

Analysis: Exporting Files

S U M M A R Y

This lesson focuses on ways you can export files or data from Epi Info™. In this lesson, you will create two new graphs and learn ways to RouteOut and Write/Export files for use in other programs. This lesson also includes advanced coding, graphing, and an introduction to the command RECODE.

The RECODE command allows you to create groups, transform code from one system to another, change variable values, and create new values for variables. You will use RECODE to re-order the variable WMonth to appear in a school year sequence.

In this lesson, you will also use the WRITE command to create a new data table that contains selected information from the survey records. This new data table will contain information selected by age and symptom. The new data table will be used to create a line graph that maps all symptoms on one graph by age, so that you can look for trends in symptoms based on age.

Length of time to complete: 2 hours Intermediate

Managing Data

Overview of export types and commands covered in this lesson. Also describes and discusses the creation and storage of output files from the Analysis module.

Use Header, PrintOut, and RouteOut Commands

Use the HEADER, PRINTOUT, and ROUTEOUT commands to customize Output window results and to print results from the Output window.

Use Define and Recode

Use DEFINE to create new variables and RECODE to assign values to create a graph with re-ordered dates based on the survey variable WMonth.

Use the Write Command

Use the WRITE command to create a new data table for specified variables.

Write and Append a Data Table

Use the WRITE command to create a new table containing specified variables. Use the new data table to create a graph.

Write to MS Excel

Use the WRITE command to export your data to an MS Excel file.

Skills Review

Series of ten review questions based on the reading and hands-on activities in this lesson.

BEFORE YOU BEGIN

Complete Lesson 4 Analysis: Basics.

Complete Lesson 5 Analysis: Creating Statistics.

Complete Lesson 6 Analysis: Epi Graph

WHAT YOU NEED

Asthma Survey 2005.MDB

Microsoft Excel

FIVE GOALS

- Understand and be able to view output files created by Analysis.
- Use the RECODE command to define a variable.
- Use the WRITE command to place selected variables in a new data table.
- Use the format commands NUMTODATE and TXTTONUM to assign and format a date variable.
- Use the WRITE command to export to data to an MS Excel file.

Managing Data

Information gathered and analyzed in Epi Info™ can be exported to other formats and used in other programs. In this lesson, you will manage data in three ways.

1. You will use the HEADER command to customize and then print data from the Analysis Output window.
2. You will use the ROUTEOUT command to designate a new Output file. In this lesson, you will create a new graph of Worst Month for Asthma and send it to the new file. This lesson also introduces the RECODE command.
3. You will use the WRITE command to do three kinds of exporting:
 - Export and create a new data table to save a temporary value as a permanent value.
 - Export selected data to a new table and use the new table to create a line graph of symptoms by age.
 - Export the selected variables and new data to an MS Excel file.

Commands in this Lesson

HEADER

The Header command sets up specific headings that appear in the Output window until a new file is Read into Analysis. Located in the Output folder.

ROUTEOUT

The RouteOut command directs the output to the named file until the process is terminated by Closeout or by exiting Analysis. RouteOut creates an HTML document that can be read by any browser. Located in the Output folder.

CLOSEOUT

The CloseOut command closes the current output file. Located in the Output Folder.

PRINTOUT

The Printout command sends the current output file, or some other file specified by you, to the default printer. Located in the Output folder.

WRITE

The Write/Export command sends records to an output table or file in the format that you specify. Use this command to write your files to a new data type such as MS Excel or a text file. Located in the Data folder.

DEFINE

The Define command allows you to create new variables. Located in the Variables folder.

RECODE

The Recode command allows grouping of data for age and other variables, or transformation of coding from one system to another. You can use this command to change some or all values of a variable. The new values can be stored in the same variable or in a new one. Recode can convert a numeric variable into a character variable or the reverse, or create a new variable based on recoded values of an existing variable. Located in the Variables folder.

ASSIGN

The Assign command stores the value of a variable, or assigns the result of mathematics to a variable. Located in the Variables folder.

