Module 2 Using the Database

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Using the Database

After data has been entered into the Excel Reporting Form it is ready to be imported into the database. From here it can be analysed over time and across different locations. For example, aggregate reports can be built to look at quarterly or annual results, and indicators can be visualised in the form of graphs and maps.

In this way, the Database acts as a central repository for individual reports and as a tool to improve decision-making through more easier, faster visualisation and analysis of HIS data.

2.1 Before you start

2.1.1 MINIMUM COMPUTER REQUIREMENTS FOR HIS DATABASE

The HIS database is recommended for use on computers running Windows XP, Windows Vista and Windows 7 operating systems.

We recommend that you use MS Access 2007 with the database. A free runtime version of this software has been included on the CD-ROM that accompanies this manual.

2.1.2 HOW TO INSTALL

The most recent versions of the HIS installers are also on the CD-ROM. You can also visit the HIS website to check for the most recent software downloads and upgrades: www.unhcr.org/his



> For new installation

If you have not used the HIS database before, you must install the Full installer.

> To upgrade an existing database

If you have already installed an earlier version of the HIS, you should use the Upgrade Installer.

2.2 The first time you start

2.2.1 STARTING THE HIS

After installation you can start the database by double clicking the HIS icon on your desktop.

IMPORTANT: Do NOT use the full installer to

upgrade an existing version of the HIS

database as this will

overwrite your data.

2.2.2 CREATING A NEW COUNTRY DATABASE

When you open the HIS for the first time you will see the HIS Initial Setup form. If you are setting up a database for an existing HIS country, select New country and choose your country from the drop-down menu.

New country	O Preconfigured	
	untry which corresponds s that you will be monitori	
alth Information Sy	ystem	
	<u> </u>	

Press *Continue* and you will proceed to the *Login form*. If this is the first time you have used HIS, you will need to enter a new user name. Next time you open HIS you will find that your name has been added to the user list and you will simply need to click on it to proceed.

	EN
Please select your na	me from the list below,
r enter it here >	
0	

After entering or selecting your name, press *continue* to access the Main Menu. You are now ready to start using the database (go to 3.0 Quick Start).

2.2.3 LOADING DATA INTO A NEW DATABASE

If are setting up new database but already have data to load inside it, select *Preconfigured* from the *Initial Setup form* and then browse to where the data is saved. Select the file and press *Continue*.

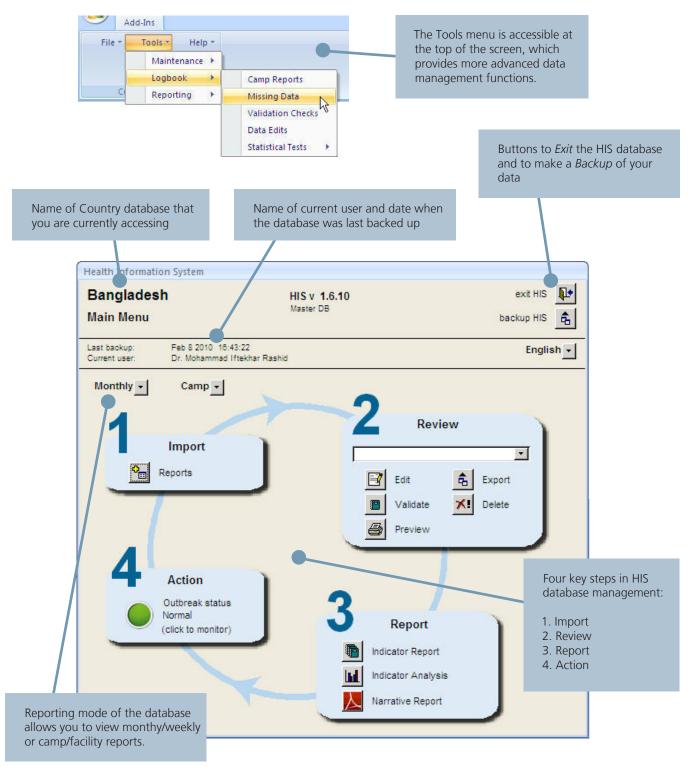
You will next see the Login form and will need to enter a new user name - or select a name from the user list - to proceed to the Main Menu.

2.2.4 SELECT THE LANGUAGE

The HIS database can be switched between English, French and Arabic by clicking on the language menu. The change language option is also available from the Main Menu and the Login form. It translates all menus, forms and reports inside the database.

