRINT; or push the alpha key\*** **DATE LAST RUN\*** **#**

<u>C</u> RITICAL ACTIVE FOLLOW-UP CASES	10/08/2005	10
<u>D</u> ELINQUENT (OVERDUE) CRITICAL FOLLOW-UP CASES	09/30/2005	2
<u>F</u> INAL DATA DUE—FUP DONE, but RECORD NOT CLOSED	10/08/2005	10
<u>I</u> NACTIVE INCOMPLETE OVERDUE CASES (ABANDONED)	07/03/2000	1283
<u>N</u> EEED TO NOTIFY PT. of SCHEDULED TIME-DATE-CLINIC	09/30/2005	0
<u>O</u> VERDUE ACTIVE FOLLOW-UP CASES	12/04/2000	798
<u>S</u> CHEDULING NEEDED WITHIN 1 MONTH	12/04/2000	927
<u>T</u> OTALLY INACTIVE (CLOSED) RECORDS—CLOSED SINCE:	02/27/2003	3636
<u>P</u> URGE TOTALLY-INACTIVE CASES, CLOSED OVER 3 YEARS AGO	07/30/2005	161

{EXIT} **LIST "SENT/PENDING" CASES: 0.** \*(RED-LABELS=THOSE DUE TO BE RUN)

TO LIST # OF CASES DUE FOR EACH LINE (EACH BUTTON)--- click on "#" button, or push Enter Thursday, October 13, 2005

**FIGURE 6.a. PRINT REPORT MENU:** This is a Menu of the various Reports that are available for printing. The last column (to the right) displays how many clinical records (cases) fall into each category (into each report). This gives the user the option of printing out a report, and then working from paper; rather than off a computer screen while consulting other applications in other windows at the same time.

The bottom button (“LIST ‘SENT/PENDING’ CASES”) looks for incomplete records, cases where specimens were sent out but their reports are not yet back, and those cases “forced” electronically into the underlying data table without full follow-up decisions yet made. “Final Data Due—FUP DONE” would list, for example, a Pap or colposcopy which has a “date done” entered (so as to block sending more reminder letters to the patient), but where there is no final pathology report back yet.

The button labels here turn **red**, just as they do on the form in Figure 3—when a programmed date passes. We captured the above page on 10/13/05. On 10/14/05, a two week time period had lapsed on two buttons (those with the date 9/30/2005 beside them above). This turned those two labels **red**, as shown on the next page, Figure 6.b....

Microsoft Access - [FUP PRINT-REPORT MENU]

## FUP "PRINT-REPORT MENU" MAIN

USE THIS TO CHOOSE WHICH "REPORT" TO PRINT...

"Tab" FOR REPORT DESCRIPTIONS-->CLICK TO PRINT; or push the alpha key

	DATE LAST RUN*	#
CRITICAL ACTIVE FOLLOW-UP CASES	10/08/2005	10
<b>DELINQUENT (OVERDUE) CRITICAL FOLLOW-UP CASES</b>	<b>09/30/2005</b>	<b>2</b>
FINAL DATA DUE—FUP DONE, but RECORD NOT CLOSED	10/08/2005	10
INACTIVE INCOMPLETE OVERDUE CASES (ABANDONED)	07/03/2000	1283
<b>NEED TO NOTIFY PT. of SCHEDULED TIME-DATE-CLINIC</b>	<b>09/30/2005</b>	<b>0</b>
OVERDUE ACTIVE FOLLOW-UP CASES	12/04/2000	802
SCHEDULING NEEDED WITHIN 1 MONTH	12/04/2000	935
TOTALLY INACTIVE (CLOSED) RECORDS—CLOSED SINCE: ➡	02/27/2003	3636
PURGE TOTALLY-INACTIVE CASES, CLOSED OVER 3 YEARS AGO	07/30/2005	161

