PsyGrid Data Collection Application – Training Exercise

1 Prerequisites

Aim: to configure your PC correctly – this section only needs to be performed if you are completing the training remotely.

In order to complete the PsyGrid training you need access to a computer with:

- A working network connection (either public internet or NHS)
- A web browser installed such as Internet Explorer or Firefox.
- A Java Runtime Environment (JRE) installed with version greater than or equal to 1.5. The JRE can be downloaded from http://java.sun.com and the latest version should be fine ("Java Runtime Environment (JRE) 6 Update 4" at time or writing)

2 Downloading the application using Java Web Start

Aim: to learn how to download the application from the Internet.

The PsyGrid data collection application will be distributed to users over the Internet using a technology called "Java Web Start". As well as being a simple and efficient way for us to get the software to you, it also ensures that you will always have the latest version of the software, as new versions will be downloaded automatically.

- Open the following URL in your web browser:
  http://psygrid.smb.man.ac.uk/psygrid-data-client/
  NOTE: this URL is different from that of the "live" system on the NHS network.
- Accept the certificates.
- Choose to create an icon on the desktop.
- When the application launches just click Cancel in the login dialog to shut it down.

The application is now installed on your PC and is ready to use.

If you experience an error after entering the URL above additional configuration of you computer may be required. Please see the following document:
http://www.psygrid.org/psygrid/documents/WebstartProxy.pdf

3 Starting the application

Aim: to learn how to start the application.

During normal use of the application there are two ways to start it, both of which are completely equivalent:

- Opening the URL used in Part 1 in the web browser again.
- Double-clicking on the desktop icon.

Try both of these ways to start the application (after starting click Cancel as in Section 1 to shut the application down). Then feel free to use whichever method you feel is easiest.

4 Logging in

Aim: to learn how to log-in to the application using your username and password.

The data collection application uses a standard username and password method of authenticating users.

- Start the application.
- In the Login dialog box enter your username and password.
- Click the Login button.

The Login dialog will now inform you of its progress as it attempts to authenticate your username and password. If the login is successful, the Login dialog box will disappear.
Once you have logged in successfully for the first time there is likely to be a pause for a minute or two before it is possible to do anything else. Don't worry about this! The application is downloading the definition of the assessment forms from the data repository to your local PC. This is quite a lot of data, so takes some time. So long as the progress bar along the bottom of the application window is moving, all is fine.

When the application has successfully downloaded the assessment forms a dialog will be displayed called “Choose the desired project” - in which case, go to the next section.

5 Creating a new document -n ew record

Aim: to learn how to complete the first assessment form for a new patient.

At last! We can now start entering some data.

To select an assessment form to complete you first need to select (i) the project that the assessment form is a part of, and (ii) the study number of the client for whom the form is being completed.

- Examine the “Choose the desired project” dialog (if it is not visible it can be opened by selecting the menu item Local – New Document...). It should be displaying the available projects, and there is only one - “Outlook”. Double-click “Outlook”.
- The “Screening/study code” dialog should be displayed. In the “Screening/study code” dialog answer “No” to the question “Has the patient completed an assessment form previously”. Always enter “No” here when completing the first assessment form for a patient, and “Yes” when completing subsequent assessment forms for a patient (which we'll come on to in Section

6).

- After selecting “No”, another drop-down list will be displayed called “Select group” (NOTE: it is possible that you only have one group, in which case the “Select group” dropdown will not be displayed). What is a group? A group is essentially a geographical subdivision of the project, so (for instance) the group “006001” represents the “North West – Manchester Mental Health and Social Care Trust”. The “Select group” dialog will contain all of the groups to which you are associated with – select one of them.
- Once the Group has been selected you will be presented with a list of Sites for that Group. A Site is a physical location within the region associated with the Group e.g. a hospital. Select a Site.
- Finally, select a Consultant.
- The Study Number for the new client is now displayed. **The study number is the only way of uniquely identifying the client in the PsyGrid system so it is important that you record it in your screening log!** And for the purposes of this exercise, write it down somewhere. Click OK.
- The Consent dialog is displayed. First two dates must be entered; “Date of entry into the study” and “Please provide the date of the 1st contact with Mental Health Services for this client”. The second date entered here has additional significance as it used to work out when follow up assessments are due to be completed (i.e. 6 month follow ups should be completed 6 months after this date). Enter two dates.
- Next you must “tick” the consent that the client has given. There should be a tick-box for each paper consent form; tick the boxes for which equivalent consent has been obtained on paper (these tick boxes do not replace written consent on paper!). For the purposes of this exercise tick the boxes for the “Has the client (aged over 16 years) agreed to take part in the study?” and “Has the client agreed to their relative...” consents.
- Finally we can choose the assessment form (document) to complete. Documents are divided into groups, and only documents from groups that are not “locked” may be selected. “Locked” groups are denoted by a small padlock (yellow blob!) on the folder icon. Locked groups are unlocked when all documents in the preceding group have been completed. Double click the “Baseline - Section A (Core Assessments)” group.
- Now, the dialog will display all of the documents in this group. We are going to complete the Personal Details Form, so double-click on this.