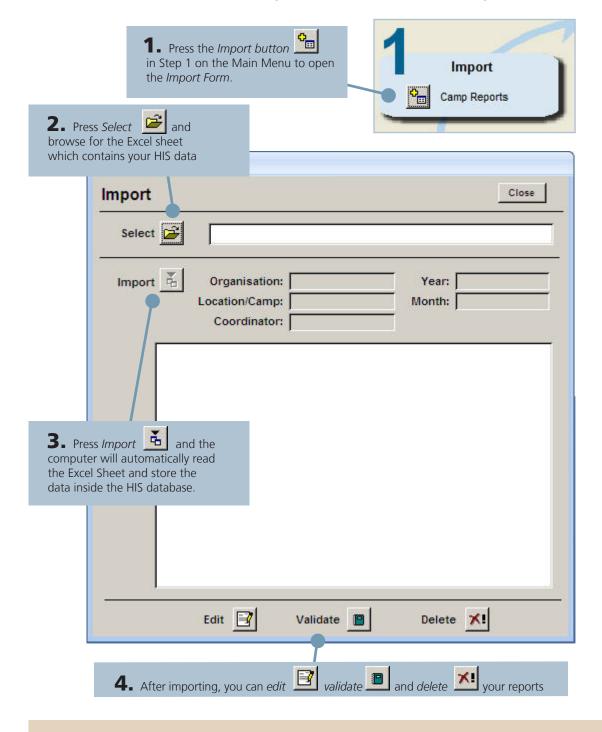
2.3 Quick Start

The first screen you will see after the login screen is the Main Menu. This displays the four key functions within the database. In addition, a Tools Menu at the top of the screen gives you to access more advanced functions.



2.4 Importing data

The first essential task in the database is to import the data that has been entered into the Excel Reporting Form (see Part 1 Using the Excel sheet).



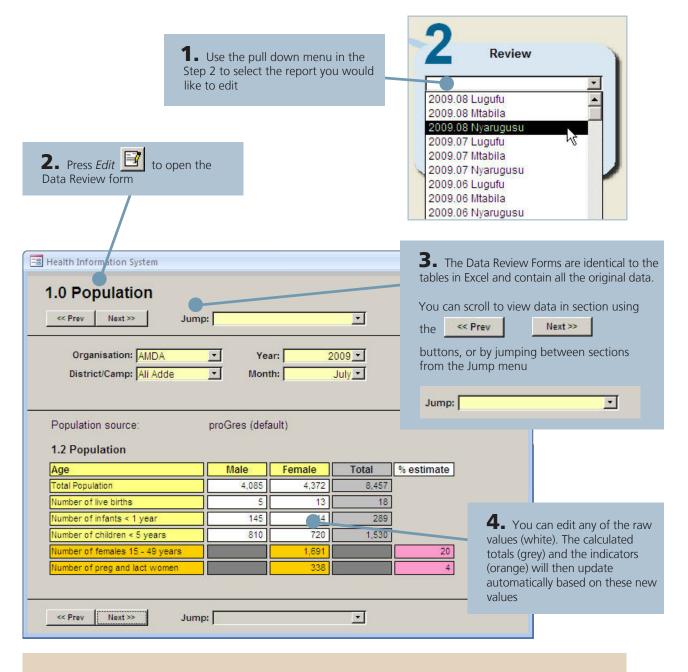
Tip: See Troubleshooting guide for advice on what to do if the sheet fails to import. See Handling Missing data and Validating data quality for more information on how to check for missing values and broken validation rules after import.

2.5 Reviewing data

After a report has been imported into the database, it is now important to review the data and make any necessary edits and corrections.

2.5.1 EDITING REPORTS

Use the Edit button to review any report inside the database, and make changes and corrections to data.



Tip: All data edits are stored inside the database, so you can track who is making changes and share them with others. You can view a list of all data edits in the database at any time by pressing **Tools > Logbook > Data Edits**

2.5.2 DELETING REPORTS

If the quality of a report is not adequate when first imported into the database, you can delete it and re-import the Excel sheet again after corrections have been made.

Nayapara
Yes No

2.5.3 **PRINTING REPORTS**

You can easily print complete copies of your reports, or save them to pdf, to share with others.



2.5.4 EXPORTING REPORTS

When the data has been cleaned of missing data and broken validation rules (see Basic Data Management) it is ready for sharing with others. As the data has changed inside the database, the Excel sheet is no longer up to date and you must send reporting using the Export function within the database.



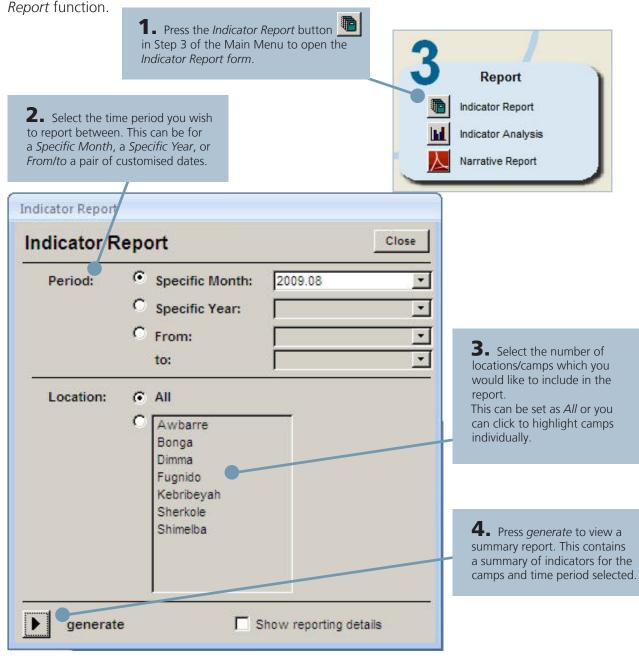
Tip: These zipped Camp Export files can be imported into other databases in the exactly same way as for original Excel sheets.