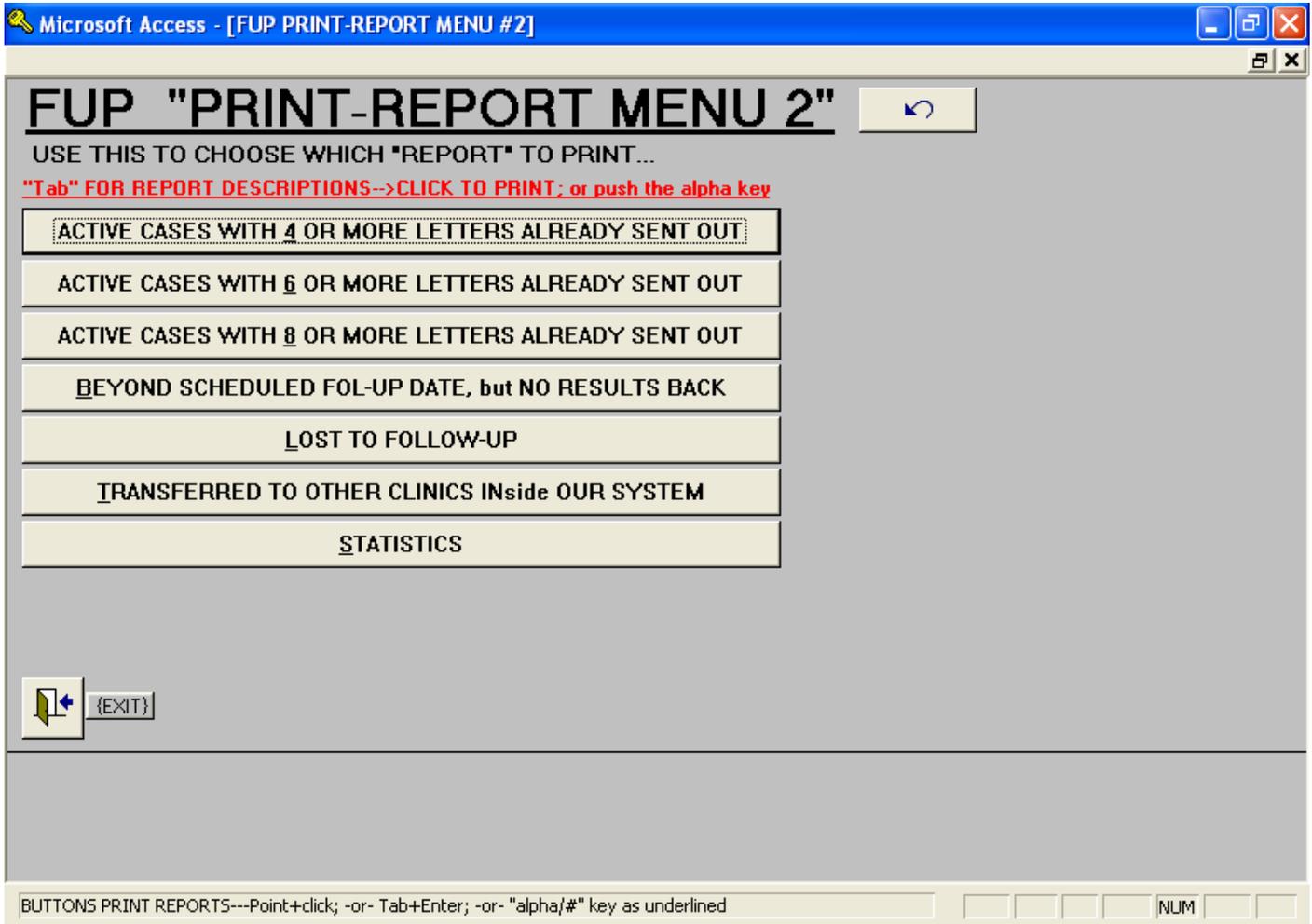
**LIST "SENT/PENDING" CASES: 0.**
\*(RED-LABELS=THOSE DUE TO BE RUN)

TO LIST # OF CASES DUE FOR EACH LINE (EACH BUTTON)--- click on "#" button, or push Enter

Friday, October 14, 2005

**FIGURE 6.b. PRINT REPORT MENU A DAY LATER:** This is the same Menu Form as in Figure 6.a, but was captured a day later (10/14/05, as shown in the lower right corner of the screen image)—this shows in **red** the two reports that should now be printed. The two buttons' descriptor labels ("**DELINQUENT**" and "**NEED**") are now **red** to indicate that these reports are due. The other change here is in the numbers in the far right column. Four more cases became "OVERDUE" overnight (798 became 802); and eight more have fallen due ("SCHEDULING NEEDED") within the next month's time (927 became 935). [Were this database used as a basis for manual record keeping and notification, these printed reports tell us who these patients are, and show their address and phone numbers for manual contact.]

