PCI Database by Peter F Ludman

Release Notes for Version 15.0

2008

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1 Introduction

This PCI Database is designed to capture details about percutaneous coronary interventional procedures. Procedure reports and GP letters can be created, the data can be analysed within the database, or exported for analysis. This database has been specifically programmed so that all fields of the BCIS-CCAD dataset are included. It can create the comma separated values (CSV) file required to upload data to the Lotus Notes application for CCAD. Thus the data can be sent encrypted to CCAD in exactly the same way (and using the same gateway) as is done with the Myocardial Infarction National Audit Project (MINAP). It also has a number of in built analysis tools to provide a variety of cuts of the data, and options to look at risk stratified outcomes. I have written the database in Access 2000 / XP.

The PCI database is not locked into an MDE format, and so the code can be explored and modified if necessary (see section – getting inside the database). It is quite straightforward for your IT department to set up a link from this database to your local hospital patient administration system, so that patient demographics, NHS numbers etc. do not have to be entered manually. A link to the results server is also very helpful (cholesterols, CK, renal function).

The database is designed so that most of the data is entered during and at the end of a PCI procedure, and a final set of data entered after patient discharge. There is also the option to add later follow up data if required.

The data can be analysed using the queries I have written, and in addition the full dataset (excluding sub-tables) can be exported to Microsoft Excel to be analysed elsewhere. In addition if the data if uploaded to the Note Lotus CCAD application, all the Lotus analysis tools are also available.

The current database version is 15.0, and the latest dataset is version 5.4.4. These are available on the BCIS web site (http://www.bcis.org.uk/).

Users of earlier versions of this database can find instructions for upgrading to the current version on the BCIS web site

2 Using the database

You need to put two files in the same location on the computer or server on which the database is to reside:
1. The database itself (called **PCI version 15.0**)
2. The file called **mousehook.dll** (this will simply prevent the mouse wheel scrolling inadvertently through records by accident).

No password has been set. Double click **"PCI version 15.0"** to open.

2.1 To set up the database with your own defaults click here

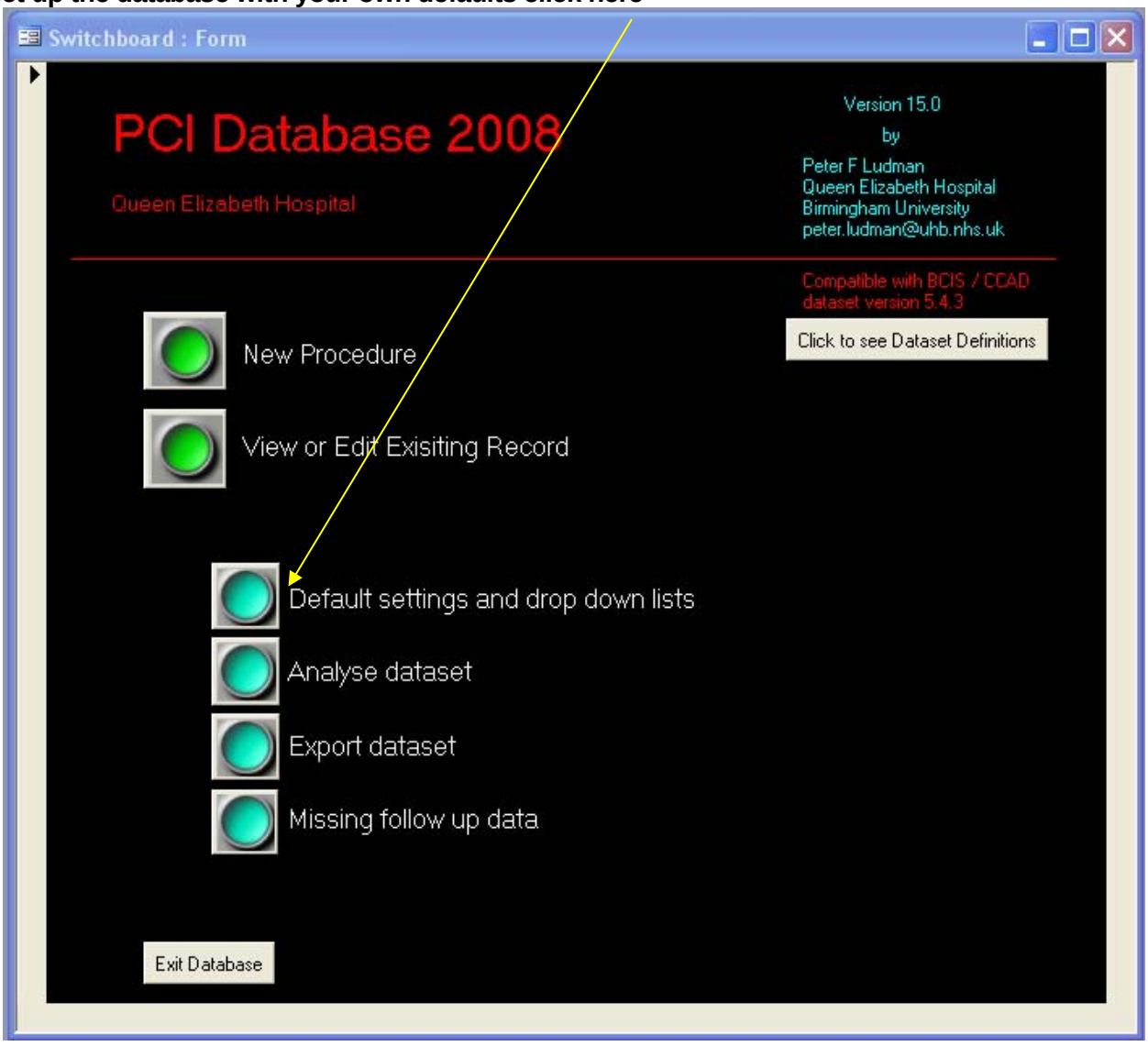


Figure 1

You then will be presented with the following screen:

Figure 2

2.1.1 Defaults

2.1.1.1 Selecting your hospital

Once selected, you need to close down the database and re-open it. Your hospital should now appear on the main (and all other) switchboards, report forms etc.

If your hospital is not in the list, it will need to be added to the table called "centers" inside the database – see 'getting inside the database' below

2.1.1.2 Click on "All other default settings" to bring up the defaults menu:

If you want all drop down lists in the data entry form to automatically open on focus – pick this option. The alternatives are

1. use **F4** to show all options, and arrows to move through them
2. enter the **first letter** of the selection you want and auto-complete will put the appropriate selection in the field, or
3. use the **mouse**

You can also modify the default Surgical cover and Brachytherapy options

2.1.2 Contents of drop Down Lists

2.1.2.1 Operator and consultant names

Enter the names of local consultants and operators (need to enter consultants into both lists). Format is First initial, full stop, space, Surname

2.1.2.2 Equipment lists

Modify the list of stent names and balloon names that will appear in the drop down menus when you use the database.

2.1.3 Update Menu Items

2.1.3.1 Volatile field lists

The eight volatile fields in the BCIS / CCAD dataset version 5 can also be altered from this menu, under the heading “Update Menu Items”

2.1.4 Login Access Controls

This button gives you the ability to restrict access to some aspects of the database’s inbuilt analysis options. The ability to either get to the export switchboard, or to get to the consultant or operator based analysis options can be set up to be blocked except for specific users. This block is not intended to do more than discourage inappropriate use by casual users. It is actually very easy to bypass the restriction if you have any programming ability. I will give you the administrator password to get into this on request. Once the access restriction is switched on, the database looks to see the windows username (i.e. the person logged into the computer). If this matches the user names in the admin list, then access is granted, and if not, access is denied.