2.6 Reporting data

After the data has been imported, and cleaned of missing data and broken validation rules, it is ready for reporting and analysis.

2.6.1 INDICATOR REPORT

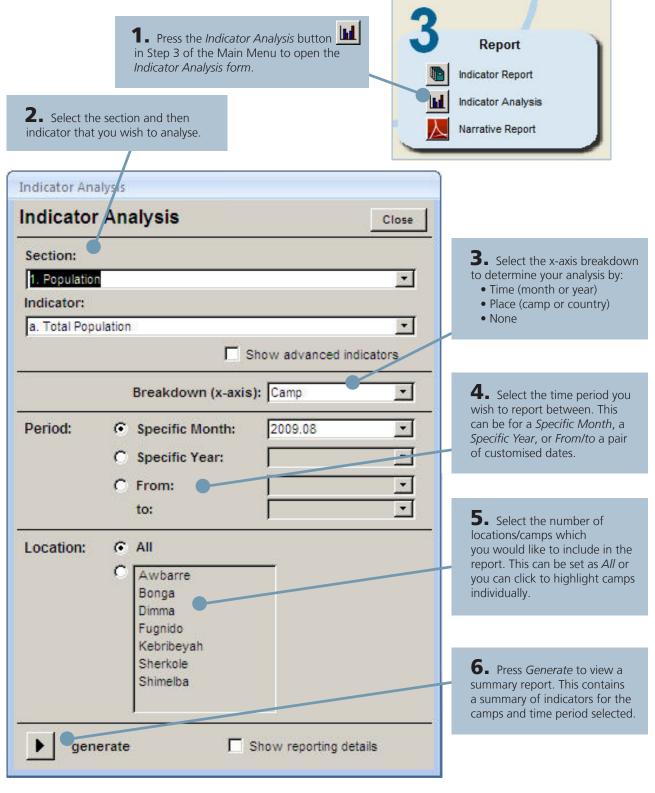
If you wish to make an aggregate report over time or across camps you can use the Indicator



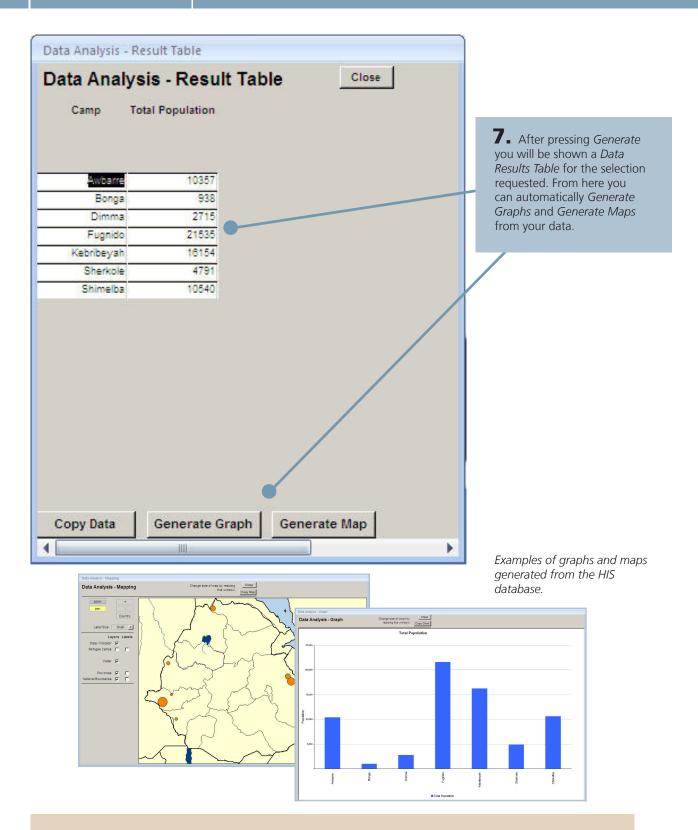
Tip: Check the *Show reporting details* box if you would like to see a list of any reports that are missing for the selection you have made.

2.6.2 INDICATOR ANALYSIS

After reviewing indicators in a Summary Report, you may wish to analyse one or more the indicators within the database in more detail.



Tip: Check the *Show advanced indicators* box if you would like to see a more comprehensive list of indicators within each section.