Clicking the small arrow-head button in the extreme lower right corner of this menu form, takes the user to a second Report Menu, that shown in Figure 7, on the next page.



**FIGURE 7. THE SECOND REPORT MENU:** This is for printing out case lists and for printing our “STATISTICS” report—which we showed in Figure 2 (in a separate file). That report tabulates dozens of classifications of follow-up records and timing data.

Except for the “BEYOND SCHEDULED FOL-UP DATE, but NO RESULTS BACK” button, and the “STATISTICS” button above, we rarely use the other reports listed here. [Again, the message in the stripe at the very bottom of the screen in the form’s border, guides the user at all times. This “Status Bar Text” is field- and form-specific, and automatically changes as the user moves from field to field. With a menu such as the one above, the user can “Tab” from button to button, and the Status Bar Text changes, to tell you specifically what each subsequent Report will show. The button you are looking at has a dashed-line rectangle around its text so that you know which one it is—above, it is the top “ACTIVE CASES” button.]

Microsoft Access - [ "LETTERS MENU"--- 3 PARAGRAPHS ADDED TO ALL "BULK" LETTERS]

—MULTIPLE PATIENTS, "BULK" LETTERS [LETTERS MENU FORM]—

1. PULL-DOWN LIST; ENTER NAME OF SPECIFIC "CONTACT" FOR PATIENTS TO CALL:  
**BERNIE FULTON, R.N.** MAIN

2. TYPE IN AN EXPLANATION / or MESSAGE TO ALL OF THESE PATIENTS:  
 [...or delete the default note below, to add nothing to these "form-letters" being sent.]  
 This letter is based upon a routine review of medical records. If you believe that the above data are in error, please call us so that we can investigate further.

3. GENERAL "PS" PARAGRAPHS, TO APPEAR AT BOTTOM OF ALL THESE LETTERS...  
 (unless English + Spanish "PS's" changed, on PS FORM--CLICK HERE TO GO CHANGE):  
 We are MOVING in mid-November, to 3900 Grape Street (near the Police Station). There, the new Park Hill Clinic telephone number will be 720-956-2820.  
 APARTIR DE NOVIEMBRE LA CLINICA PARK HILL SE VA A TRASLADAR A 3900 GRAPE STREET, DENVER.

4. PRINT ONE LETTER TO ALL APPROPRIATE PATIENTS (CLICK ON ONE CHOICE\*):

<b>1st RESULTS (if not yet informed)</b>	<b>NOTIFY OF SCHEDULED APPTS.</b>
PLEASE CALL TO SCHEDULE FUP	CONFIRM APPTS. in 30-60 days
<b>FinalDx+"NEXT" RECOMMENDATION</b>	REMIND OF APPTS. in < 30days
(LEAVE HERE<--- GO BACK TO "MAIN")	ALL OF THE ABOVE, ONLY AS DUE

\*[RED BUTTON-LABELS INDICATE THOSE CATEGORIES NOW DUE TO BE RUN, UNDER "ALL"]

<Enter> TO ACCEPT NAME ABOVE; -or- KEY-IN 1st NAME+; -or- PullDown & Click--ALPHABETICAL BY SURNAME

NUM

**FIGURE 8. LETTERS MENU:** This Menu prints out batches of letters. Here, as on other forms, each button title that is **RED** indicates a specific type of letter that has cases ready for printing (when the operator batches their entries). The two "PS" fields (under the section title labeled "3") can be left blank, or be informational as shown here. [The default is a blank (null) field.] Those users with higher permissions can click on that message field (click on one of the two large rectangular boxes under label "3"), and go to another form where they can change the "PS" message and/or change the Spanish "PD" message. [The *white background* of this form is a color cue to remind users that this Menu prints out letters on paper (white paper).]