2.2 To enter patient data (usually in the catheter lab during and at end of PCI procedure)

From the main menu (figure 1), click the top green button 'New Procedure', and the following form will open:

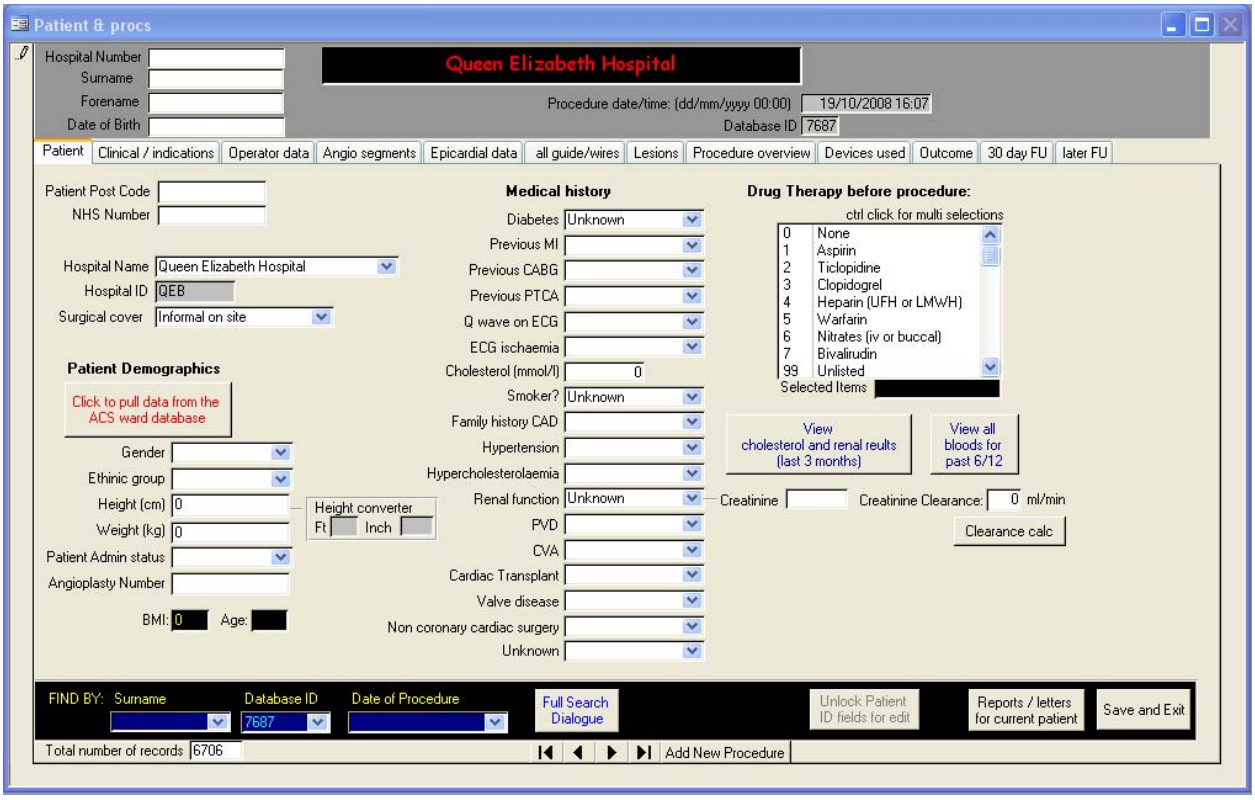


Figure 3

The cursor will start in Hospital Number field in the dark grey section at the top. After entering number hit enter or return or tab to move to next field. The procedure date / time field (top right) defaults to the current time and so does not need altering if the data are being entered at the time of the procedure (otherwise these need to be entered manually). Once the top 4 fields are filled, you will move down to the first field under the tab heading "Patient". When you get to a field with a drop down arrow, the list will appear if you click the mouse, or if you hit **F4**. The list will appear automatically if you have selected this to occur in the defaults section (above section 2.1).

I have set up the Queen Elizabeth Hospital database so that after entering the hospital number, the rest of the patient demographics, NHS number (and the GP details) are automatically pulled into the database from the PAS server. I strongly recommend that you get your IT team to do this. I have also created links to our acute coronary syndrome ward and the Results server (these buttons are disabled on your version, but the code behind them is still in place in case your IT want to modify it for your own systems.

The hospital name will be the one you have chosen as your default. If the patient is not being treated at your default hospital, you can change this for this particular patient using this field (which won't alter your default).

Height converter: If you only know height in feet and inches, then the cm height will be calculated after you have entered the inches and hit enter or return (so if a patient is 6 foot, you need to enter 6 foot 0 inches).

The multi-selection tables work by holding down the control key and clicking on any selection(s) you want to make. You can check you've got the correct ones by looking at the 'selected items' list which reflects what is actually stored in the database. Whether a selection remains highlighted or not as you move about is irrelevant.

Once this sheet is complete, click on the next tab "clinical / indications" and complete this. You will note that if a patient with stable clinical syndrome is being treated, a number of the fields that are not required are covered up, and the CCS and NYHA fields are exposed. In addition, if you select an ST elevation MI in this section, the TIMI flow rates and times under tab section "epicardial data" are uncovered.

"Operator data" tab – self-explanatory. The form will look to see if your name also appears in the consultant field list, and if so automatically enter appropriate status, but non-consultant grades will have to pick their status from the drop down list.

"Angio segments" tab
This gives you the opportunity to enter details about the entire coronary anatomy. I have used the coronary tree segment classification that has been adopted by the European working party (CARDS project 2004) for the unification of European PCI datasets. This section is **not** required for the current BCIS dataset, but it will be for the European dataset.

"Epicardial data" tab. For the BCIS / CCAD dataset, this is the mandatory way in which coronary anatomy is described. If you have filled out the "angio segments" tab, then clicking 'update epicardial data from angiosegment chart' will pull the data across. Otherwise the most efficient way of entering data into this sheet is to use the keyboard instead of the mouse. Hit enter or return to move to subsequent fields, and use F4 for drop downs, or hit the first letter of the item you wish to select and auto-complete will put the appropriate selection in the field. You will note that if you have not treated a lesion, the post procedure stenosis is automatically entered the same as the pre-procedure one. Note you are describing epicardial territories, not vessels. If the Duke score does not auto calculate, then you can click the button to force the calculation or to update it if you've modified the epicardial data.

"All guide/wires" tab
If you wish to modify the contents of the drop down menus, you can do it from the buttons on this page

"Lesions" tab
I have provided up to 4 lesion details that can be entered. If you have treated more, and wish to record this, then that can be done under the next tab.

“Procedure overview” tab
You can check that the program has correctly calculated the summary data by clicking the button ‘view edit lesion summary data’. The number of lesions treated is the total number, of which the number of CTOs, restenoses etc. are all subsets.

“Devices used”. A quick way to enter the GP IIb/IIIa antagonists is to check the box entering “No” in all options, and then change the field of the appropriate agent to yes, this will automatically update the ‘why no agent used’ field.

This is that last tab to be completed at the time of the procedure. After discharge, the next tab can be completed to capture, post procedure data, and there are two further tabs for later follow up if required.

2.3 Procedure reports and letters

Once the procedure information is entered (i.e. after the patient is about to leave the catheter lab but before data has been entered under the "outcome" tab), you can create a procedure report, letter, or Save and Exit. (Clicking either of these buttons saves the record).

Figure 6

Once you click on either of these buttons if there are any fields that have not been filled in (excluding the "outcome" tab data) you will be presented with a list of them (figure 7), and the actual fields will be highlighted in red. You are given 2 chances to complete data entry. If after the second warning you haven't done it, you will be allowed to progress as you had originally intended to the reports or exit.