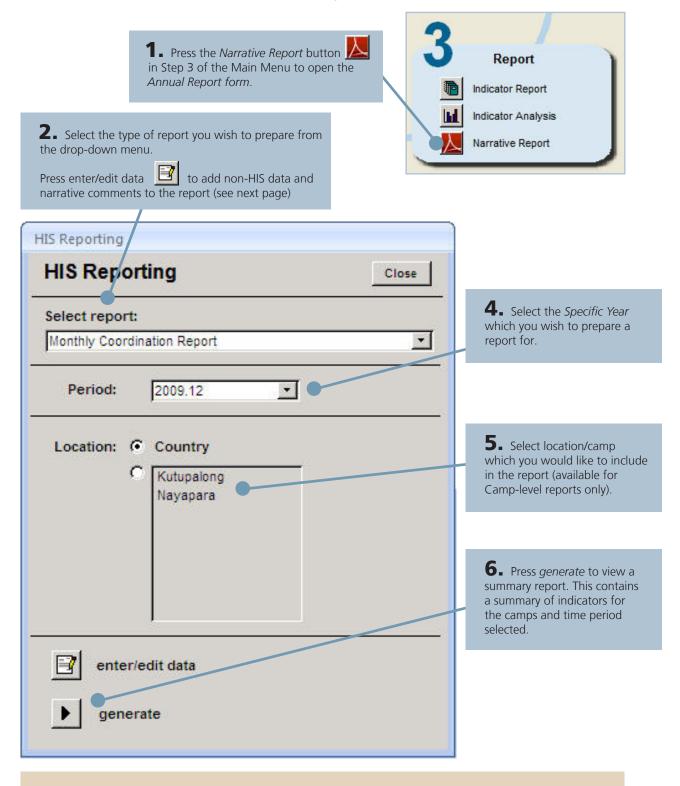


Tip: Use the "Copy" button on each form to copy data tables, graphs and maps to the clipboard and then paste into written reports, presentations or powerpoint presentations you are working on.

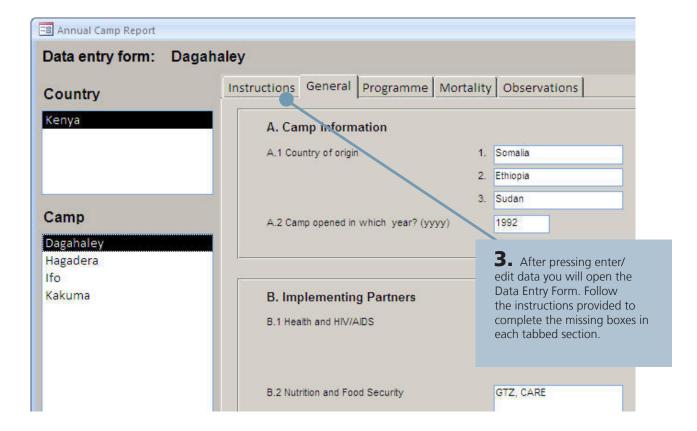
The exact type of graph depends on the x axis breakdown and the indicator in question. Maps are only available for indicators analysed 'by camp'.

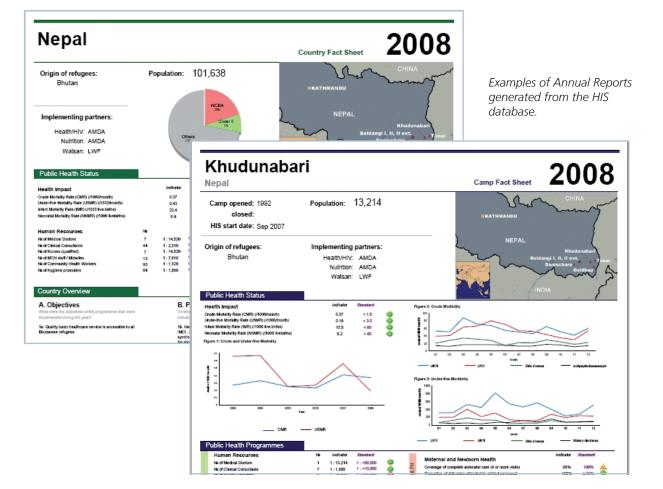
2.6.3 NARRATIVE REPORTS

In addition to *Summary Reports*, more comprehensive *Narrative Reports* can also be prepared from the database. These bring together HIS data, non-HIS data (e.g. survey results, number of staff) to create simple, visual summaries of Country and Camp-level data.



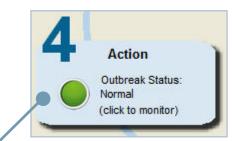
Note: As we gather more feedback from field users, we will add new report formats to the database. Please send comments and suggestions to <u>HOHIS@unhcr.org</u>





2.7 Taking action!

The last and most important step within the HIS data cycle is to act and take decisions based on your data. The most immediate use of the data is in the detection of suspected disease outbreaks.



1 The *Outbreak Status button* is displayed in Step 4 of the Main Menu.

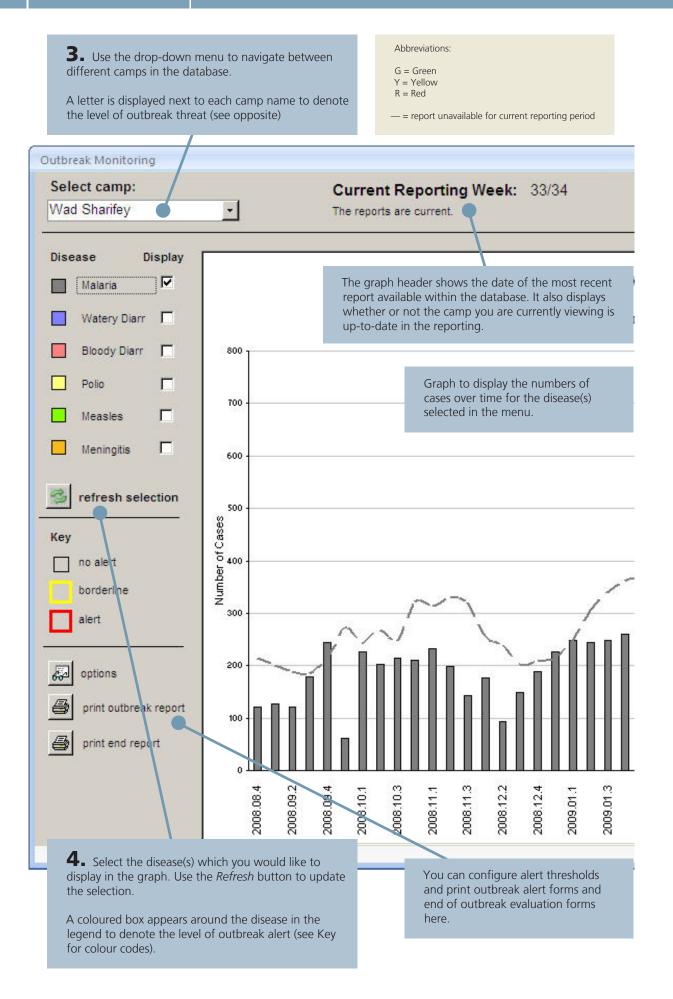
It changes from Green (*Normal*) to Yellow (*Borderline*) to Red (*ALERT*!) - depending on the level of threat of a suspected outbreak (see below for definitions).