5.1 Entering data

The Personal Details Form should now be displayed. The application window is split into three parts. The bar down the left-hand side shows the sections in the document, with the currently displayed section highlighted in bold. This document has only one section “Main”. The bar across the top shows the name of the document and the study code of the patient.

The document contains a number of different types of data entry field:

1. Selection from a list of options (e.g. Sex, Ethnicity).
2. Selection/entry of a date (e.g. "Date of birth").
3. Entry of text (e.g. "Country of Birth").
4. Entry of data in a table (e.g. "Past drug use").

For any type of data entry field it is possible to select one of the four Standard Codes:

- 960. Data not known
- 970. Not applicable
- 980. Refused to answer
- 999. Data unable to be captured

Exactly how a Standard Code is selected depends upon the data entry field, as we'll see as we complete the form.

So, let's get on with it!

Question	Answer/Response
Date of birth	Enter a date in the past. There are three ways to enter a date. (1) Type the date in using dd-mmm-yyyy format e.g. 20-Jul-1977. (2) Use the calendar, click on the "-" icon left of the downward pointing arrow – a calendar is displayed. Use this to select the desired date (by clicking on the date). (3) Enter a partial date, when either month and year or year only is known. Click on the downward pointing arrow at the far right of the field and click "Enter partial date". The field will transform into a drop-down list (for Month) and a numeric entry (for Year). *Experiment with all three ways of entering a date, then enter a full date.*
Sex	Select the sex of the client from the list of options.
Has fixed abode?	Select No. Note that the question below "Postcode" is disabled and it is not possible to enter data for it. Select Yes - "Postcode" is now enabled.

Question	Answer/Response
Postcode of residential address	Enter some data that is clearly **not** a valid UK postcode. A red cross will appear to the left of the textbox, indicating the data is not valid. Hover the mouse pointer over the red cross to see why the data is not valid. Enter a valid postcode – the red cross will disappear.
Ethnicity	Select the ethnicity
Fluency in English	Select from list of options
Religious Cultural Tradition	Note that the list has an "Other (please specify)" option. Select this. The textbox beneath the option is now enabled and data should be entered in it.
Marital Status	Note that all questions where the answer is selected from a list of options also have the 4 standard codes as options in the list. Select one of the standard codes.
Living Status – At Baseline	Select an option
Housing Type – At Baseline	Select an option
No of children	This question requires a numeric answer. First, enter some non-numeric data – it will be marked as invalid. Now enter a negative number – again it will be marked as invalid. Enter a positive number that is not an integer (e.g. 1.6) – data is still invalid. Finally enter a positive integer number – the data is now valid.
No of children < 16...	Enter a valid number.
Educational Qualifications Attained	Select an option
Years in full time education	Enter a number
Employment Status – At Baseline	**Don't select any of the options** (we'll come back to this later).
No of hours worked per week	Select an option
Client's Occupation	Select an option
Mother's Occupation	Select an option
Father's Occupation	Select an option

Question	Answer/Response
Partner's Occupation	Select an option
Possible DSM Diagnosis at Baseline	Select an option
Epilepsy	Select an option
A city	Enter one of the standard codes, selected by clicking the down-triangle to the right of the entry field.
City suburbs	Enter one of the standard codes. Then enter a number – click the down-triangle and select “Enable editing” to be able to do this.
Smaller Town	Enter a number
Village/rural	Enter a number
Number of moves...	Enter a number
Other information about client	Select option
Client	Select option
Family	Select option
Notes	Select option
Other	Select option
Has the patient had previous antipsychotic medication?	Select the “No” option – note that the table below remains disabled.
Previous antipsychotic medication	*Disabled*
Is the patient currently receiving medication	Select Yes – note that the table below becomes enabled when Yes is selected.
Current medication	Enter values in all columns of the first row. ● Medication = text ● Dose = number ● Frequency = select from list ● Oral/depot = select from list To add a new row, click the “New Row” button. To delete a row click the “Trash” icon next to that row. *Experiment with adding and deleting rows.*

Click the “forward” button – a dialog will appear titled “Validation error” informing you that there is a problem entered with some of the data in the form. Click OK.