GRAPH

The Graph command produces various graph types based on data and selections. Located in the Statistics folder.

STORING OUTPUT

The Storing Output command allows a change of the default settings for storing output files. Located in the Output folder.

Output Files

Each time you read a file into Analysis and run a command, you create an Output file. The Output appears in the Output window and in the Output file inside your project directory. Output files are stored in the directory of the current project with a name composed of a prefix and a sequence number, the default is OUT#.htm, for example, C:\Epi_Info\EIHA Tutorial\OUT120.htm. The name, number, and destination of your Output files can be changed using the **Storing Output** command. From the Result Storage dialog box, you can change the file prefix, sequence number, and location of output.

Result Storage

Output File Prefix: Output File Sequence:

Results Folder:

Archive Folder:

Flag output files exceeding these limits

Age in Days	Number of Results	File Size (KB)
<input type="text" value="20"/>	<input type="text" value="100"/>	<input type="text" value="500"/>

The output of a single statistical procedure is called a result. Results accumulate in a given results index file called IResults.htm, located in the project directory. If several projects share the same directory, they share the same results index. Results continue to populate this file until the data source changes by READ, RELATE, SORT, SELECT, or SET PROCESS, or until a CLOSEOUT command is executed.

When Epi Info creates the Out#.htm file, it also creates a corresponding Out#.xml file. Out#.htm files are stored for reference purposes. Out#.xml files are stored for use in the Epi Report module.

When Output files are created, the name and location of the file appears in the Output window title bar as a reference. Outputs are added to the same file until the data source is changed.

When you create an Output file, you will see the location and name of the file in the title bar at the top of your window.

C:\Epi_Info\EIHA Tutorial\OUT141.htm

View Output Files

Each task you complete in Analysis creates results which appear in the Output window and in the Out#.htm file. Now view the Output files you have created so far.

1. Open the Analysis module.
2. From the Output window button bar, click **Open**. The Browse dialog box opens. It should be open to your destination folder, EIHA Tutorial.