Microsoft Access - [FOLLOWUP TRACKING]

**FOLLOWUP TRACKING** PRINT Pg. START A FUP 1st! MAIN

Pull Down! LN--for MF#= 0000001 FN PATIENT FEMALE D.O.B. 01/01/1968 S 303-331-4129

fin# 11111111 CLINIC PROVIDER G FOL UP#  
 CRITICAL?  PARK HILL FAMILY HEALT GEORGE BOCK, M.D. 3 0000001-01/01/2005P

RESULT: DATE ABNL. ABNORMALITY OR PARAMETER NOTES/LIMITS/CONCERNS #1=  
 01/01/2005 PAP NORMAL REPORT

FOLLOW UP: WHAT'S NEEDED NEEDED BY WHERE SCHEDULED SCHEDULED TIME= DATE=  
 PAP SMEAR 01/01/2006

GOT DONE: DATE DONE POST-OP "IMPRESSION" ONLY NOTIFIED PT. HOW? HOW?  
 NOTES/LIMITS #2=

FINAL DIAGNOSIS, pull down: 0-LOST/ RETURNED MAIL LAST UPDATE= 10/11/2005 23:21 OUR LAST LETTER=

"NEXT"... INTERVENTION BEFORE CLINIC NEXT RESPONSIBLE CLICK for NEXT FOL UP, #

CLOSED: MEMO: Lost, mail returned! GB 051008. Closed.  
 10/08/2005

MEMOS/EXPLANATIONS, incl. CHANGES, go here in "MEMO."  
 This field will print on many REPORTS, so use it liberally!  
 Entries here will help you later, if the patient doesn't respond.  
 This data will help you decide what to do for problem cases.

(PRINT A LETTER TO PATIENT ON THIS 1 FOLLOW-UP)

ENTER ALL MEMOS/EXPLANATIONS, incl. CHANGES, TROUBLE SCHEDULING/REACHING Pt., etc. NUM

**FIGURE 10. MEDICAL DATA FORM:** Here is the form for entry of each case’s *medical* data and recommendations. As elsewhere, the yellow fields here are mandatory entries. [The rectangular buff-colored “pop-up” message seen at the bottom right side of the form in this figure is a “Control Tip Text,” used for giving a field-specific hint or help message. These messages appear when the mouse pointer hovers over a field for a couple of seconds. Here, it is over the large white “MEMO” field at the bottom of the form. This specific pop-up message tells where the information entered therein will show up in the future (“on many REPORTS”).]

The demographics across the top line of this form come from the prior (“Patient Info”) Form, appear automatically, and never need reentry. Click the “CRITICAL” box (on the far left near the top) to be reminded of this case every 2 weeks. The Clinic field defaults to the current clinic, but can be changed to another clinic (e.g., Women’s Care) when needed. This will put *their* Clinic name, *their* address, and *their* contact phone number at the top of all letters sent out on this case (for this specific record only).

The “ABNORMALITY” and “WHAT’S NEEDED” fields are pull-down lists. Entering a “P” into either, takes you to the “Pap” section of each list (“auto-complete”).

Microsoft Access - [FOLLOWUP TRACKING]

**FOLLOWUP TRACKING**    PRINT Pg.    START A FUP 1st!    MAIN

Pull Down!    LN--for MF# = 0000002    FN    D.O.B.    303-331-4129  
 PATIENT    SECOND FEMALE    01/01/1966    303-000-0000

fin# 22222222    CLINIC    PROVIDER    G    FOL UP #  
 CRITICAL?     PARK HILL FAMILY HEALT    GEORGE BOCK, M.D.    5    0000002-08/24/2004P3

RESULT:    DATE ABNL    ABNORMALITY OR PARAMETER    NOTES/LIMITS/CONCERNS #1=  
 09/20/2004    08/24/2004    PAP ASC-US (ABNORMAL)    Repeat 4-6 mos per ST

FOLLOW UP:    WHAT'S NEEDED    NEEDED BY    WHERE SCHEDULED    SCHEDULED TIME= DATE=  
 PAPER SMEAR    02/24/2005            

GOT DONE:    DATE DONE    POST-OP "IMPRESSION" ONLY    NOTIFIED PT.    HOW?  
 01/01/2005                  

NOTES/LIMITS #2= Clinic Next Responsible = PKHL.

FINAL DIAGNOSIS, pull down:    PAP NORMAL REPORT    LAST UPDATE= 01/20/2005 00:08  
 2    OUR LAST LETTER= 01/20/2005

"NEXT"...    INTERVENTION    BEFORE    CLINIC NEXT RESPONSIBLE    CLICK for NEXT FOL UP, #  
 01/20/2005    PAPER SMEAR    07/01/2005    PARK HILL FAMILY HEALT    0000002-01/01/2005P

CLOSED:    MEMO: This automatically-entered record= placed 9/20/2004, from a prior Fol-Up, # 0000002-  
 01/20/2005    8/27/2003P. See that record for data!

