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ANNEXURE I: METHODOLOGY

CREATING PIVOT TABLES USING MICROSOFT® EXCEL

Due to the big size of the Cholera Dataset, the cholera cases of Aug'00-Feb'04 had to be divided into years and others into months to be able to sort the data effectively. Microsoft Excel could not accommodate all the data entries in one spread-sheet, it is limited to process up to a maximum of 65,535 data entries. Thus, the entries were divided into files based on cholera cases of particular years, months or a combination of months (Table 1).

Table 1: Annual/monthly cholera case counts between Aug 2000 – February 2004.

Spread-sheet #	File Name	Number of data entries (cases)
1	Non Dated cases	226
2	Cases 2000	20,415
3	Cases January 2001	34,837
4	Cases February 2001	32,123
5	Cases March-May 2001	46,491
6	Cases June-December 2001	9,571
7	Cases 2002	12,352
8	Cases 2003	864
9	Cases 2004	16
		158,895 (Total Cases)

N.B.

This part of the data sorting exercise was conducted for the entire Cholera Dataset as it was provided for the study. At this stage all the cholera cases were considered irrespective of whether the individual data entries were complete or not. That means it was at the end of this sorting exercise that the complete data entries were considered for inclusion in the attribute dataset. Nonetheless, the steps outlined here were also used for sorting the attribute dataset at one point or another.

The entire Cholera Dataset was divided to create individual Excel spread-sheets as listed in Table 1. This exercise was done by sorting the Cholera Dataset which was created in Microsoft Access as follows:

1. Data was copied from Cholera Dataset (Access Spreadsheet) into Excel
From Excel the data entries were sorted by date. Thus:
 - a. Highlight all the data entries
 - b. Click > Data > Sort > Choose “Date of notification”
 - c. The data entries are now sorted orderly.
2. Transferred the sorted data into the assigned files (Table 1).

PIVOT TABLES

Information from each spread-sheet was used to generate the following information:

- a. Total monthly cases
A compilation of all the monthly cases that can also be separated by gender.
- b. Age groups by GIS place names
Lists the age groups affected in all the GIS place names reporting cholera. The age groups can also be separated by gender.
- c. Age groups by gender
Sorts all the cholera cases by age groups and by gender.
- d. Cholera cases by DC
Number of cholera cases in each DC. These could also be sorted by gender.
- e. Cholera cases by MD
Number of cholera cases in each MD. These could also be sorted by gender.

CREATING PIVOT TABLES WITH MICROSOFT EXCEL

Before creating pivot tables, the column “Date of notification” (Table 2) was split into Day, Month and Year (Table 3).

Procedure:

1. Insert 3 columns after the column of “Date of notification” And them as Day, Month and Year respectively.
2. In the Day cell > type: =Day (E2)>Enter
In the Month cell > type: =Month (E2)>Enter
In the Year cell > type: =Year (E2)>Enter
(N.B: (E2) is the designation of the cell - “Date of Notification”).
3. Each of the above commands can be copied from the first cell to the rest of the individual column to enter the day, month and year figures respectively.

The Dataset format will now appear as the example given in Table 3.

CREATING PIVOTS.

- Open the relevant spread-sheet.
- Go to Data > Pivot table & Pivot chart report.

Pivot Table and PivotChart Wizard - Steps 1 of 3

Where is the data that you want to analyse?

Choose: Microsoft Excel list or database.

What kind of report do you want to create?

Choose: Pivot Table

Click > Next

Pivot Table and PivotChart Wizard - Steps 2 of 3

Where is the data that you want to use?

The range is automatically chosen.

Click > Next

Table 2: Example of the line listing of Cholera cases from the Cholera Database.

Age (Years)	Gender	GIS Place Name	PCODE	Date of Notification	Died?	Death Date
49	Female	Mtubatuba	53510105	2000/11/09	No	
37	Male	Mtubatuba	53510105	2000/12/07	No	
32	Female	Mtubatuba	53510105	2001/02/08	Yes	2001/02/10
	Male	Mtubatuba	53510105	2001/04/04	No	

Table 3: Example of the line listing of Cholera cases after 'Date of notification' was separated into Day/Month/Year.

Age (Years)	Gender	GIS Place Name	PCODE	Date of Notification	Day	Month	Year	Died?	Death Date
0	Male	Mfanefile	53720034	31-Jul-01	31	7	2001	No	
17	Male			01-Aug-01	1	8	2001	No	
68	Male	Ingwavuma	55010101	01-Aug-01	1	8	2001	No	
34	Female	Greytown	52010101	01-Aug-01	1	8	2001	Yes	06-Aug-01

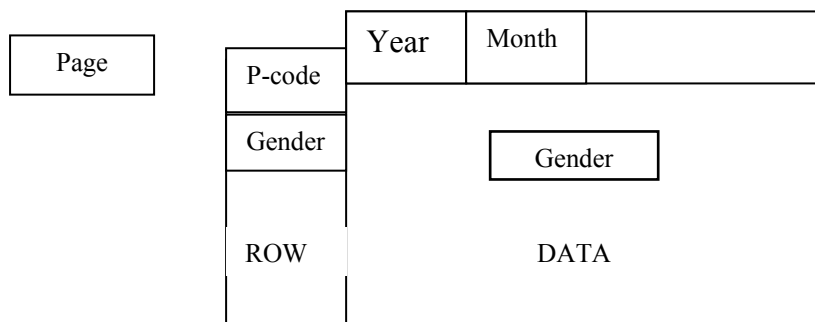
Pivot Table and PivotChart Wizard - Steps 3 of 3

Click > Layout: A Pivot Table layout is given. Drag the fields listed on the right and arrange them accordingly as shown in Figs 1-4.