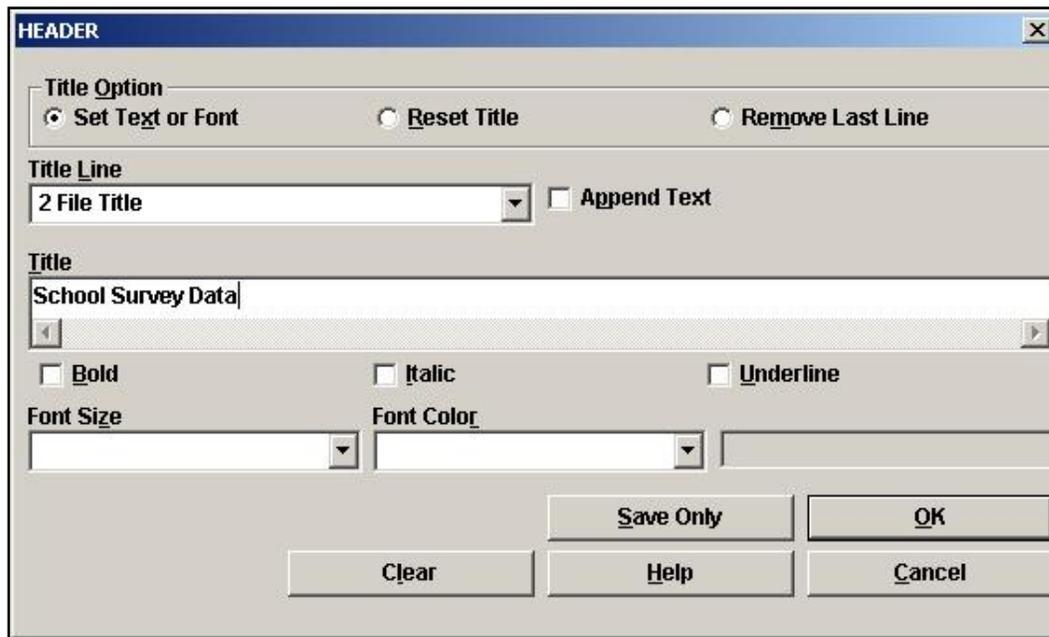


- Notice the list of OUT#.htm files in your folder.
3. Select one of the OUT files.
 4. Click **Open**. The file opens in your Output window.
 - This is the saved reference output you created.
 - Notice the Program Editor does not update, as you are not running a command, only viewing data.
 5. From the Output window button bar, click **Open**.
 6. Select IResults.htm.
 7. Click **Open**. The Results Library appears.
 - The IResults.htm file in your directory and the Results Library link inside active output windows, open the same file.
 - In the Command column, you will see a list of blue hyperlinks.
 - Click a link to view the results.
 - This is another way to view previous Output for reference.

Use the HEADER Command

You are going to customize the Output window using the HEADER command to label results. Customizing Analysis Headers is useful if you will be creating long lists of code that need to be labeled for specific project files, uses, or data tables.

1. From the Command Tree Output folder, click **Header**. The HEADER dialog box opens.



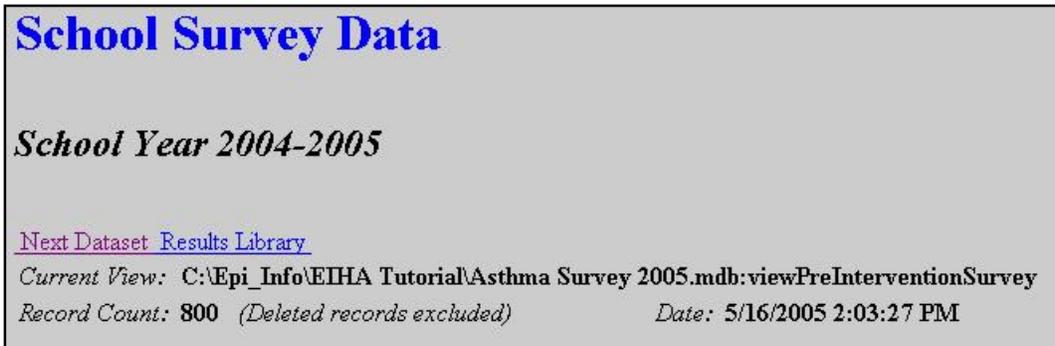
2. From the Title Line drop-down, select 2 File Title.
3. In the Title Field, type *School Survey Data*.
4. From the Font Size drop-down, select +3.
5. From the Font Color drop-down, select Blue.
6. Click **OK**. The Output window appears.
 - The header code appears in the Program Editor, but it is not applied until you Read/Import a file.
7. Click **Header**. The HEADER dialog box opens.
8. From the Title Line drop-down, select 3 Data Source Title.
9. In the Title Field, type *School Year 2004-2005*.
10. Select Bold.
11. Select Italic.

12. Click **OK**.

13. Read/Import your Asthma Survey 2005.mdb. Be sure the project and the data source match. If not, click **Change Project** and select the Asthma Survey 2005 project.

14. Click **OK**.

- Header information stays in effect until you read in a new file.
- Your Output window should look similar to this example.



Use the PrintOut Command

PRINTOUT can be used to print results directly from the Output window.

1. Create a Frequency of SchoolNum.
2. Create a Frequency of Medication.
 - Notice the Data Source Title School Year 2004-2005 appears above your results.

C:\Epi_Info\EIHA Tutorial\OUT789.htm

Previous Next Last History Open Bookmark Print Maximize

School Year 2004-2005

[Previous Dataset](#) [Results Library](#)

FREQ Medication

[Next Procedure](#)

[Forward](#)

Has a health professional prescribed any medication to your child?	Frequency	Percent	Cum Percent	
Yes	64	8.0%	8.0%	<div style="width: 8.0%; height: 10px; background-color: yellow;"></div>
No	736	92.0%	100.0%	<div style="width: 92.0%; height: 10px; background-color: yellow;"></div>
Total	800	100.0%	100.0%	<div style="width: 100.0%; height: 10px; background-color: orange;"></div>

95% Conf Limits
Yes 6.3% 10.2%

- From the Command Tree Output folder, click **PrintOut**. The PRINTOUT dialog box opens.