Scroll through the form looking for the red cross icon which indicates where the problem is. It should be next to the "Employment Status – At Baseline" question, which remember we left uncompleted earlier. Select an option for this question – the red cross icon disappears.

Now, try to go "Forward" again (either scroll to the bottom of the form and click "Forward", or just click the right pointing arrow button in the toolbar at the top-left of the application window). Hopefully this time validation should pass and a dialog "Submit record" is displayed. This has three options:

- "Go back and continue editing" just returns us to the assessment form where we can continue editing it.
- "Save and choose a new document" saves the assessment form and allows you to select another form to complete.
- "Save and exit" saves the assessment form then closes the application.

Choose "Save and choose another document" then click "OK". The "Choose the Desired Document" dialog will now be displayed. Click "Cancel to dismiss this. Then go to the next section.

6 Committing to the repository

Aim: to learn how to commit locally stored assessment forms to the central data repository.

At the end of the previous section when we saved the completed assessment form it was saved to the local hard drive on your PC, not to the remote data repository. The "Commit" process uploads all the assessment forms stored locally to the data repository. The reason for this two stage process is to allow you to enter data using a laptop in locations where there is not an available network connection. **However, it is important that data is committed to the data repository as often as possible as when it is stored in the data repository it is secured against data loss.**

- Select the Commit option from the Repository menu.
- A dialog will be displayed showing the records that are to be committed. Click OK.
- In the bar at the bottom of the main application window it will say "Committing to the repository", and a progress bar will be shown.
- When the commit is complete a message box will be displayed. The assessment form is now stored in the repository.

7 Creating a new document -e xisting record

Aim: to learn how to complete additional assessment forms for existing patients.

The procedure for completing an assessment form is slightly different after the first form for the same patient has been completed. Instead of the screening code being generated it must be selected, and there is no need to enter consent, as this will be carried over from the first form completed.

- Select “New Document...” in the “Local” menu.
- Select the Outlook project.
- Select “Yes” as the answer to “Has the patient completed an assessment form previously?”.
- Now, instead of the drop-down list to select a group (as seen in Section 4) there is a drop-down list containing the screening codes for clients for which assessment forms have already been completed.
- Select the screening code that was generated when you created the Personal Details Form (which hopefully you noted down earlier!).
- Go into the Baseline – Section A folder. Note how the Personal Details Form that you have just committed is now greyed out, which lets you know that it has already been completed.
- Double-click the “Positive and Negative Syndrome Scale for Schizophrenia (PANSS)” document.

The PANSS assessment form contains several features that we didn't see in the Personal Details Form, namely multiple sections and calculations.

- The first section of the PANSS form just contains some instructions and a date. To move to the next section click “Forward”.
- The 2nd section of the form is displayed. Note that the 2nd section in the list on the left is now highlighted in bold.
- Data entry fields P1 to P7 are all for numeric entry, and will only allow valid numbers between 0 and 7 to be entered. Experiment by entering non-numeric values, or numbers less than 0 or greater than 7 to see that this causes validation errors.
- Enter valid values for P1 to P7. When you have entered numbers for all of these see that the “Subtotal (positive syndrome)” entry now contains a value. This is a calculated entry, the value of which is calculated by summing the values entered for P1 to P7. If you go back and change some of the number in P1 to P7 notice that the calculated value updates automatically.
- Complete the rest of the PANSS form, clicking the “Forward” button to move to the next section. If you want to go back and change something in a previous section, click the “Back” button. Alternatively, click on the radio button next to the section you wish to go to in the list of section on the left-hand side. Clicking “Forward” when in the final section will display the “Submit record” dialog, as we saw earlier. Choose “Save and choose a new document”
- Until the document has been committed you are able to go back and edit it. Go into the Baseline – Section A folder. Note that against the PANSS document it says “Ready to Submit”. Double click on it to re-open the PANSS. Make some changes if you like then save it again. Now

commit it to the repository using the Repository – Commit menu option.

8 Making corrections to a rejected document

Aim: learn how to modify a rejected document

Before completing this section please ask one of the trainers to reject your PANSS document. If you are doing the tutorial remotely please email support@psygrid.org saying that you want your PANSS document rejected for the CoCoA tutorial, and make sure you tell us the screening/study code (i.e. OLK/XXXXXX-YY)

After a document is completed and committed, it is then made available to the Clinical Project Manager (CPM) for review. In case the CPM identifies problems with a document, the document is rejected with a suitable explanation next to the relevant entries (note that when using the system for real you will receive an email when a document is rejected). The PANSS form that you filled earlier has now been rejected to allow you to fix the issues in it. You have to be online to be able to fix rejected documents.