2. Click on the button to open the *Outbreak Monitoring form* (see next page).

If an outbreak has been detected, the graph will automatically open to display the camp and disease(s) which have exceeded the alert threshold(s) for the current reporting period.



Note: The Outbreak Status button only displays alerts for thresholds that were exceeded within the current reporting period. It does NOT reflect past outbreak alerts.



2.8 Basic Data Management

2.8.1 HANDLING MISSING DATA

During import of an Excel sheet into the HIS database (see Importing data) the database searches for missing values and lists them all in the window of the Import Form:

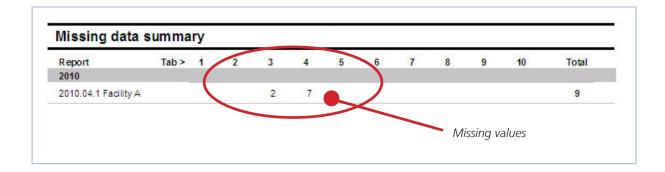
	10 10	20110-021-0210-021
Section	1.0	PopulationOK
Section	2.0	MortalityOk
Section	3.0	Morbidity 2 missing value(s)
		IPD & Referral 7 missing value(s)
		Laboratory
Section	6.0	Disease Control OK
Section	7.0	EPI and Vit. A OK

Example of Missing value check in the Import Form

These missing values are also recorded in the database logbook. Go to **Tools > Logbook > Missing data** to see a summary of all the missing data in the entire database.



After selecting *Missing Data* in the drop-down menu, will see a report which records the name and date of all reports which contain missing values and also the sheet number where the values are located. If you observe missing data here you next need to browse to find the relevant report inside the database and use the Edit function *(see Editing reports)* to make corrections.

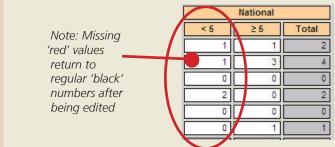


All missing values are assigned the value ZERO inside the database and are displayed in **RED font**. This distinguishes them from 'true' zeros as are recorded as regular black numbers.

After you have identified that a value is missing the next step is to verify the reason and identify the true value. Once this has been done you can enter the true value into the report using the Edit function (see Editing reports).

			Refugee			National
		< 5	≥ 5	Total	< 5	15
Total in ward at beg	inning of reporting period	3	2	5	0	1
Number of admissio	ns this reporting period	2	1	3	0	3
Number of exits	authorized	1	0	্	0	0
	unauthorised	0	0	0	0	0
	death	0	0	0	0	0
	referral	0	1	1	0	1
Total discharged		1	1	2	0	1
Deaths within 24 ho	ours	0	0	0		0
Total in ward at e	nd of reporting period	4	2	0		3
IPD Indicators					\searrow	
Number of days in r	eporting period		5			
Number of beds			2			
Sum number of day	s stay for auth discharges		5			
Proportion of < 5 IPC) deaths within 24 hours			Mis	sing values	
Average length of s	stav (davs)		5.0		5	

Tip: The value will return to a real BLACK number after it has been edited. The missing value will also be removed from the Missing Data Summary in the logbook.



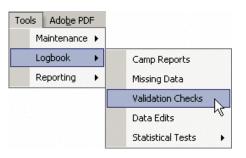
The aim is to clean the database and ensure the logbook does not contain any missing values after each report has been imported.

2.8.2 VALIDATING DATA QUALITY

Over thirty data validation rules have been defined within the HIS database. These are activated if known inconsistencies or errors in the data are found during import of each Excel sheet.

After import you can immediately look to see whether any rules are broken by pressing the Validate button at the bottom of the screen. You can also validate a report at any time, by selecting the report from the pull-down menu in Step 2 and pressing *Validate*.

Broken validation rules are also stored in the database according to the name and date of the report. Go to **Tools > Logbook > Validation Checks** to view a report which summarises all broken rules which are currently active in the database.



You will see a report which records the name and date of all reports which contain broken rules. You will also be given a short description of the rule plus a recommended action to correct it. It is now important to verify the reason for the broken rule and to correct the values in the database report using the Edit function *(see Editing reports)*.