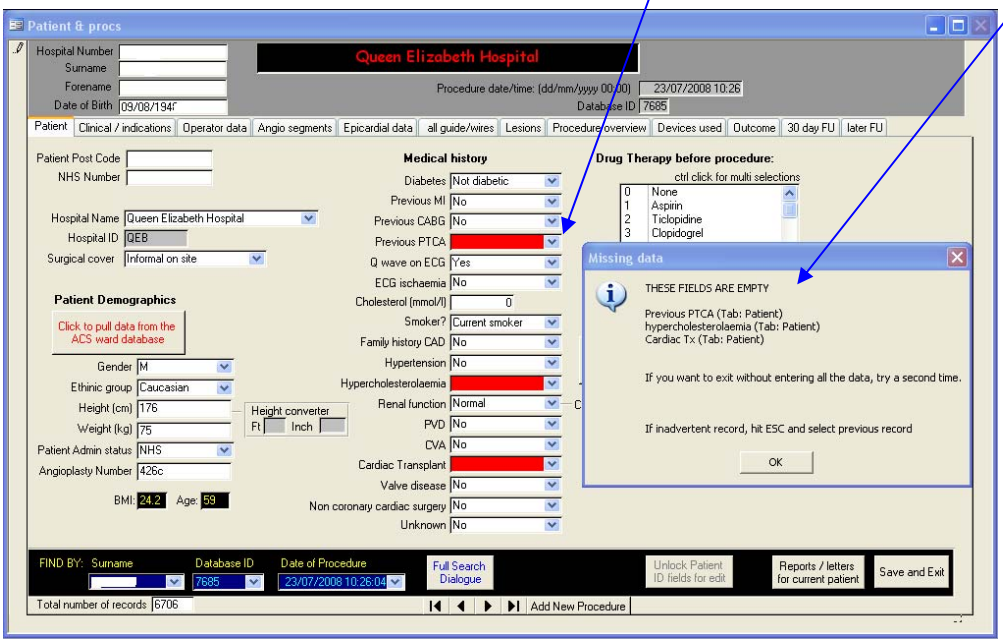


Figure 7

The procedure report will automatically have your hospital name at the top, and is intended to go in the notes as the patient leaves the catheter lab.

The GP letter is still under development, and I would suggest you use it as a first draft. You will want to alter it by placing your hospital's official logo / header in place etc. I have set up the database at the Queen Elizabeth Hospital so that after entering the patient's hospital number, not only are the patient demographics automatically pulled into the database, but also the patient address and GP data are pulled from the PAS system into these fields. The form allows you to do this manually of you wish.

2.4 Searching for a previous entry

You can search for a previous entry in four ways

1. Use the 'Surname', 'Database ID' or 'Date of Procedure' drop down boxes. Click on the arrow and scroll to the appropriate record, or highlight the whole box and then enter the first few letters of the surname, the list will scroll straight to all appropriate entries. Once you click correct entry, all the data for that procedure are brought into the data entry form.

2. Use a full access database search dialogue

3. Use the navigation buttons as shown below

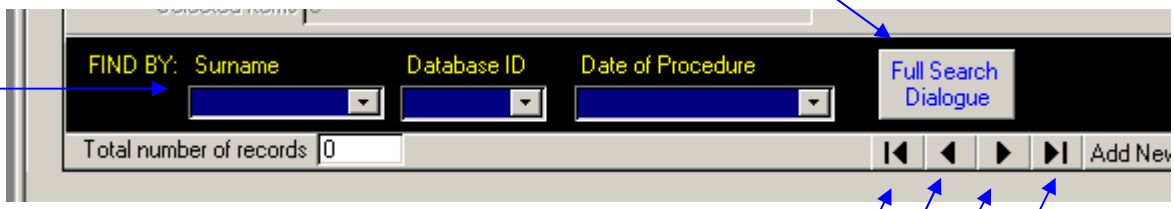
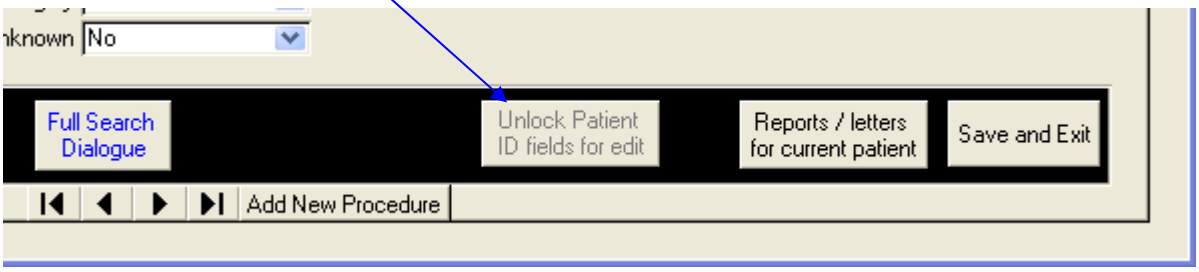


Figure 8

To first record
Back one record
Forward one record
To last record

4. In addition, from the first switchboard (figure 1), if you click the second green button 'view or edit existing record', the first record will open as in figure 3, but the Patient name and ID fields will be locked, preventing inadvertent modification. The navigation buttons can then be used to move through the dataset as before. The locked fields can be unlocked by clicking on the greyed out button at the bottom of the screen 'unlock patient ID fields for edit' if required.



2.5 To enter patient data (after discharge)

All tab sections up to and including “Devices used” need to be filled in up to the time the patient leaves the catheter lab.

To find patients who have had procedures, but whose data up to hospital discharge is still not entered (i.e. “Outcome” tab data not yet entered), go to ‘missing follow up data’:

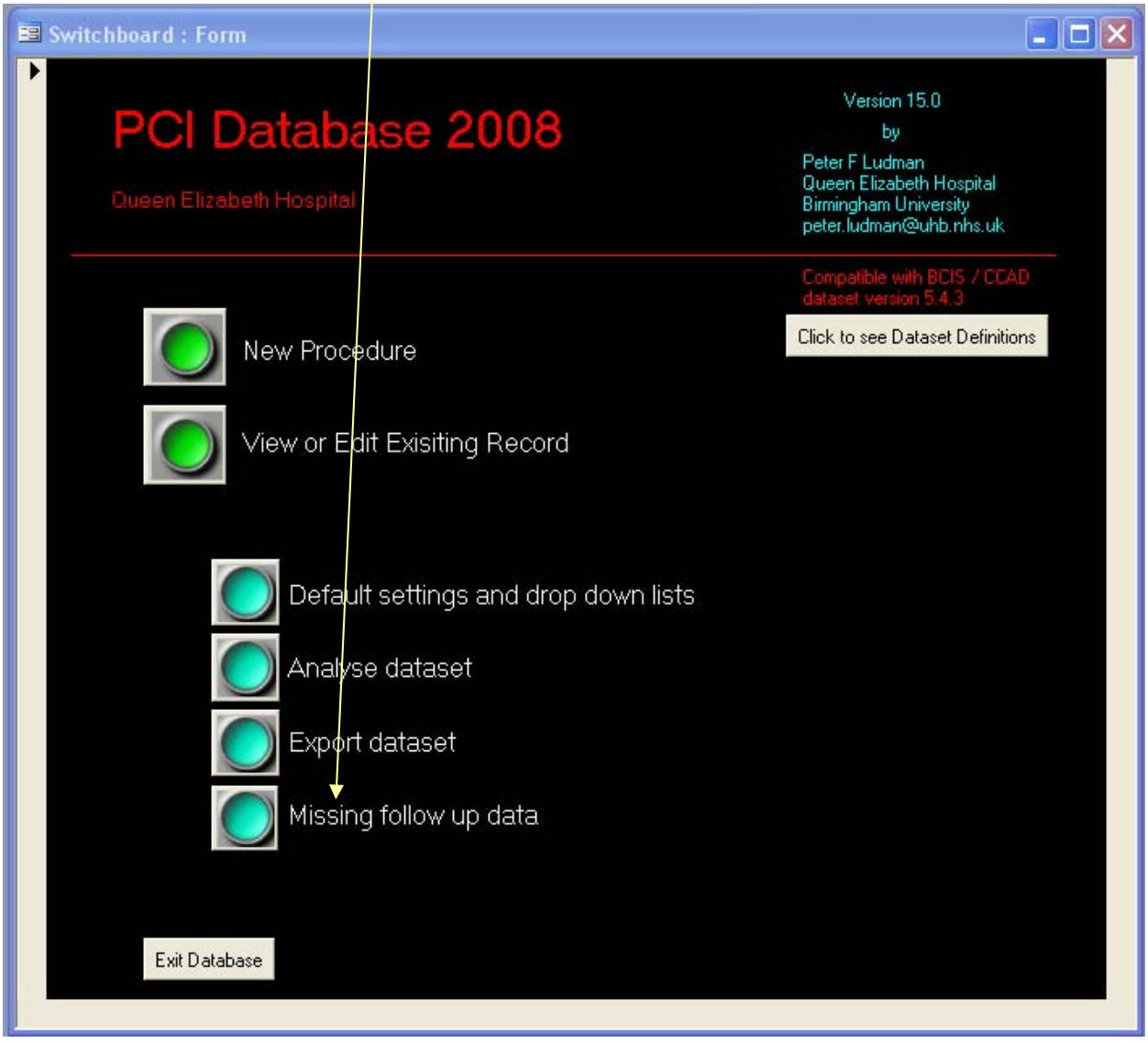


Figure 9

This will bring up the next dialogue box:

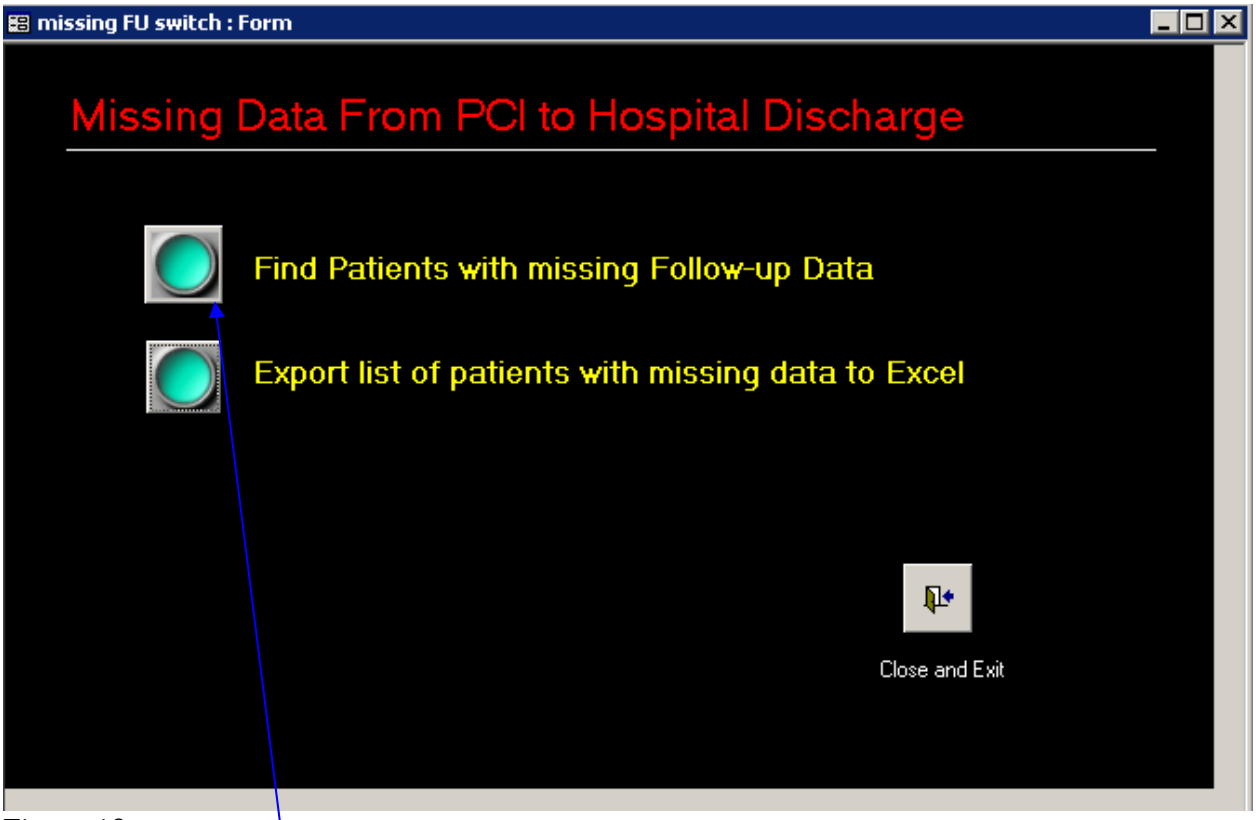


Figure 10

Click on this to get list

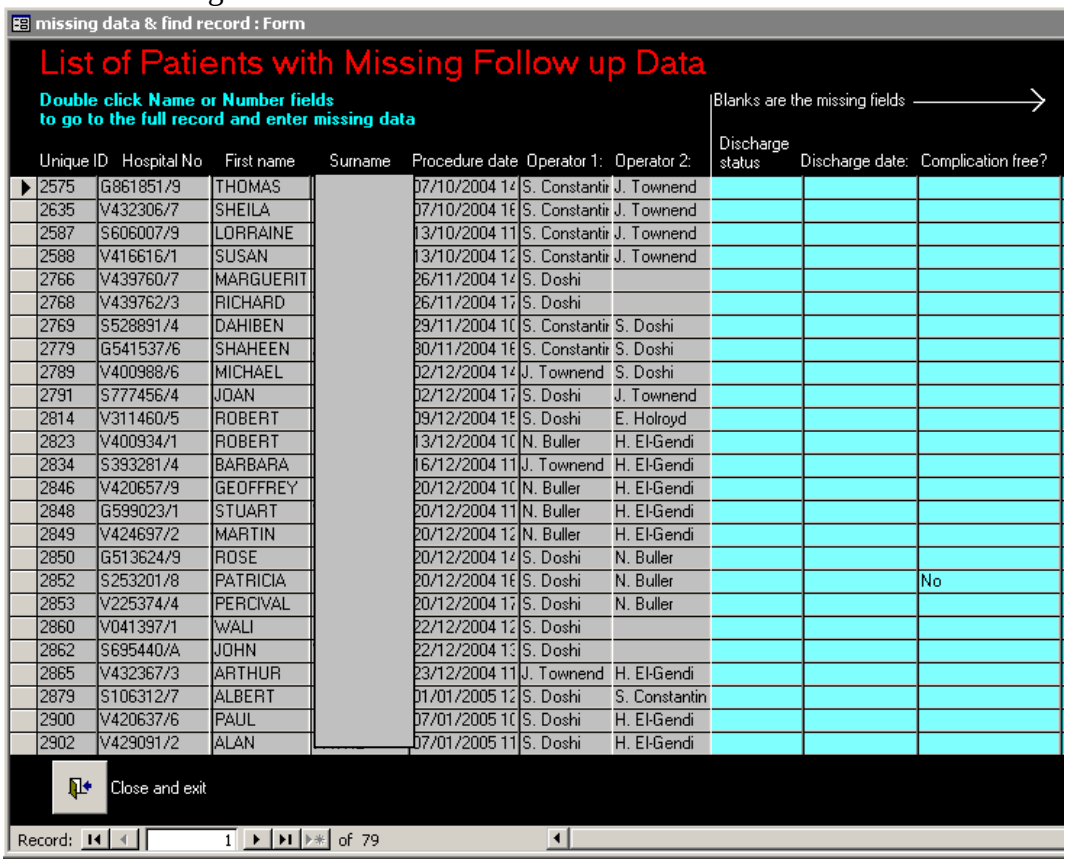


Figure 11

If you now double click on any of the names of these patients, the data entry form will automatically open to that particular procedure, and allow you to fill in the final set of data.

If the patient's procedure was uncomplicated, then you need only answer 4 questions (stable cases) or 3 questions (acute cases).

Thus:
1. Click complication free 'Yes' - and all other options are auto filled
2. Enter discharge date – as many patients go home the next day, if you click the check box, the day after procedure date is auto-entered
3. Fill in the discharged to where question(s)
4. In stable patients, you also need to enter the post procedure cardiac markers (this data field is hidden in patients treated for acute coronary syndromes).

There is the option to put any cardiac marker result in the database whether or not the patient is stable, but this is not required for the BCIS/CCAD minimum dataset.