(PRINT A LETTER TO PATIENT ON THIS 1 FOLLOW-UP)    ANALYZE THIS Pg.    PRINT: ANALYZE-Pg.

TYPE OF TEST/INTERVENTION --- YOU CANNOT CHANGE THIS HERE    NUM

**FIGURE 11.a. MEDICAL DATA FORM:** This is the same Form as seen in Figure 10, but showing a record of another patient’s follow-up case, one that is now “completed.” It shows Pap-ASCUS (as “ABNORMALITY”) on 08/24/2004, with a recommendation to repeat the Pap within 6 months (“NEEDED BY” 02/24/2005), rather than doing a colposcopy. Her follow-up Pap occurred early (“DATE DONE” 01/01/2005), and was normal (the “PAP NORMAL REPORT” seen after the “FINAL DIAGNOSIS” label).

There are six green-backed or light-green-bordered date fields on this form. The database fills these in. [We use the color green to flag the date fields that are automatically filled in by the database—though they can be reedited by the user.] In the case example shown above, five of these fields have dates in them. The empty date field is almost in the center of this form, just below the “WHERE SCHEDULED” field.

[Figure 11.b shows this patient’s subsequent case record, which takes data directly from the bottom half of the case above. You will recognize the date (01/01/2005), the result (“PAP NORMAL REPORT”), the recommendation (“PAP SMEAR”), and the recommended date (07/01/2005) from the above.] At this point, the above record will be closed (inactive), and the new record (Figure 11.b) becomes an “active” case.

Microsoft Access - [FOLLOWUP TRACKING]

**FOLLOWUP TRACKING**    PRINT Pg.    START A FUP 1st!    MAIN

Pull Down!    LN--for MF#= 0000002    FN    D.O.B.    303-331-4129  
 PATIENT    SECOND FEMALE    01/01/1966    303-000-0000

fin# 22222222    CLINIC    PROVIDER    G    FOL UP #  
 CRITICAL?     PARK HILL FAMILY HEALT    GEORGE BOCK, M.D.    6    0000002-01/01/2005P

RESULT:    DATE ABNL    ABNORMALITY OR PARAMETER    NOTES/LIMITS/CONCERNS #1=  
 01/20/2005    01/01/2005    PAP NORMAL REPORT    Clinic Next Responsible = PKHL.

FOLLOW UP:    WHAT'S NEEDED    NEEDED BY    WHERE SCHEDULED    SCHEDULED TIME= DATE=  
 PAP SMEAR    07/01/2005

GOT DONE:    DATE DONE    POST-OP "IMPRESSION" ONLY    NOTIFIED PT.    HOW?  
 NOTES/LIMITS #2= Clinic Next Responsible = PKHL

FINAL DIAGNOSIS, pull down:    LAST UPDATE= 01/20/2005 00:08  
 0    OUR LAST LETTER= 01/20/2005

"NEXT"...    INTERVENTION    BEFORE    CLINIC NEXT RESPONSIBLE    CLICK for NEXT FOL UP, #

CLOSED:    MEMO: This automatically-entered record= placed 1/20/2005, from a prior Fol-Up, # 0000002-08/24/2004P3. See that record for data.

{PRINT A LETTER TO PATIENT ON THIS 1 FOLLOWUP}    ANALYZE THIS Pg.    PRINT: ANALYZE-Pg.