After doing this you can re-validate the report, by pressing the Validate button. If the rule is corrected it will no longer appear in the *Data Validation Report*. The aim should therefore be to clean the database, and have an empty logbook at the end.

Tip: If you view the Data Quality report from the database logbook, you will be asked if you wish to run all the checks again (see below). If you press Yes, this will recalculate the validation rules for every report in the database. Depending how many reports you have stored this could take a long time.

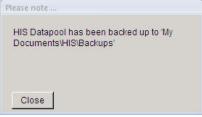
Recalculate?	
Would you lil ensure they Last ran:	ke to re-run the quality checks to are current?
Yes	No

If you press No you will see a validation report based on the last available set of validation reports that were generated. These may or may not be current, depending on whether or not the data has been edited since the last time the validation checks were run.

2.8.3 MAKING BACKUPS OF YOUR DATA

It is recommended that you make regular backups of your data to ensure that it isn't lost (for example via power failure, file corruption, viruses).

To do this press the *HIS Backup* button on the top right of the Main Menu. This sends a complete copy of all your data to your My Documents/HIS/Backups folder. Every time you press the button new backup is made. Note that each file is labelled with the date and time that you backed it up.



To share a copy of your most recent data, simply copy the most recent Datapool_HIS file (ie. with the most recent date) and send by email.

🛅 H:\HIS\Backups			
File Edit View Favorites Tools Help			
🕒 Back 🔹 🕥 🖌 🏂 🔎 Search 🎼 Folders 🛛 🕼 🎲	× 9 🗉]-	
Address 🛅 H:\HIS\Backups			
Name	Size	Туре	Date Modified 🔻
Datapool_HIS_RW_v1.4.10_20090402_1341.zip	162 KB	WinZip File	02/04/2009 1:41 PM
QDatapool_HIS_RW_v1.4.10_20090313_1446.zip	160 KB	WinZip File	13/03/2009 2:46 PM
Datapool_HIS_RW_v1.4.10_20090209_1612.zip	160 KB	WinZip File	13/03/2009 2:46 PM

2.8.4 VIEWING ALL THE REPORTS INSIDE THE DATABASE

To view a list of all the reports inside the database, go to

Tools > Logbook > Camp Reports.

Too	ls Ado <u>b</u> e PDF	
	Maintenance 🕨	
	Logbook 🔹 🕨	Camp Reports
	Reporting +	Missing Data
		Validation Checks
a s	ummary	しata Edits
e fo	ollowing	Statistical Tests
	4 . 41	

This will display a Summary Report listing all the reports

that are stored inside the database. The cover page presents a summary of the number of reports inside the database by month. The following pages list the individual camp reports inside the database, the date they

were imported, the name of the health coordinator, and the version of Excel which was used.

2.8.5 UNINSTALLING THE HIS

Open the HIS database and make a backup of the data (Press 'Backup Button' below Exit on the Main Menu). Then click Start Menu > All Programs > HIS > 'Uninstall HIS' to remove the existing program.

2.9 Advanced Data Management

2.9.1 LOADING A NEW DATAPOOL INTO THE DATABASE

If you wish to load a new set of data into a database you need to use the Change datapool function. First go to the **Tools > Maintenance > Change datapools.**

File 🕆	Tools *	Help *	
	Mainte	enance 🕨	Change datapools
	Logbo	ok 🕨	Datapool Synchronization
C	Report	ting 🕨	Export Camps

The HIS Status form will open and display the datapool you are currently connected to:

C:\Doci	Status t datapool connection: iments and Settings'All Users'Application S'BE\Datapool_HIS_SD.mdb
Last ba SD	ackup for countries loaded: 25/09/2009 11:26:38 PM
	Link
Sele	Link Link Ct a file below to change the HIS datapool example, to return to a backed up version)
Sele	ct a file below to change the HIS datapool

Press the select button in and browse for the datapool file you wish to load into the database. Press *Change datapool* and you will then be able to log in and see the data which has just been loaded.

Tip: By following the steps above you will delete the current datapool you are using and *replace it* with the version which you are loading.

To avoid losing data it is therefore recommended that you first make a back up of the old data before loading a new set (see Making Backups of Your Data).

2.9.2 NETWORKING A DATAPOOL WITHIN AN OFFICE

In some offices, it may be useful to be allow multiple users to access the same set of data from different computers. For example, if a number of colleagues within the same health unit wish to access the same dataset to make edits, generate reports, or prepare analysis.

In order to do this, you will first need to make a backup of the data that you wish to load into a database (see Making backups of your data). Take a copy of this data from My Documents, unzip the file and place it onto a local network drive which is accessible to all other users with whom you wish to share the data.

On each computer which will access the data, you now need to install the database onto each computer which will read the common data set (see How to Install).

Now you need to link each database to the data which has been placed on the common drive. To do this to the go to the **Tools > Maintenance > Change datapools**. The HIS Status form shows the datapool you are currently connected to.