PRINTOUT [X]

Filename to print (leave blank for current)

Browse **Save Only** **OK**

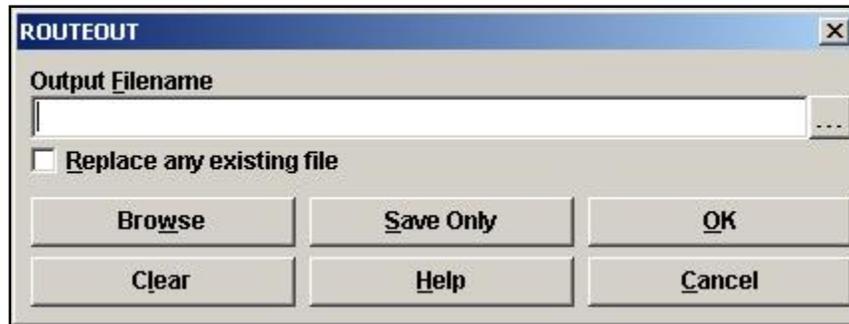
Clear **Help** **Cancel**

- To print the current Output window and settings, click **OK**. The Print options window displays.
- Click **Cancel**. If you are connected to a printer, you can click **Print** to see the results in paper form, otherwise cancel the print command.

Routeout Data to a New File

You are going to create a new graph to be included in a presentation. Rather than saving the graph as an image file, you are going to route the graph and results to a new file. The ROUTEOUT command stays in effect until you use the CLOSEOUT command. ROUTEOUT will name your output and place it in the location of your choice on the computer.

1. From the Command Tree Output folder, click **RouteOut**. The ROUTEOUT dialog box opens.



2. In the Output Filename field, type *School Year Graph*.
3. Click **OK**.
 - Output results will now go to the School Year Graph.htm file instead of the Out#.htm file.

DEFINE and RECODE

In an earlier lesson, you create a bar graph using the variable WMonth. You may have noticed that Epi Graph ordered the variables in sequence based on the first number, 1, 10, 12, etc. To create a graph with months occurring in school year sequence, you are going to use the DEFINE command to create a new variable and the RECODE command to place existing values in a new order. A program example is located in Asthma Survey 2005 Sample.MDB. The program is called MonthsRecode.PGM.

In the survey, some students selected their worst month for asthma symptoms from a comment legal field, those who made no selection are considered Missing values. Students did not select a year in this field. You want the dates in your graph to be distributed based on the school year when the questions were asked. You are going to use the RECODE command to assign a year (variable name addyr) to the months and to place them in the order September 2004-August 2005.

Once the months are recoded, you will define a new variable (NewWMonth) to indicate the new sequence of months with the new year value. When you create the final code, you will designate how you want the dates to appear and specify that the Legal Value fields, which were once text, will appear as numbers. To do this you will use the function NUMTODATE. NUMTODATE transforms a set of three numbers into the year, month, day format and allows you to order the variables by the new dates.

Your final code will say that the value of the NewWMonth variable will change from a number to a date. The date will be formatted as the year 2000 plus the addyr variable, the WMonth variable, and the first day of the month. Since WMonth is a text field, you also have to add in the code to format it as a number (TXTTONUM).

Keep in mind that the ROUTEOUT command is in effect and will send data to the new output file School Year Graph.htm. This information and the graph can then be used in your asthma report.

1. From the Command Tree Variables folder, click **Define**. The DEFINE dialog box opens.



2. In the Variable Name field, type *addyr*.

3. Click **OK**.
 - The data table now contains a new Standard variable. Standard variables are temporary. Values and definitions are lost at the next READ command.
4. From the Command Tree Variables folder, click **Recode**. The RECODE window opens.