- Select “Load Rejected Documents...” in the Repository menu. Note, you have to be online to be able to do this.
- Double-click on the screening/study code you used for the PANSS form (there should only be one).
- Double-click on “Baseline – Section A”.
- Double-click on the PANNS entry.

The form will now load. There will be one or more entries that have a yellow triangle with an exclamation mark in it. This means that the CPM has marked these entries as invalid.

- Find the first entry which has been marked as invalid then move the mouse over the yellow triangle. A tooltip should show the reason why the CPM marked it an invalid.
- Let's fix the problem, double-click on the text box. The “Edit Entry” dialog is displayed.
- Change the value in the dialog box that shows up and give the reason for the change. Note that you are required to give a reason for every change you make after you commit the document for the first time.
- Press “OK”.
- The yellow triangle has now been replaced by a blue “i” indicating that the value has been changed. The reason for the change will be displayed if you move your mouse over the “i”. Note that you can change the value several times by following the same procedure.
- Repeat the steps above for any other entries that have been marked as invalid, then go to the last section and click Forward.

- The “Submit Record” dialog will be displayed. This dialog is essentially the same as the one you get when completing a document for the first time except the text of the options is slightly different. Select “Commit and choose another rejected document” and click OK.

And that's it, you have corrected the issues with that document. The CPM will now have the opportunity to review it once again and if there are no problems, it will be approved. Otherwise, this step will have to be repeated.

9 Saving an incomplete document

Aim: learn how to deal with documents that have to be completed over a period of time.

In some cases, a document has to be completed over a period of time. It is undesirable to keep this data in a laptop for this period of time as it could be lost or stolen. This means that one needs to save the document to the central repository after it has been partially completed and then get it back again once the data to finish completing it is available. Let's try it.

- Select “New Document...” in the Local menu.
- Double-click on “Outlook”.
- We want to complete a document for a new client so select “No” in the first drop-down. Complete the necessary steps to generate a study number (note this down) and complete the consent (as in Section 4).
- Double-click on “Baseline – Section A”
- Double-click on “Duration of Untreated Psychosis - Baseline”
- The electronic version of the DUP Form should now be displayed.
- Enter a date for question A) and B).
- Select “Save Incomplete Document” in the Repository menu. A message will be displayed asking if this is what you want to do. Read the message and then select “Yes”. A confirmation message should be displayed.
- At this stage, the document is saved locally in your computer. To open it again go back into the “Baseline – Section A” folder. Against the DUP document it should say “Locally Incomplete”. Double click to open it – when it opens the two answers you have already provided are still there. Save it as incomplete again.
- Select “Commit” in the Repository menu. A dialog will be displayed showing the records to be committed. Note that the tickbox for the record we have just created is unticked – incomplete documents are not committed by default. Tick the box then click OK.
- A confirmation message should be displayed. Now, the document has been sent to the central repository.
- Let's say a few days have passed and we want to be able to complete the form. Select “Load

Incomplete Documents...” in the Repository menu. You have to be online for this.

- Double-click on the relevant study number, then the Baseline – Section A group, then the DUP document. The document is retrieved from the repository and opened ready for editing.
- Complete the form and click on “Forward”.
- You are now at the Submit Dialog once again. This should be familiar by now. Select the second option and click OK..
- Commit the DUP document

10 Additional things to try if there's time

For the super keen, here are some more things to try if there is spare time.

- See what happens if you close the application when halfway through completing an assessment form (just click the close button “X” in the top-right corner, then confirm in the dialog), then start the application again.
- When completing an assessment form for a new patient (i.e. the screening code is generated for you) don't tick any of the consent boxes, click OK and see what happens when you try to open a document.
- Create a new document then use the “Paper+Pencil/Edit” button in the toolbar to complete all entries in the current section of the document with the same standard code.
- Use the Repository – Change Record Status menu option to view the status of a record (record statuses are used to monitor the progress of a client through the study, and are used to generate recruitment statistics). Complete all document in the Baseline – Section A folder and commit them. Check the record status again (it should have updated). You can also use Change Record Status to manually change the status, but generally you should not need to do this.
- Use the Repository – View Document Status menu option to launch a dialog that can show you which assessment forms have been completed for a given client. Double-clicking on any completed document will generate a printable PDF view of the data.
- Use the Repository - Generate Report menu option to generate a PDF report on the PANSS document you completed in section 6 (the report is called “PANSS – Baseline”). The report will contain a summary of the scores and a graphical view.
- Create a new document then use the “Print “ icon in the toolbar to generate a PDF representation of the document.
- Use the Repository – Print Document menu option to create a PDF representation of a document stored in the repository. Similarly the Print Record menu item creates a PDF for all the documents in a record.

And if there is still time ask the trainer for more things to do.