	Status
C:\Docu Data\HI	t datapool connection: iments and SettingsVAII Users\Application S\BE\Datapool_HIS_SD.mdb ackup for countries loaded:
SD	25/09/2009 11:26:38 PM
	Link
Con	nect to a shared datapool located on your local

Select the link tab and press the select button to browse for the datapool file on the common drive. Check the link to this file, and press Continue to link to the file. Note that Linked DB will appear to denote that you are linked to the common drive.

Tip: You can de-link a computer from the networked datapool at anytime by unchecking the link to this file box.

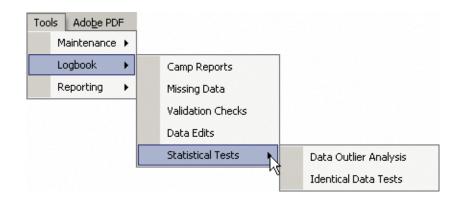
2.9.3 EXPORTING DATA FOR SELECTED CAMPS

Users with a large number of camps inside a database may wish to export reports for selected number so that they can share them with other users, or perform specific analysis with a smaller dataset.

Go to Tools > Maintenance > Export Camps. The *Export Camp form* will open. Select the camp(s) you wish to export (hold Ctrl to select more than one camp) and press *Continue*.

Assign a name to the new datapool and the file will be saved to My Documents/Export data. Search for the file, and attach and email to the partner to load into their database.

After the partners receive this file, they then need to simply load the datapool into the database to review the new data (see How to load a new datapool into the database).



2.9.4 PERFORMING STATISTICAL TESTS

The database contains simple statistical tests which can be performed to check the validity and reliability of the data. To access them go to **Tools > Reporting > Statistical tests**.

The two tests that are currently available are:

- 1. Data Outlier Analysis: This test lists any data point which is < -3 to > +3 standard deviations from the mean within its range of values.
- 2. Identical Data Tests: This test identifies tables which are identical in 2 or more consecutive months. Whilst this might be a valid observation, it could also point to reporting error or duplication. (Note: tables consisting entirely of zeros are excluded from these identical data tests).

2.9.5 CREATING CUSTOM REPORTS

Custom reports is a powerful feature which allows advanced users to generate analysis for any value within the database, for any time period, and across any number of locations/camps. This is particularly useful if you have a known set of variables which you wish to analyse (e.g. in order to write a report, or to research a specific line of enquiry).

Go to **Tools > Reporting > Custom Reports** to open the *Custom Indicator Report form*.

1. Press the <i>Create New Report</i> button and enter a name for your Custom Report. Press <i>OK</i> to add to Report list.	eport X e enter a name for the new report. OK Cancel
2. You can rename <i>I</i> or delete <i>My</i> re Custom Reports.	port
Custom Indicator Report My Reports 3. Y entire	ou can save 🛄 load 彦 and delete 💿 collections of Custom Reports.
Show: Time C0102G30 Period: Show: Time C0201F26 M Location/Cam Camp C0201F27 M Period: Specific Month: C0201F26 M C0201F27 M C0201F26 M C0201F26 M C0201F26 M Period: Specific Month: Camp C0202F35 M C0202F35 M C0202F3 Specific Year: Image: Colored and the second and	op - Total population op - Total no of infants < 1 year op - Total no of children < 5 years ort - Male refugee total <5 ort - Female refugee crude ort - Fe ort - Male refugee crude ort - Male refugee total <5 ort - Male refugee total <5 ort - Female refugee >1 to <5 ort - Female refugee >5 ort - Female refugee >5 ort - Female refugee <5 male
	Add-Ins
6. Press <i>Generate</i> to prepare a data table of your results. Press the <i>File > Analyse It with Microsoft Excel</i> to export the table to MS Excel for further analysis and use.	Main

A. Press the <i>Add New Field</i> button to open the Data Review form.	.	B. Scroll through the forms to find the values which you wish to add to your Custom Report.			
🖪 Health Information System					x
1.0 Population <pre> </pre> Section Jump:			×	ļ	Close
Organisation: AMDA District/Camp: Ali Adde		ear: <mark>2</mark> nth: 2	2009 • July •		
Population source:	oroGres (de	fault)			
Age	Male	Female	Total %	estimate	
Total Population	4,085	4,372	8,457		
Number of live births	5	13	18		
Number of infants < 1 year	145		289		
Number of children < 5 years	810	720	1,530		
Number of females 15 - 49 years		1,691		20	
Number of preg and lact women << Prev Next >> Jump:		338			
		Select field)
C. Double-click inside the cell to open the <i>Select field</i> . Press <i>Continue</i> to add the value to the Indicator Report					
Pop - Total population					
	1	c ont	tinue		Cancel
C0102G28 Pop - Total population R0102E28 Pop - Total population male R0102F28 Pop - Total population female					

Tip: In the *Select field* box you can edit the name of the value create any name you wish.

To Delete a field from the indicator report, simple double click the value you wish to remove in the Custom Indicator Report window.

2.10 Trouble Shooting

2.10.1 MY DATABASE WON'T OPEN

You must be logged into MS Windows as a user with Administrator privileges to be able to install the HIS database. Before running the installer, disable all antivirus / ad-ware software on your computer (these applications may interfere with the installation). Run the installer, and then for new installations restart your computer.