The RECODE dialog box is shown with the following elements:

- From** and **To** drop-down boxes.
- Warning: **Dates must be in US format**
- Table with columns: **Value (blank = other)**, **To Value (if any)**, and **Recoded Value**.
- Buttons: **Fill Ranges**, **Save Only**, **OK**, **Clear**, **Help**, and **Cancel**.

5. Use the From drop-down box to select WMonth.
 - You are taking the values from the variable WMonth and recoding them to appear in the variable addyr.
6. From the To drop-down box, select addyr.
7. In the Value (blank=other) field type "9" and press Enter.
 - Remember the value of 9 is September. September is a text value and text values must be enclosed in quotes.
8. In the To Value (if any) field type "9" and press Enter.
9. In the Recoded Value field type the number 4 and press Enter. A new blank entry line appears.

- You are creating the code to differentiate the year 2004 from the year 2005. The number 4 is the year you will add to 2000 to reorder the months.
- You are creating code so that September begins the list and appears in the year 2004.
- October- December appears in the year 2004.
- January -August appears in the year 2005.

RECODE

From: To:

Dates must be in US format

Value (blank = other)	To Value (if any)	Recoded Value
"9"	"9"	4
"10"	"12"	4
"1"	"8"	5
		(.)

Buttons:

10. Complete the code as follows.

- Value "10" To Value "12"=4
- Value "1" To Value "8"=5
- Value blank To Value blank= (.)
- You are adding the condition that any values that do not fit the pattern are considered Missing.

11. Click **OK**.

Your code should appear in the Program Editor as follows:

```

RECODE WMonth TO addyr
  "9" - "9" = 4
  "10" - "12" = 4
  "1" - "8" = 5
  ELSE = (.)
END

```

Define a new variable to contain the date code

1. Click **Define**. The DEFINE dialog box opens.

The DEFINE dialog box is shown with the following details:

- Variable Name:** NewWMonth
- Scope:** Standard (selected), Global, Permanent
- Buttons:** Save Only, OK, Clear, Help, Cancel

2. In the Variable Name field, type *NewWMonth*.
3. Click **OK**.

Assign a value to the new variable

1. From the Command Tree Variables folder, click **Assign**. The ASSIGN dialog box opens.

The ASSIGN dialog box is shown with the following details:

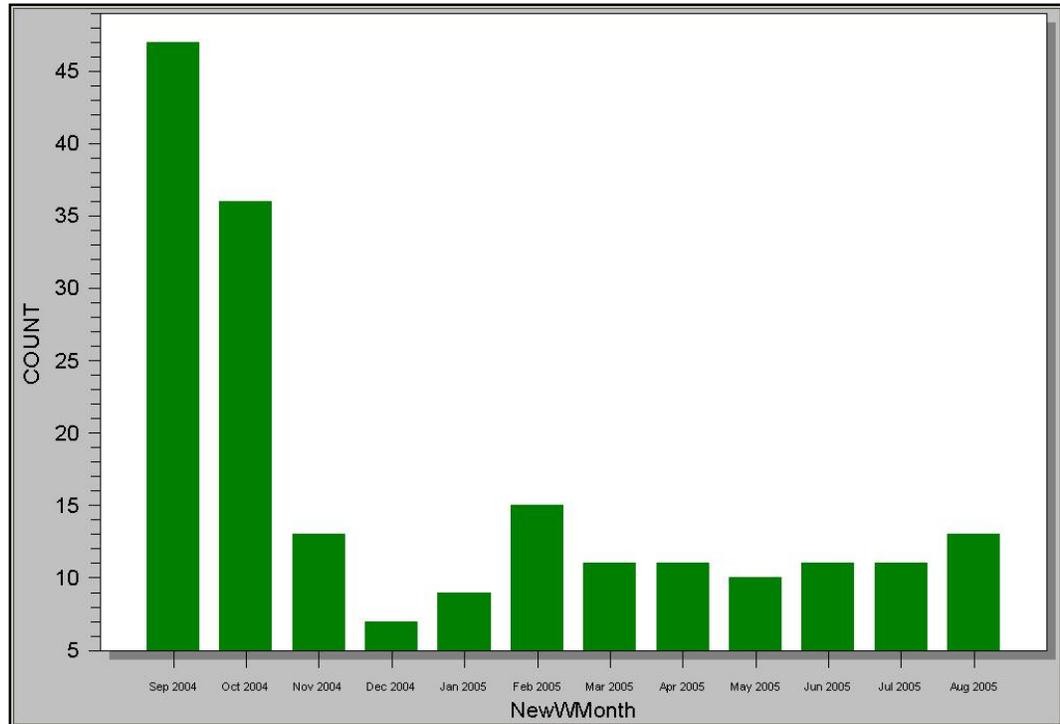
- Assign Variable:** NewWMonth
- = Expression:** numtodate(2000+addyr,txttonum(wmonth),1)
- Available Variables:** (empty dropdown)
- Toolbar:** +, -, *, /, =, <, >, &, ", (,)
- Buttons:** Functions, Save Only, OK, Clear, Help, Cancel