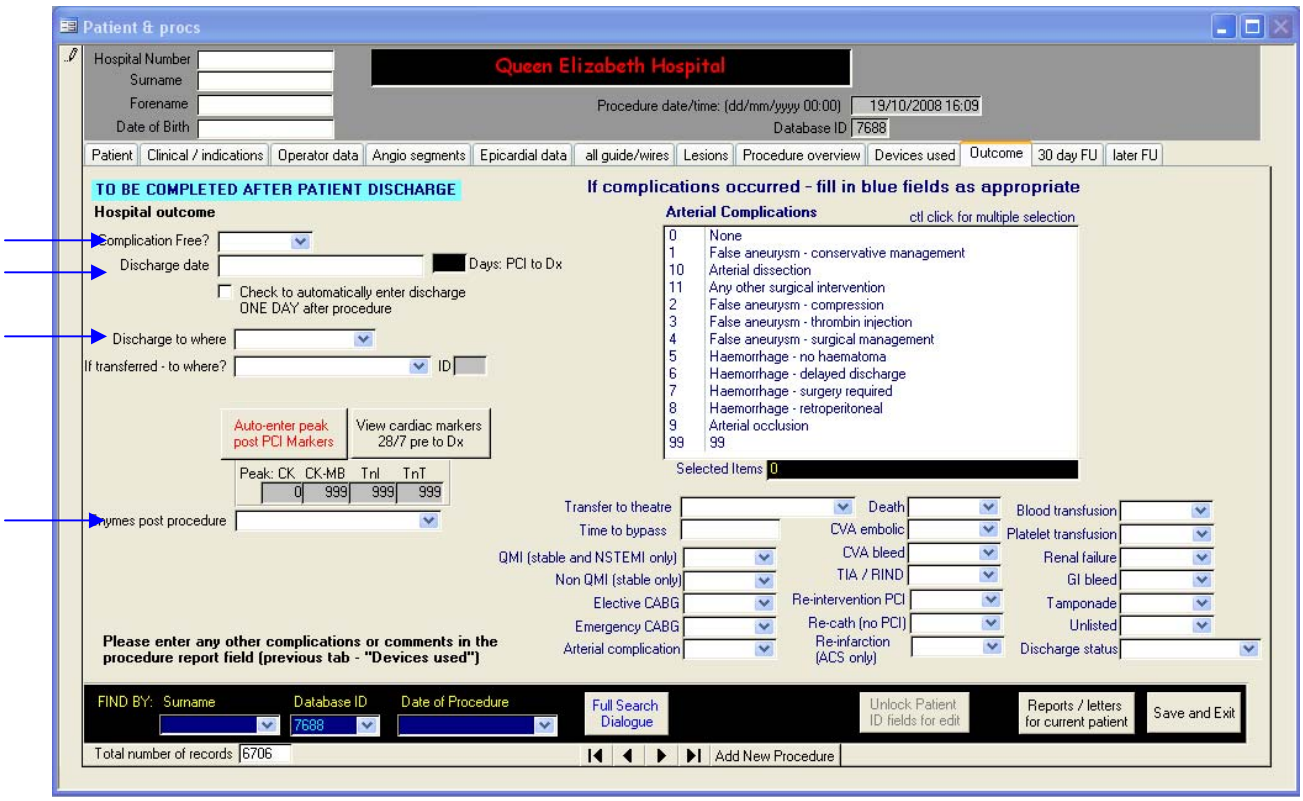


Figure 12

3 Data manipulation

3.1 Analyse dataset

Once you have closed down the patient entry form, and patient report etc. the database can perform a number of analyses on the entire dataset.

From the first switchboard (figure 1) click on Analyse dataset, to get to this menu:

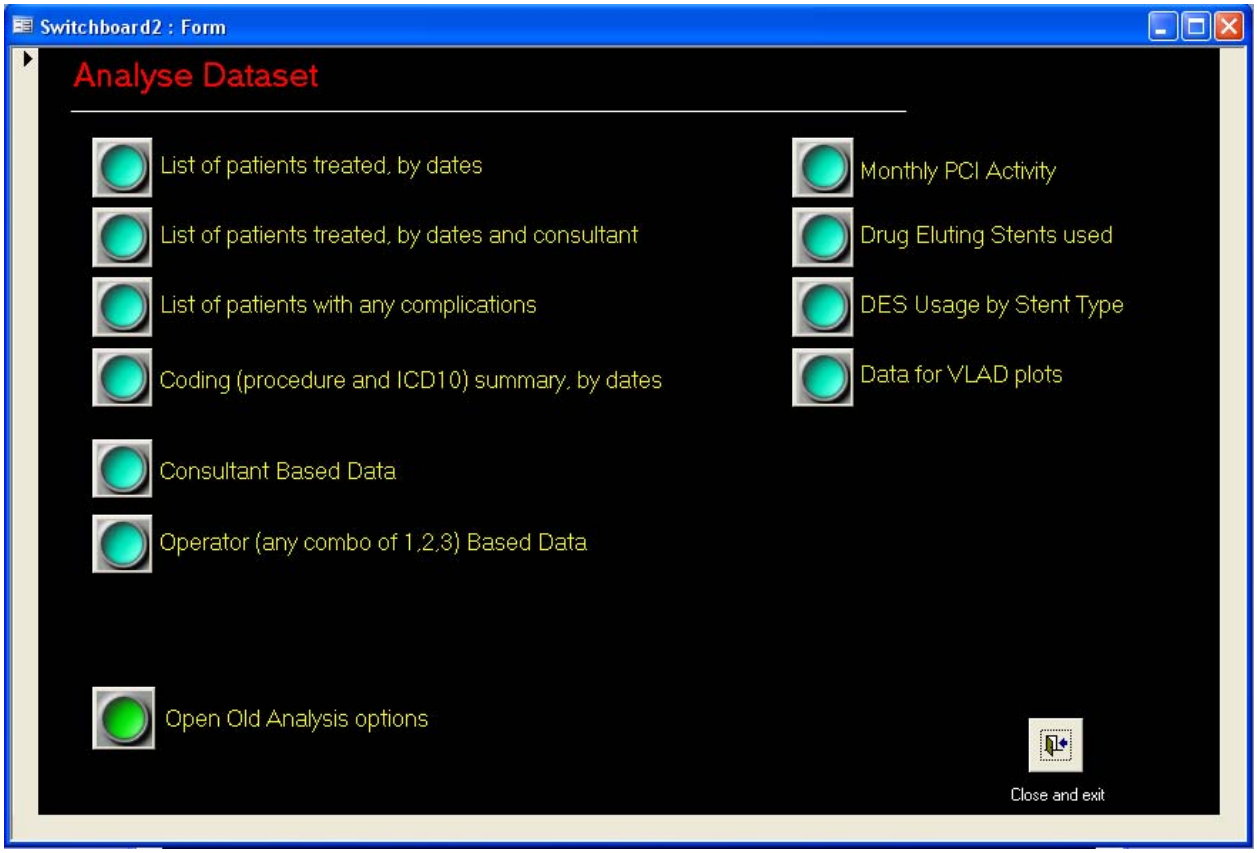


Figure 13

Explore these analysis options which should be self explanatory. The 'operator' and 'consultant' based data analysis provides quite a detailed breakdown of individual activity. You can also get to all the previously programmed data cuts via the 'open Old Analysis options' button, bottom left.

The monthly activity button will prompt for dates. Note that all Januaries and Februaries in the time period you select will be added, so if you specify 2 years, this will be sum of 2 Januaries, 2 Februaries, etc. activity.

3.2 Export dataset

From the first switchboard (figure 1) click on Export dataset to be presented with the following options:

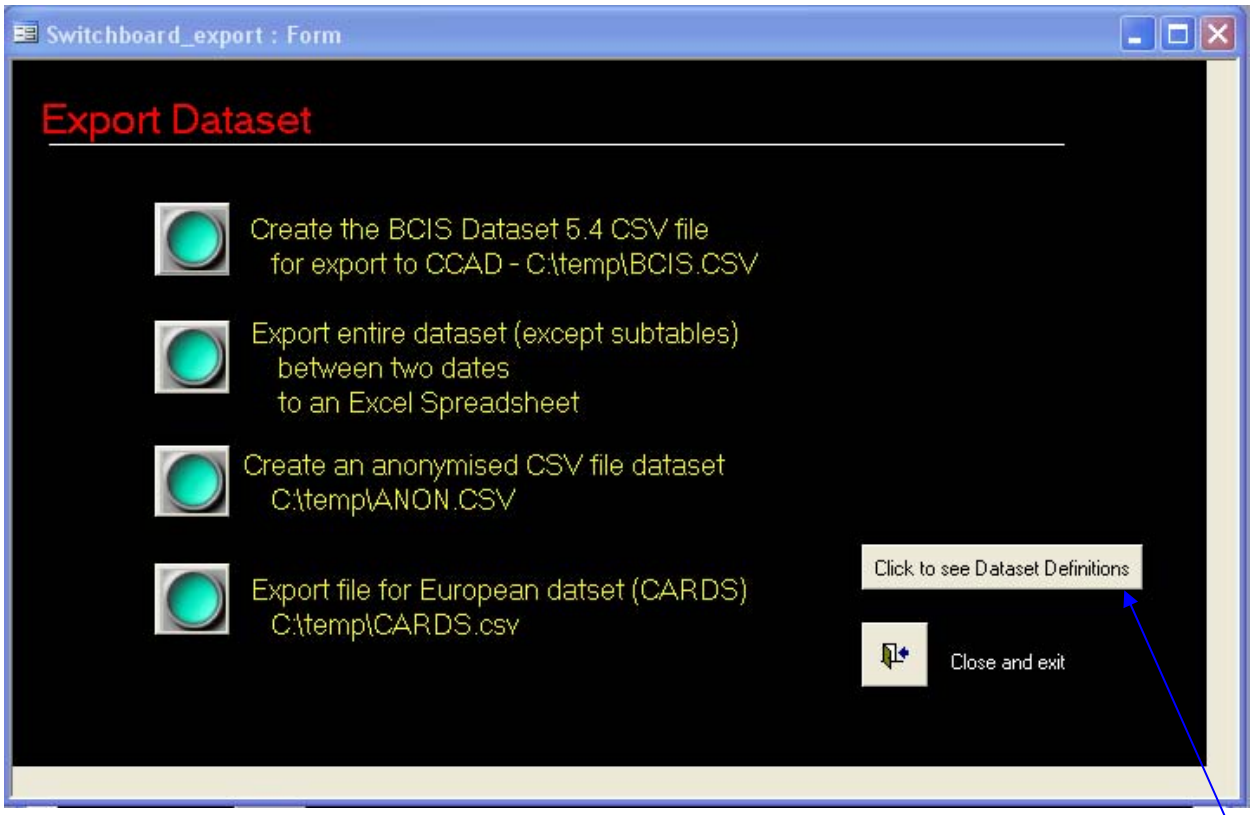


Figure 14

The top button will extract data from the database (between dates of your choosing) into a comma separated values (CSV) file called BCIS.CSV, and will put it in the 'temp' folder on the C drive.
It looks for c:\temp. **If you don't have a folder labelled 'temp' on the C drive**, you will get an error message (computers with windows XP often don't have this folder) – so put a folder of that name on your C drive and it will then work. (For the format of the CSV file see below).

The dataset is version 5.4.4, and can be uploaded into the Lotus notes CCAD database front end (which is programmed to look for a file named BCIS.CSV in a folder named 'temp' on drive C). It will then populate the CCAD database fields, and the data can then be analysed using all the analysis software programmed into the Lotus Notes front end, and of course the data can also be encrypted and sent to the CCAD servers via the gateway.

The second button allows you to download your raw dataset between selected dates into an excel spread sheet for further custom analysis. The only data not extracted are the data contained on the sub forms (i.e. the list of guides, wires, balloons, stents and associated pressures). To clarify the codes for each of the options, you can click the button 'click to see Dataset Definitions' on this switchboard or the main switchboard.

The third button generates a CSV file just like to top button, but with patient and operator identifiers anonymised

The fourth is an initial attempt to create an export compatible with the CARDS European dataset. There are important structural differences between CARDS and BCIS-CCAD, so this section is work in progress

4 Getting inside the database

In order to get inside the database, to alter programming, table entries etc. you need to open the database with the shift key held down. You will then be presented with all the tables, forms, queries, macros etc. grouped under tab headings. Be cautious, it is very easy to break the database.

5 Common issues

5.1 Records

If you start a new record, you *must* enter data at least into the hospital number and patient surname fields. These are required fields, and no data can be stored in the record without something in these fields. If you inadvertently start a new record, but don't wish to continue to enter data you can:

either: Press **Esc** key and then go back to the previous record (with the navigation buttons see figure 8)
or: Quit Access (very top right of screen)

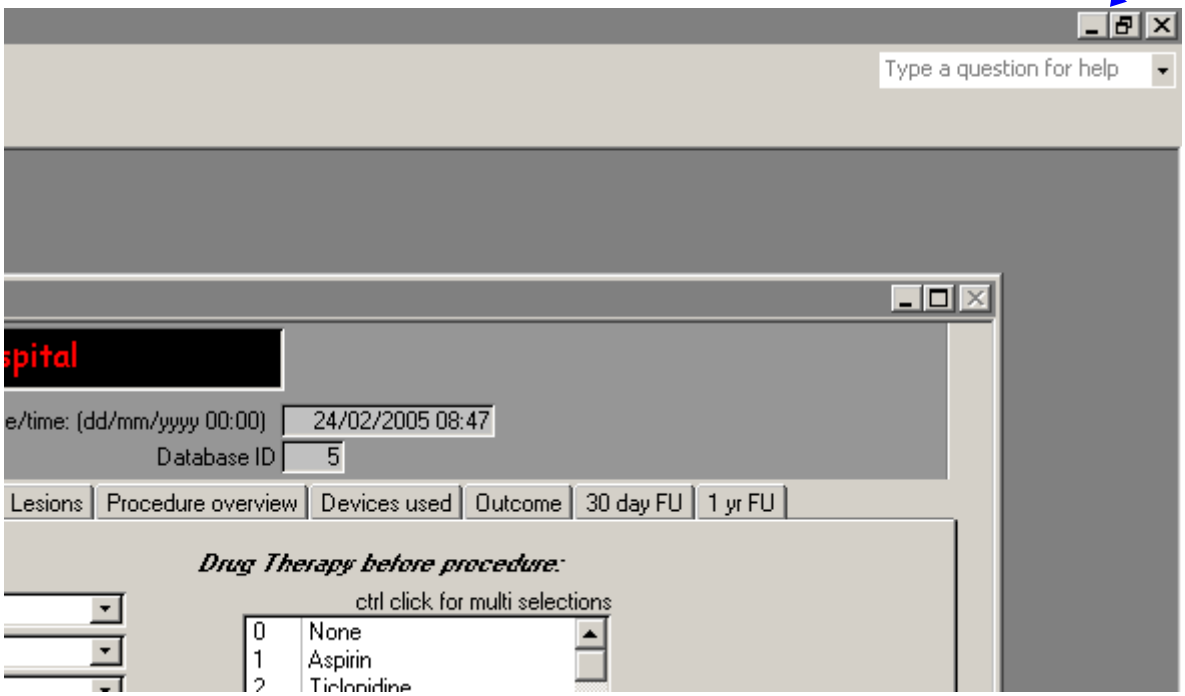
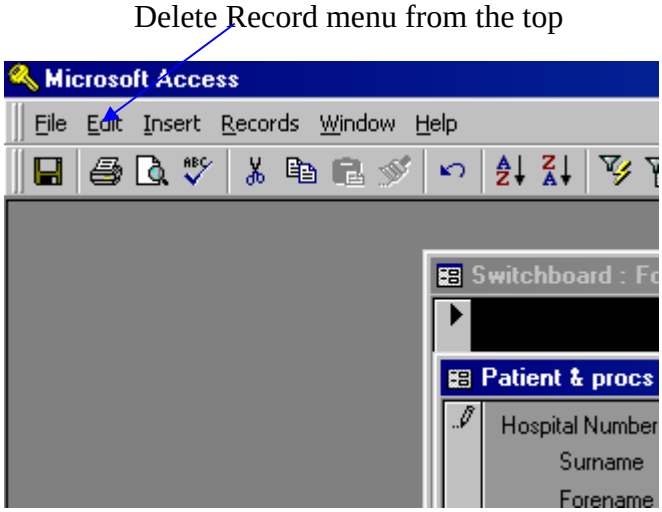


Figure 10

You will get a warning that the record can't be saved – answer OK.

If you inadvertently enter data, but wish to delete the entire record, use the Edit / Delete Record menu from the top



5.2 Time / Date fields

Sometimes the time date fields in Access are awkward. There is an input mask on these fields, so provided you have landed on the field using the tab or entry key, you can simply type in the numbers without the place holders (i.e. the "/" or ":"):

So to enter 10/12/2002 18:00, you just type 121220021800
It should all look fine once you've done it.