To check which version of MS Access you have installed, open MS Access from the Start menu, and select Help > Microsoft Access from the menus. The current service pack levels are Office 2002/XP SP3 and Office 2003 SP3 (for more on computer requirements see Minimum computer requirements for HIS database).

2.10.2 MY MS EXCEL SHEET WON'T IMPORT

There can be a number of reasons why the Excel sheet will not import into the database. Three steps to consider are as follows:

- Check you are using the correct version of the Excel sheet. The most recent version can be found in your My Documents/HIS folder or downloaded from the website (www.unhcr.org/ his). If you are unsure please write to us at <u>HQHIS@unhcr.org</u>
- 2. Check that the Header section is correctly filled in the first sheet. If the Camp or Organisation name has not been selected properly in Sheet 1.0 then the database will refuse to import the sheet. Ensure you have selected all the names from the drop-down menus.
- 3. Check that the Population values have been filled completely in table 1.2. If there are missing values the database will refuse to import the sheet.

2.10.3 THE BUTTONS ON MY MS EXCEL SHEET WON'T WORK

When you first open the sheet you may see a message in a red bar asking you to enable macros. It is very important that you enable this for the buttons in the options sheet to work properly.

Please enable macros to adjust the Basic Configuration and General Information sections

To do this, please take the following steps:

- Open the Excel sheet. Go to MS Excel > Tools > Macro > Security.
 Set the security settings to LOW, save the sheet and then exit the program
- 2. Repeat the steps above. This time, set the security settings to **HIGH** and again save the sheet and exit the program
- 3. Open the Excel sheet for a third time. You should now receive a warning telling you that Macros are contained in the file and asking if you would like to enable them.

IMPORTANT! Tick the box for "*Always trust content from this publisher*". And then press the button "Enable Macros". The sheet should then continue to open normally.

4. If the HIS Menu now appears at the top of the Sheet you are viewing then the Excel form is working properly.

If there are any additional questions or problems please write to us at <u>HQHIS@unhcr.org</u>

2.11 Frequently Asked Questions (FAQs)

1. How do I share my reports with other partners?

The data in your monthly reports is likely to undergo a number of changes and edits once inside the database (for example to correct broken validation rules or to replace missing values). This means that, by the time you are ready to submit your report to a higher level, the original data in the Excel form is no longer up-to-date and you will need to share data directly from the database with other partners (for more information see *Exporting reports*).

2. Where is the master copy of the data kept?

The original master copy of the data is kept in the computer where the MS Excel sheet is first imported. In most cases this will be at camp level and will be managed by the partner organization. On rare occasions, it will be kept at the UNHCR sub-office until partners are able to take responsibility for database management themselves. If you are a partner organization who wishes to use the database, please contact your UNHCR health coordinator or write to HQHIS@unhcr.org for more details.

3. Who should make edits and corrections to the data?

Only the original master database should be edited and corrected. All other users of the HIS database are looking at a copy of the data. Therefore, if you are not using the master database and spot mistakes or errors in the data please inform us directly or contact the owners of the master database at camp level. Please do not make changes to copies of the database, as these will not be synchronized back to the master original.

4. Can I access my database from multiple computers?

Yes. The HIS database can be networked, to allow multiple users to access the same data from different computers. This is particularly useful if you are working in an office and have a number of colleagues who wish to use the database at the same time (for more information see *Networking a datapool within an office*).

5. What happens if camps open or close during the year?

Please let us know if a camp is due to open or close in your programme by writing to <u>HQHIS@unhcr.org</u>. We will update this information into the database and ensure that the camp reports are handled appropriately.

6. What happens if my HIS starts part way through the year and I need to prepare annual reports in December?

Not all countries will have complete data inside the database for a full year and we recognize that

this will present a challenge when you need to report your complete annual data. If you have electronic copies of your pre-HIS data we may be able to enter this into the database for you. Please write to us at <u>HQHIS@unhcr.org</u> and we can see how to help you.

7. Will an internet version of the HIS database be available?

Yes. We are working on a web-based version of the HIS which will allow you to automatically submit and receive your data online. The web version will also mean we can add more sophisticated analysis and reporting functions.

8. Can UNHCR provide a computer for HIS in my office?

In certain circumstances, yes we can. Please first speak with the UNHCR health coordinator and UNHCR programme officer to see if computers can be provided from within your regular programme budget. If this is not possible, please write to us at <u>HQHIS@unhcr.org</u> and we can see if we can help.

9. Is my data private?

Yes. Access to the complete HIS database will remain private and will only be accessed by UNHCR and partner organizations that collect the data. We also sometimes share summary HIS reports when specifically requested by donors. A number of external collaborators have expressed an interest in preparing publications with HIS data, but this will done on a selective basis and governed by strict terms of use. To help you learn more about how we plan to use the HIS data, we will soon be publishing Data Sharing Policy on our website.

10. How can I change the language settings?

You can change your database language settings by using the Language drop-down box on the Main Menu (see *Selecting the language*). Note that this will also translate all of the individual and summary reports inside the database.

11. Where can I discuss HIS with other users?

We plan to launch an HIS discussion group soon, so you can ask questions online and share your expertise with others in the field. We will keep you updated as to when this is ready.

12. Where can I send feedback or report problems?

We'd love to hear what you think. Please write to us at HQHIS@unhcr.org