2. From the Assign Variable drop-down, select NewWMonth.
3. In the =Expression field, type `numtodate(2000+addyr,txttonum(WMonth),1)`
 - You are assigning a date format to the variable NewWMonth. You want the year/month/day format because you are going to order the months by the year. This code says the value of the NewWMonth variable will change from a number to a date. The date will be formatted as the year 2000 plus the addyr variable, the WMonth variable, and the first day of the month. Since WMonth is a text field, you also have to add in the code to format it as a number.
4. Click **OK**. The code in the Program Editor appears as follows.

```
DEFINE NewWMonth  
ASSIGN NewWMonth=numtodate (2000+addyr ,txttonum (wmonth) , 1)
```

Create a bar graph using the new variables and date code

1. Click **Graph**. The GRAPH dialog box opens.
2. From the Graph Type drop-down, select Bar.
3. From the Main Variables drop-down, select NewWMonth. The Display Format drop-down opens.
4. From the Display Format drop-down, select mmm yyyy.
5. Click **OK**.



- Notice the months now appear in the School Year order you coded as September 2004-August 2005.

Customize the graph

1. Left-click the X-Axis text NewWMonth. The X-Axis Label dialog box opens.
2. Highlight the text NewWMonth.
3. Delete the text.
4. Click **OK**.
5. Right click the graph and select Customization Dialog from the pop-up menu.
6. In the Main Title field on the General tab, type *Worst Month for Asthma*.
7. In the SubTitle field, type *School Year 2004-2005*.
8. Click **OK**.
9. Close Epi Graph.
 - Notice that the window title bar shows the Output file as School Year Graph.

C:\Epi_Info\EIHA Tutorial\School Year Graph.htm

10. From the Command Tree Output folder, click **CloseOut**. The CLOSEOUT dialog box opens.



11. Click **OK**.

- Results will resume being created and saved as Out#.htm files.

12. From the Output window, click **Open**. The Browse dialog box opens.

13. Locate the EIHA Tutorial folder. Notice the file School Year Graph.htm is listed among the other Out###.htm files.

14. Click **Exit** to close Analysis.

Creating and Writing New Data Tables

For your asthma report, you want to see if there is a connection between age and asthmatic symptoms. You want to illustrate the findings in the form of a graph.