Calculated    NUM

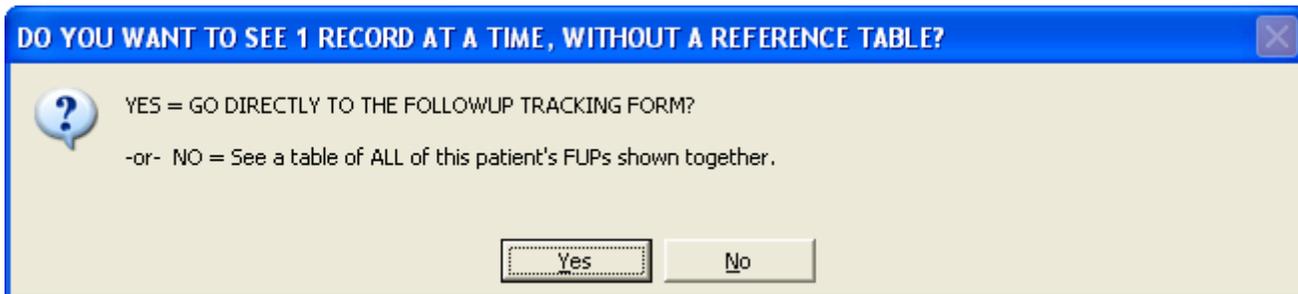
**FIGURE 11.b. THE PRIOR PATIENT'S NEXT MEDICAL DATA FORM:** This is for the *same* patient as in Figure 11.a, but this is their *next* case record. All data here came automatically from the prior case record (in Figure 11.a). This fact is automatically put into the large white "MEMO" field at the bottom of this form—see "This automatically-entered record...." A recall ("PLEASE") letter would go out 06/01/2005, one month before the 07/01/2005 "NEEDED BY" date shown above in the last yellow field. This automatic entry and the automatic reminder letter are real time savers!

This Form can be printed, but by design the prompts and buttons and pull downs do not appear as such on the printout.

All letters generated by this case will show the terms "PAP NORMAL REPORT" and "PAP SMEAR" just as on this screen above, and they will also pull the same dates (01/01/2005 and 07/01/2005) as well. If you look just above the field title "**CLINIC NEXT RESPONSIBLE**" (in blue type) and magnify (zoom in on) Figures 11.a and 11.b, you will see in an unlabeled field that these cases generated 2 and 0 letters to date respectively. The database automatically increments this field when it prints each letter.



**FIGURE 12.a.**



**FIGURE 12.b.**

**FIGURES 12.a & 12.b. TYPICAL PROMPTS (DIALOG BOXES):** These help the user find the record sought, or make appropriate choices, or choose one of two display options when a patient has several different cases in the database. Figure 12.a (top) warns you to check out the Form before proceeding—it may not be the exact case you think it is. Later, choosing “No” in Figure 12.b, yields the next screen (Figure 13)....

HERE ARE ALL OF THIS PATIENT'S FUPS--TO HELP YOU DECIDE WHICH 1 YOU WANT:

DATE ABNL.	ABNORMALITY/RESULT	WHAT'S NEEDED	NEEDED BY	DATE DONE	CLOSED?
09/27/2002	LAB NO INTESTINAL BLEEDING	LABORATORY TESTING	09/27/2003	03/17/2004	05/19/2005
03/17/2004	LAB NO INTESTINAL BLEEDING	LABORATORY TESTING	03/17/2005	04/28/2005	05/19/2005
04/28/2005	LAB INTESTINAL BLEEDING +	SPECIALIST VISIT	08/28/2005		

[FOR 1 Pt. ONLY!] CLICK THIS FORM'S "X" BOX TO CLOSE IT; -or- DOUBLE-CLICK ROW OF INTEREST

Record: 1 of 3

**FIGURE 13. FLOW SHEET TABLE:** This “flow sheet” type presentation of a patient’s sequential FOBTs appears after clicking “No” in the Dialog Box shown as Figure 12.b. [This table (Figure 13) also will “pop up” upon double clicking the patient’s name or medical record number field on the “FOLLOW-UP TRACKING FORM” (shown in Figure 11).] The patient shown above fell a bit behind schedule. The last FOBT test was positive, and the patient went to the GI clinic (shown as a “SPECIALIST VISIT”).

Double-clicking any row entry here in this table (in Figure 13) takes the user right back to the “FOLLOW-UP TRACKING FORM” but it moves you to *the one specific case record* (the one date) chosen from the Table above.