If you got to the field with the mouse, make sure the cursor is at the left end of the empty field.

If you then wish to change the date, it is sometimes not happy with you simply altering a part of it. You may need to select the whole field by dragging the mouse across it and enter the entire date / time again, (even though they do not show, you still do not need to put in the place holders). You can always use the **Esc** key to get back out of the field.

All years must be entered as full four digit years.

5.3 CSV file export

Remember that you need to have a folder labelled 'temp' in the C drive, because that is where the CSV exported file will be sent to, and it is also where the Lotus Notes application from CCAD will look for it. If you have not made a temp folder on the C drive, you will get an error message when you try to create the CSV export file.

5.4 Missing SOAP libraries

Some users have noticed that when upgrading from earlier versions of the database to version 15.0, the program jumps out to a page of visual basic code where it is trying to calculate age and with the message: 'Compile error: can't find project or library'.

This seems to be due to a missing SOAP library, which I think is present on newer, but not earlier version of Microsoft Access. Once this dll is placed in the appropriate program folder on the computer, the program will run correctly. Your IT department should be able to provide you with the missing component.

6 Notes on the structure of the database

The database is structured so that each procedure is stored as a separate record in the table 'Patients and procedures'. If a patient has more than one procedure, each will appear as a separate line in this table. Virtually all the data for the procedures is stored here. The only additional place data are stored is in the subtables that contain information about balloon and stent sizes and deployment pressures, and guides and wires. It is possible to enter detailed lesion specific data, with balloons and stents used etc. on up to 4 lesions (data entry form tab "Lesions"). If in fact you have treated 6 lesions, then enter the correct totals in the section under tab "Procedure overview". The correct totals will be counted in all the analysis sections, and exported to CCAD in the CSV file, which does not look at the data entered under tab "Lesions".

7 Format of CSV export file

The evolution of the datasets and the resultant csv file formats are documented on the BCIS web site. Version 5.4.3 is given below

```
This file describes the format for the BCIS export file 5.4.3 - bcis.csv,
introduced in January 2009

The file is a CSV (comma separated variable) file.  All values (even empty
ones) must be enclosed in quotes("").
Each line (record) of the file must be properly terminated with a CRLF
(carriage return and line feed, ASCII
characters 13 and 10 in decimal, 0D and 0A in hex).

Each line (record) is made up of 106 variables (fields) in the prescribed
order.

A complete list of variable is shown below.  The first number is the position
of the variable followed by a
comma then a tab, the next number is the dataset number, then a hyphen,
followed by the field description,
followed by a full stop then the datatype.
```

Details about the legal values for the fields can be found in the dataset, http://www.ic.nhs.uk/our-services/improving-patient-care/the-national-clinical-audit-support-programme-ncasp/heart-disease/getting-started/information-on-datasets

1, 1.01 - Hospital identifier - Text (single value)
2, 1.02 - Patient Case Record Number - Text (single value)
3, 1.03 - NHS Number - Text (single value)
4, 1.04 - Patient Surname - Text (single value)
5, 1.05 - Patient Forename - Text (single value)
6, 1.06 - Patient Date of Birth - Date (dd/mm/yyyy)
7, 1.07 - Patient Gender - Text (single value)
8, 1.08 - Patient Ethnic Group - Text (single value)
9, 1.09 - Patient Admin status - Text (single value)
10, 1.10 - Patient Post Code - Text (single value)
11, 2.01 - Clinical Syndrome - Text (single value)
12, 2.02 - Indication for Intervention - Text (single value)
13, 2.03 - Procedure Urgency - Text (single value)
14, 2.04 - Cardiogenic shock pre-anaesthesia (pre-procedure for PCI) - Text (single value)
15, 2.05 - CCS classification for stable angina - Text (single value)
16, 2.06 - NYHA classification for cardiac disease - Text (single value)
17, 2.07 - Symptom onset (ACS) - DateTime (dd/mm/yyyy hh:mm)
18, 2.08 - Arrival in First Hospital of chain (ACS) - DateTime (dd/mm/yyyy hh:mm)
19, 2.09 - Admission route (ACS) - Text (single value)
20, 2.10 - Presenting ECG (ACS) - Text (single value)
21, 2.11 - Recent Lysis (ACS) - Text (single value)
22, 2.12 - Cardiac Enzymes/Markers Raised - Text (single value)
23, 2.13 - Previous MI - Text (single value)
24, 2.14 - Previous CABG - Text (single value)
25, 2.15 - Previous PCI - Text (single value)
26, 2.16 - Diabetes - Text (single value)
27, 2.17 - Height - Numeric (integer)
28, 2.18 - Weight - Numeric (real)
29, 2.19 - LV Function assessment - Text (single value)
30, 2.20 - LV Ejection Fraction - Numeric (integer)
31, 2.21 - N grafts present - Numeric (integer)
32, 2.22 - N grafts patent PreOp - Numeric (integer)
33, 2.23 - LMain PreOp - Text (single value)
34, 2.24 - LADprox PreOp - Text (single value)
35, 2.25 - LADother PreOp - Text (single value)
36, 2.26 - RCA PreOp - Text (single value)
37, 2.27 - LCX PreOp - Text (single value)
38, 2.28 - Flow in IRA PreOp (ACS) - Text (single value)
39, 3.01 - Date/Time arrival at hospital (for MINAP) or Procedure Date (for all other datasets) - DateTime (dd/mm/yyyy hh:mm)
40, 3.02 - Consultant Responsible for Procedure - Text (single value)
41, 3.03 - Primary Operator - Text (single value)
42, 3.04 - Primary Operator status - Text (single value)
43, 3.05 - Second Operator - Text (single value)
44, 3.06 - Second Operator status - Text (single value)
45, 3.07 - Third Operator - Text (single value)
46, 3.08 - Third Operator status - Text (single value)
47, 3.09 - Vessels attempted - Text (multivalue ; separated)
48, 3.10 - N Vessels attempted - Numeric (integer)
49, 3.11 - N Lesions attempted - Numeric (integer)
50, 3.12 - N Chronic Occlusions attempted - Numeric (integer)
51, 3.13 - N Restenoses attempted - Numeric (integer)
52, 3.14 - N InStent stenoses attempted - Numeric (integer)
53, 3.15 - N Stents used - Numeric (integer)

54, 3.16 - N Drug Eluting Stents used - Numeric (integer)
55, 3.17 - Drug(s) eluted by stent(s) - Text (multivalue ; separated)
56, 3.18 - GP IIb/IIIa drug(s) used during procedure - Text (multivalue ; separated)
57, 3.19 - Diagnostic device(s) used during procedure - Text (multivalue ; separated)
58, 3.20 - Procedural device(s) used - Text (multivalue ; separated)
59, 3.21 - Athero-thrombus removal device(s) used - Text (multivalue ; separated)
60, 3.22 - Brachytherapy device(s) used - Text (multivalue ; separated)
61, 3.23 - Emboli protection device(s) used - Text (multivalue ; separated)
62, 3.24 - Circulatory support - Text (multivalue ; separated)
63, 3.25 - Arterial management - Text (multivalue ; separated)
64, 3.26 - Time of IRA reperfusion (ACS) - DateTime (dd/mm/yyyy hh:mm)
65, 3.27 - LMain PostOp - Text (single value)
66, 3.28 - LADprox PostOp - Text (single value)
67, 3.29 - LADother PostOp - Text (single value)
68, 3.30 - RCA PostOp - Text (single value)
69, 3.31 - LCX PostOp - Text (single value)
70, 3.32 - N Lesions success - Numeric (integer)
71, 3.33 - N grafts patent PostOp - Numeric (integer)
72, 3.34 - Flow in IRA PostOp (ACS) - Text (single value)
73, 3.35 - Procedure report/comment - Text (single value)
74, 3.36 - Device failure - Text (single value)
75, 4.01 - PCI Hospital Outcome - Text (multivalue ; separated)
76, 4.02 - Enzymes PostOp - Text (single value)
77, 4.03 - Status at discharge - Text (single value)
78, 4.04 - Discharge Date - Date (dd/mm/yyyy)
79, 5.01 - Local Procedure Identifier - Text (single value)
80, 5.02 - Cholesterol - Numeric (real)
81, 5.03 - Smoking status - Text (single value)
82, 5.04 - Family history of CAD - Text (single value)
83, 5.05 - Medical history - Text (multivalue ; separated)
84, 5.06 - History of renal disease - Text (single value)
85, 5.07 - Ventilated PreOp - Text (single value)
86, 5.08 - Q Wave on ECG - Text (single value)
87, 5.09 - ECG ischaemia - Text (single value)
88, 5.10 - Drug therapy PreOp - Text (multivalue ; separated)
89, 5.11 - Follow on (Adhoc) procedure - Text (single value)
90, 5.12 - Training procedure - Text (single value)
91, 5.13 - Research procedure - Text (single value)
92, 5.14 - Research title - Text (single value)
93, 5.15 - Arterial access - Text (multivalue ; separated)
94, 5.16 - Largest balloon/stent used - Numeric (real)
95, 5.17 - Longest balloon/stent used - Numeric (integer)
96, 5.18 - Procedural Complication - Text (multivalue ; separated)
97, 5.19 - Arterial Complications - Text (multivalue ; separated)
98, 5.20 - Time to bypass - Numeric (integer)
99, 5.21 - Transfer to theatre - Text (single value)
100, 5.22 - Why no IIb/IIIA during procedure - Text (single value)
101, 5.23 - Indication for stent - Text (single value)
102, 5.24 - Surgical cover - Text (single value)
103, 5.25 - LMS Protected - Text (single value)
104, 5.26 - Arrival in PCI Hospital (ACS) - DateTime (dd/mm/yyyy hh:mm)
105, 5.27 – Call for Help (STEMI only) - DateTime (dd/mm/yyyy hh:mm)
106, 5.28 – Referring hospital – Text (single value)