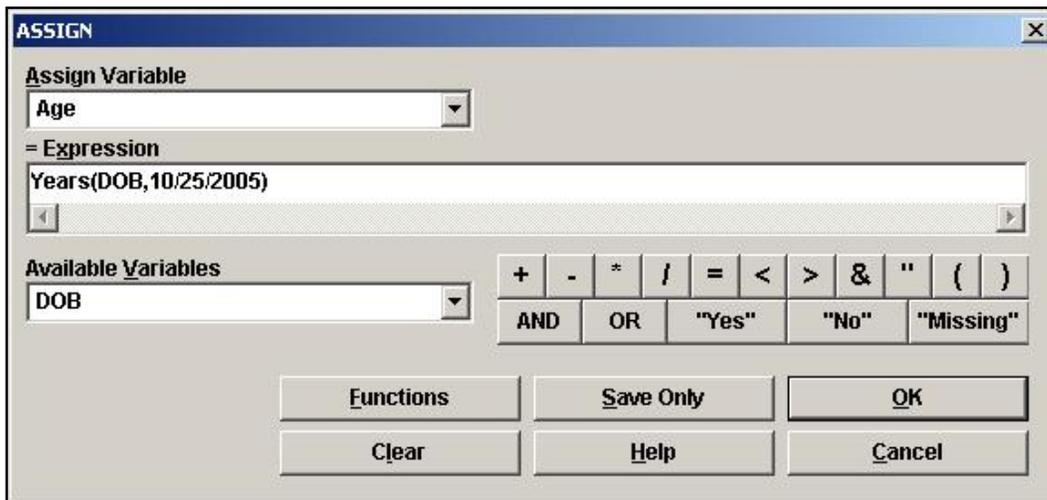
There are times when it may take a series of steps to prepare your data for analyses. In Section 4 and 5 of this lesson, you will follow a series of steps in order to create a line graph that shows trends in symptoms per age based on survey data. You will take all the students who answered Yes to the individual symptoms and use the WRITE command to create a new data table that contains Yes answers. The new data table can then be graphed.

In an earlier lesson, you used the ASSIGN command to calculate the Age variable inside the data table. The Age variable created was Standard, meaning that the code you assigned was temporary and the values were reset each time you read in a new file. You cannot create a global or permanent variable for Age because neither type can contain values that depend directly or indirectly on table fields as the YEARS function does. For this exercise, you want to create a line graph using age as a variable; however, you do not want to calculate the Age field each time you create this graph, so you are going to use the WRITE command to create a new data table containing the assigned age variable.

Using the new table, you will create person-symptom pairs of information (children answering Yes to a symptom and their age) and WRITE/APPEND those records to a new data table that contains only information for ages and symptoms. You can then READ in the age-symptom data table and GRAPH the results.

An example of the following code is available in the Asthma Survey 2005 Sample.MDB. The program is called LineGraphSample.PGM.

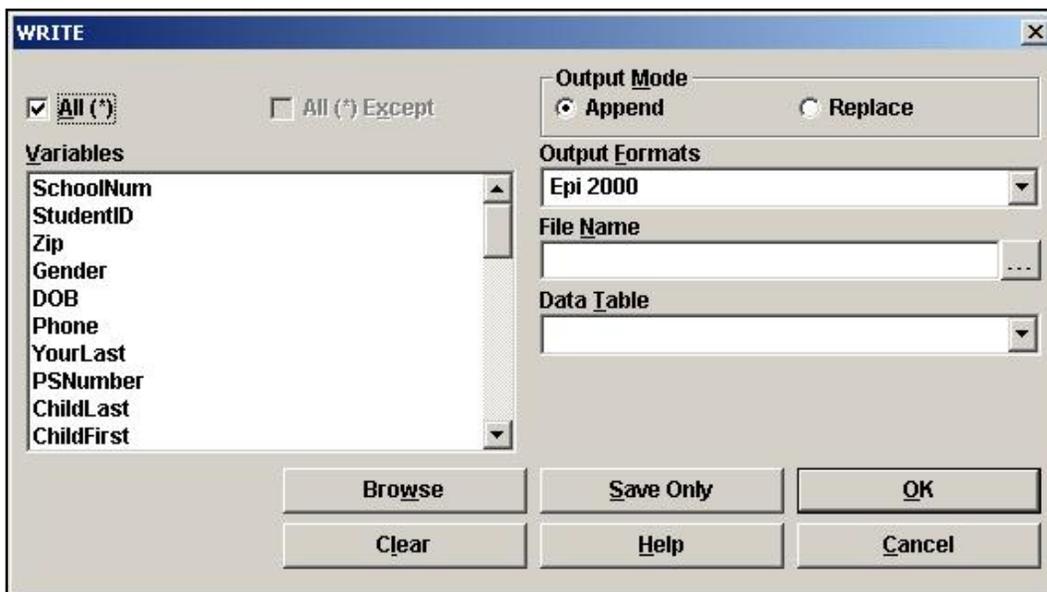
1. Open Analysis and Read in the Asthma Survey project file that contains your 800 records. Be sure the Project file and the data source match.
2. From the Command Tree Variables folder, click **Assign**. The ASSIGN dialog box opens.
3. From the Assign Variable drop-down, select Age.
4. In the =Expression field, type *YEARS(DOB,10/25/2005)*.