**THESE COLUMNS ARE:**

**DATE ABNL = DATE ABNORMAL,** the date that the test was done.

**ABNORMALITY =** the diagnosis, lab result, or problem statement found.

**WHAT’S NEEDED =** the recommended next step for the patient in that case.

**DATE DONE =** in this case, in the last row, a colonoscopy date (blank here).

**CLOSED =** blank for an active case; or, as here, date we entered the final data.

HERE ARE ALL OF THIS PATIENT'S FUPS--TO HELP YOU DECIDE WHICH 1 YOU WANT:

DATE ABNL.	ABNORMALITY/RESULT	WHAT'S NEEDED	NEEDED BY	DATE DONE	CLOSED?
10/29/2001	PAP NORMAL REPORT	PAP SMEAR	10/29/2002	11/21/2002	01/02/2003
11/21/2002	PAP ASC-H (?HSIL)/ABNORMAL	COLPOSCOPY	03/01/2003	03/19/2003	08/20/2003
03/19/2003	COLPO "OK" - NEED PAP NEXT	PAP SMEAR	09/19/2003	10/09/2003	10/31/2003
10/09/2003	PAP NORMAL REPORT	PAP SMEAR	03/09/2004	04/01/2004	05/08/2004
04/01/2004	PAP NORMAL REPORT	PAP SMEAR	10/01/2004	02/25/2005	03/11/2005
02/25/2005	PAP NORMAL REPORT	PAP SMEAR	08/25/2005		

[FOR 1 Pt. ONLY!] CLICK THIS FORM'S "X" BOX TO CLOSE IT; -or- DOUBLE-CLICK ROW OF INTEREST

Record: 1 of 6

**FIGURE 14. FLOW SHEET TABLE:** This is the same “flow sheet” Table as shown in Figure 13, but for a fairly adherent female who is now due again for another Pap smear. This table puts the recent testing into its historical context for easier decision making, without your having to look multiple places or thumb through a chart. [This patient was on an every six-month Pap schedule for 2 years following her colposcopy done on 10/09/2003 (seen in row 3 above). We did not have HPV testing available then.]

Again, as described in the “prompt” across the bottom of this table, double-clicking any given line (double-clicking on one case record) leads you to that case’s complete data being shown (shown on the form pictured in a prior figure, Figure 11.a, though that example is for an entirely different patient).

HERE ARE ALL OF THIS PATIENT'S FUPS--TO HELP YOU DECIDE WHICH 1 YOU WANT:

DATE ABNL.	ABNORMALITY/RESULT	WHAT'S NEEDED	NEEDED BY	DATE DONE	CLOSED?
11/05/2002	LAB NO INTESTINAL BLEEDING	LABORATORY TESTING	11/05/2003	04/28/2004	06/24/2005
03/13/2003	PAP--NEED "GYN" PROCEDURE	SPECIALIST VISIT	06/15/2003	06/11/2003	12/17/2003
06/11/2003	COLPO--NEED GYN PROCEDURE	GYNECOLOGY CHECK	09/11/2003	06/18/2003	12/17/2003
06/18/2003	PAP--NEXT PROCEDURE DONE	PAP SMEAR	12/18/2003	04/22/2004	05/21/2004
04/22/2004	PAP OK, WITH MINOR CHANGES	PAP SMEAR	10/22/2004	11/11/2004	12/03/2004
04/28/2004	LAB NO INTESTINAL BLEEDING	LABORATORY TESTING	04/28/2005	06/17/2005	06/24/2005
11/11/2004	PAP "OK" BUT REPEAT NEEDED	PAP SMEAR	03/11/2005	05/16/2005	06/10/2005
05/16/2005	PAP NORMAL REPORT	PAP SMEAR	05/16/2006		
06/17/2005	LAB NO INTESTINAL BLEEDING	LABORATORY TESTING	06/17/2006		

[FOR 1 Pt. ONLY!] CLICK THIS FORM'S "X" BOX TO CLOSE IT; -or- DOUBLE-CLICK ROW OF INTEREST

Record: 1 of 9

**FIGURE 15. FLOW SHEET TABLE:** Here is the chronological display (“flow sheet Table”) for a female over age 50, showing both Paps and FOBTs. She had a LOOP on 06/18/2003 (in the “DATE DONE” column), but it took us 6 months to find out the results (12/17/2003, in the last column). These data allow us to monitor not only patient behavior but also staff and consultant performance.

Not clear from any of these Tables and Forms is the forced “linkage” of all Paps and Colposcopies together, and the linkage of each new lab test with the last lab test that the patient had done. The database programming *forces* this to be so, and this yields the nice progression of each type of test through the Table above. For each Pap or colposcopy result we enter, the database searches for a prior record of either—and if it finds one, it forces the database user to enter the new result as a successful follow-up completion to the very last one that was done. This prevents a patient from having three Paps recorded in the database, none of which shows a linked follow-up screening or subsequent diagnostic test. This is important to prevent “loose ends,” which would necessitate an inordinate amount of staff time to figure out.