N.B: Fonts in italics refer to the text as it appears in Microsoft Excel 2000.

- a. Total monthly cases

Drag the specified fields from the right and arrange them accordingly as shown below.



Click > OK

The Pivot table from the above layout will be as shown below.

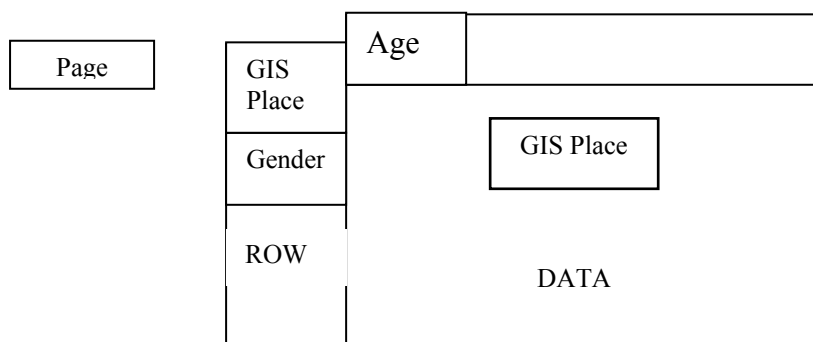
Count of Gender		Year ▼	Month ▼	
		2001		
PCODE ▼	Gender ▼	6	7	8
	Female	206	47	8
	Male	127	29	10
50110008	Female	2		
50110014	Male		1	
50110023	Male	2	1	
50110027	Female	1		

b. Age groups by GIS place names

Do the same for steps 1 and 2.

Step 3 of 3

Click Layout and arrange the fields as follows:



Click > OK.

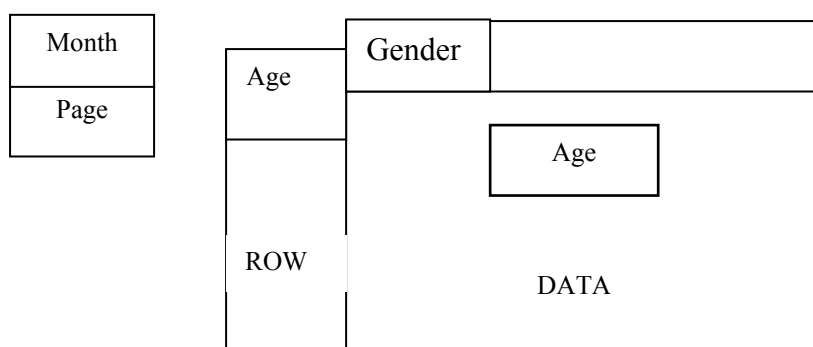
From the resultant Pivot Table, the different gender(s) and age(s) and GIS Place-names can be selected as shown in Fig 1.

c. Age groups by gender

Do the same for steps 1 and 2.

Step 3 of 3

Click Layout and arrange the fields as follows:



Click > OK.

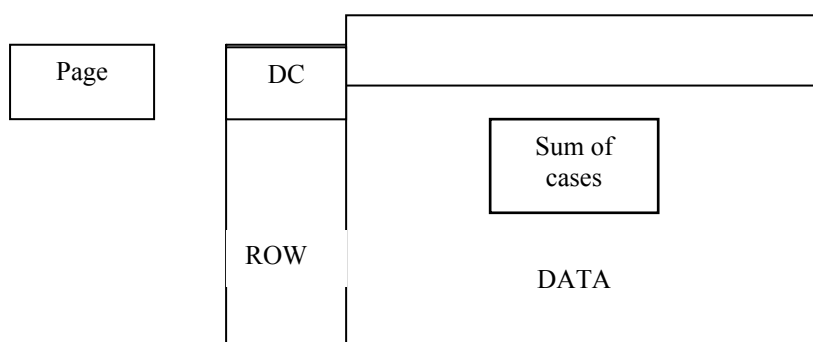
From the resultant Pivot Table, the different age(s) and gender(s) and months can be selected as shown in Fig 1.

From the Pivot Table, individual ages can also be arranged into age groups e.g. to add ages 0-4 to become one group, as follows:

- Highlight the ages to be grouped (include female cases, male cases and totals)
- Go to > Data > Enter
- > Group & outline > Enter
- > Group > Enter
- > OK
- Each group can be labeled appropriately.

d. Cholera cases by DC

For this Pivot Table, a column with DC information had to be added, to identify with the appropriate place name and another column for the sum of female and male cases.



e. Cholera cases by MD

For this Pivot Table, a column with MD information had to be added, to identify with the appropriate place name and another column for the sum of female and male cases.