Format of an export file:

```
"value 1","value 2","","",......"value 102","Value 103"
"value 1","value 2","","",......"value 102","Value 103"
"value 1","value 2","","",......"value 102","Value 103"

Note:
Empty quotes ("") to highlight how to handle empty values.
..... signifies the continuation of the values
```

8 Evolution of the BCIS-CCAD dataset

Datasets continuously evolve and are never perfect. Below i have tried to capture the key changes from 2003 to 2008 for this dataset

Version number format:
x.y.z
x updates when definitions are accepted by the information standards board
y updates with changes to the structure of the dataset, additional fields etc
z updates with changes to volatile menu items, and minor alterations to correct typos, modify descriptors etc.

5.1.1 (12-2-2003)

Initial version

5.1.2 (2003)

for road show roll out Leeds meeting 2002

5.1.3 (October 2003)

Clarification of clinical syndrome
Thus:

2.02 Indication for Intervention

	OLD descriptors (5.1.2)	→	NEW descriptors (5.1.3)
1	Stable - angina		Stable - angina
2	Stable - coronary/LV anatomy		Stable - coronary anatomy / LV function
3	ACS - no acute MI	→	**ACS - UA, NSTEMI or convalescent STEMI**
4	ACS - Primary PCI for AMI (no lysis)	→	ACS - Primary PCI for **STEMI** (no lysis)
5	ACS - Facilitated PCI for AMI (lysis + PCI)	→	ACS - Facilitated PCI for **STEMI** (lysis + PCI)
6	ACS - Rescue PCI for AMI (failed lysis)	→	ACS - Rescue PCI for **STEMI** (failed lysis)
7	ACS - PCI for reinfarction (no lysis)		ACS - PCI for reinfarction (no lysis)
8	ACS - Rescue PCI for reinfarction (failed lysis)		ACS - Rescue PCI for reinfarction (failed lysis)
9	Staged procedure		Staged Procedure
10	Hybrid procedure		Hybrid procedure
11	Acute or subacute PCI thrombosis		Acute or subacute PCI thrombosis
12	Bail out following acute complication of diagnostic cardiac catheterisation		Bail out following complication of diagnostic cardiac catheterisation
98	Unlisted		Unlisted
99	Unknown		Unknown

Explanatory text for option 3			
	OLD text (5.1.2)		**NEW text (5.1.3)**
	3. ACS - no acute MI "Acute coronary syndrome with or without enzyme release but excluding patients presenting with ST elevation or new LBBB and a history typical of acute myocardial infarction"	→	3. ACS - UA, NSTEMI or convalescent STEMI "Acute coronary syndrome with or without enzyme release and a history typical of acute myocardial infarction. Patients whose initial presentation was STEMI, but whose PCI is being performed later during the hospital stay are included in this group. (Excludes patients having PCI in the throws of an ongoing STEMI - which are coded 4 to 8)."

There are some additional minor typos that have also been changed, and all these are incorporated into **dataset version 5.1.3**, which is now the current dataset and is attached (the format of the spreadsheet shows 5.1.2 and the changes to 5.1.3)

5.2.3 corrected (March 2005)

3.25 Arterial Management

code	Arterial management
0	Manual Pressure / Clamp
1	FemoStop / Radistop / TR band
2	Angioseal
3	Vasoseal
4	Perclose
5	Duett
6	Direct suture
7	Starclose
99	Unlisted

3.17 Drug(s) eluted by stent(s)

code	Drug name
0	None
1	Paclitaxel (Taxus)
2	Rapamycin (Cypher)
3	Paclitaxel (Achieve)
4	Dexamethasone (Dexamet)
5	ABT-578 / Cobalt chrome (Endeavor by Medtronic)
6	Paclitaxel / Cobalt chrome (CoStar by Conor)
7	Tacrolimus / Carbofilm (Janus by Sorin)
8	Everolimus / Cobalt chrome (Xience V by Guidant J&J)
9	no drug / Magnesium Absorbable Metal (Lekton Magic by Biotronik)

code	Drug name
99	Unlisted

3.21 Athero-thrombus removal device(s) used

code	Athero removal device
0	None
1	TEC
2	X-sizer
3	Rescue
4	Angiojet
5	Acolysis
6	Export catheter
7	Diver catheter
99	Unlisted

5.10 Drug therapy PreOp

Code	Drug
0	None
1	Aspirin
2	Ticlopidine
3	Clopidogrel
4	Heparin (UFH or LMWH)
5	Warfarin
6	Nitrates (iv or buccal)
7	Bivalirudin
99	Unlisted

5.3.3 1st June 2008

	Current dataset	New Dataset
Dataset Version	5.2.3	5.3.3
Additional field number		5.26
Additional field definition		Date/time of arrival at centre where PCI performed (ACS only)
Change to field prompt of existing field 2.08		Date/Time arrival at First hospital (ACS only)
csv export file length	103	104

5.4.3 1st January 2009 (notification in June 08)

	Current dataset	New Dataset
Dataset Version	5.3.3	5.4.3
Additional field 1		5.27 Date/time of patient's first call for help (STEMI only)
Additional field 2		5.28 Referring Hospital
csv export file length	104	106

5.4.4 1st August 2008

Library updates (3 new stents).

Note: The field prompt 'Drug(s) eluted by stent(s)' but would be more accurately be titled 'drug based stents'.

Short Code	Text for long code
0	None
1	Paclitaxel (Taxus)
2	Rapamycin (Cypher)
3	Paclitaxel (Achieve)
4	Dexamethasone (Dexamet)
5	ABT-578 / Cobalt chrome (Endeavor by Medtronic)
6	Paclitaxel / Cobalt chrome (CoStar by Conor)
7	Tacrolimus / Carbofilm (Janus by Sorin)
8	Everolimus / Cobalt chrome (Xience V by Guidant J&J)
9	no drug / Magnesium Absorbable Metal (Lekton Magic by Biotronik)
10	Everolimus / Cobalt chrome (Promus by Boston Scientific)
11	Paclitaxel / polymer and steel (Coroflex Please by Braun)
12	EPC capture / steel (Genous stent by Orbus Neich)
99	Unlisted

9 Key Web Links

British Cardiovascular Intervention Society (BCIS):
http://www.BCIS.org.uk

Information Centres, which now hosts the National Clinical Audit Support Program (NCASP), whioch in turn supports the Central Cardiac Audit Database (CCAD):
http://www.ic.nhs.uk/our-services/improving-patient-care/national-clinical-audit-support-programme-ncasp

10 The End

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