The desired ideal effect is the complete linkage of each result to the next one, as shown earlier for one of our other patient’s two successive case records (seen in Figures 11.a and 11.b).

Microsoft Access - [FUPT/EdSheet : Form]

10/14/2005 FOR FEMALE PATIENT:

Click topic in Pull-Down. To review text, Click+Scroll big box, before... PRINTING->

PRINT Pg.

COLPOSCOPY

COLPOSCOPY--ALL NORMAL AT THIS TIME

COLPOSCOPY--INDETERMINATE / UNSURE

COLPOSCOPY-1--INFLAMMATION

COLPOSCOPY-2--REACTIVE ATYPIA

COLPOSCOPY-3--ATYPICAL SQUAM. METAPLASIA

COLPOSCOPY-4--CONDYLOMA

COLPOSCOPY-5--'HPV' (A VIRUS INFECTION)

COLPOSCOPY-6--'CIN-1'

COLPOSCOPY-7--'CIN-2'

COLPOSCOPY-8--'CIN-3'

CLICK ON TOPIC DESIRED-- use Cursor (ArrowKey) & PageDown, to find topic, if needed

NUM

**FIGURE 16. EDUCATIONAL SHEET MENU:** This Menu Form provides a “pick list” of educational sheets to print for patients. This screen shot shows most of the sheets available concerning colposcopy. The first one listed explains the procedure itself, and the rest describe the various colposcopy results and what the patient should do about each finding. [See Figure 17 for what the “COLPOSCOPY-6” letter says.]

Notice that the database has already filled in the date and the patient’s name at the top of the page (seen above in black type at the *top* of the white area). In the printed letter, these will appear above the text selected (see Figure 10). [The entry “Female Patient” would be the patient’s name.]

Microsoft Access - [FUPT/EdSheet : Form]

10/14/2005 FOR FEMALE PATIENT:

**Click topic in Pull-Down. To review text, Click+Scroll big box, before... PRINTING->** **PRINT Pg.** 

This would be a personal message typed to the patient....

**COLPOSCOPY-6--'CIN-1'** C6 622.1

SUMMARY: Colposcopy or "Colpo" refers to the special examination that was done on your cervix. [The "CERVIX" is the very bottom part of the UTERUS (the womb)--where it meets the top of the vagina. The cervix is a small, thick tube (through which you menstruate, and through which babies are born).] The Colpo examination helps us detect abnormal growths at an earlier stage, and treat them more effectively.

YOUR RESULTS: Under the microscope, the cells in the biopsy taken during your Colposcopy showed evidence of pre-cancerous changes. [The number "1" means that it is the very first step of seriousness for growth of these abnormal cells.]

What this process does from here on, may now be somewhat unpredictable. So, we have to watch you VERY carefully for any progression of this problem. This will require several more visits, and probably some further procedures relatively soon.

Please, come back to the clinic, as we recommend to you each visit.

 COMMENDATIONS: We have told you how to start the process of treating and

NOW, TYPE IN ANY TEXT THAT YOU WANT TO ADD HERE; and then CLICK "PRINT" (or "Tab")

NUM

**FIGURE 17. EDUCATIONAL SHEET EXAMPLE:** This is the top half of the educational sheet on CIN-1. The upper yellow field offers space for a personal, typed note to this specific patient, addressing this specific problem. When we print the letter, this typed note appears above the selected letter's text (of which only the top part shows in this screen shot).

The two white boxes on the right side of the form above, just under the "PRINT Pg" button, show (1) a code to link this sheet to the normalized code for this specific diagnosis in the database's clinical results table (the "C6" code here), and (2) a corresponding ICD diagnosis code from an old classification (ICD-9, 1998). An associated database holds these and other form letter data, so that we can update it as needed without changing the main database structure. We can add letters and educational sheets there for individual providers when they so request, keeping the entire database personalized, versatile, and user friendly. We have dozens of available letters on a multitude of topics and diagnoses, plus a number dealing with scheduling, adherence, and the business aspects of the practice.