5. Click **OK**.
6. List the variable *Age* to make sure it is populated.

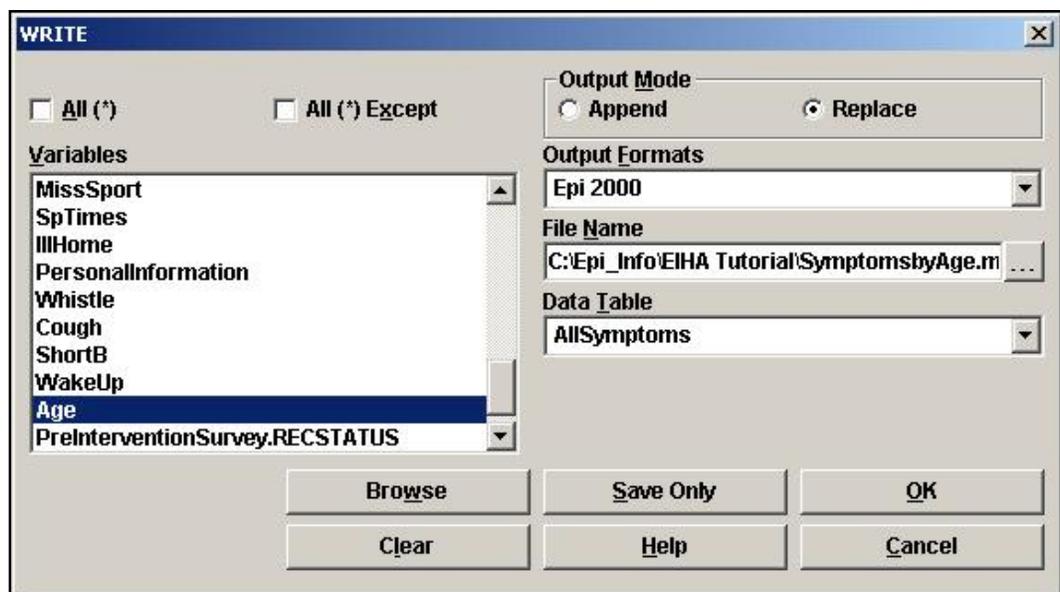
Write the *Age* variable and the variables needed for the line graph to a new file.

1. From the Command Tree Data folder, click **Write/Export**. The WRITE dialog box opens.



2. Use your mouse to click and select the following variables.
 - SchoolNum
 - StudentID

- Gender
 - DOB
 - Asthma
 - RAD
 - Bronchitis
 - Wheezing
 - Medication
 - MissDays
 - Age
3. In the Output Mode section, select Replace.
 4. From the Output Formats drop-down, select Epi 2000.
 5. Click the **Browse** button next to the File Name field. Locate the EIHA Tutorial folder.
 6. In the File Name field, type *SymptomsbyAge*.
 7. Click **Save**.
 8. In the Data Table field, type *AllSymptoms*.



9. Click **OK**.

Read in the new project

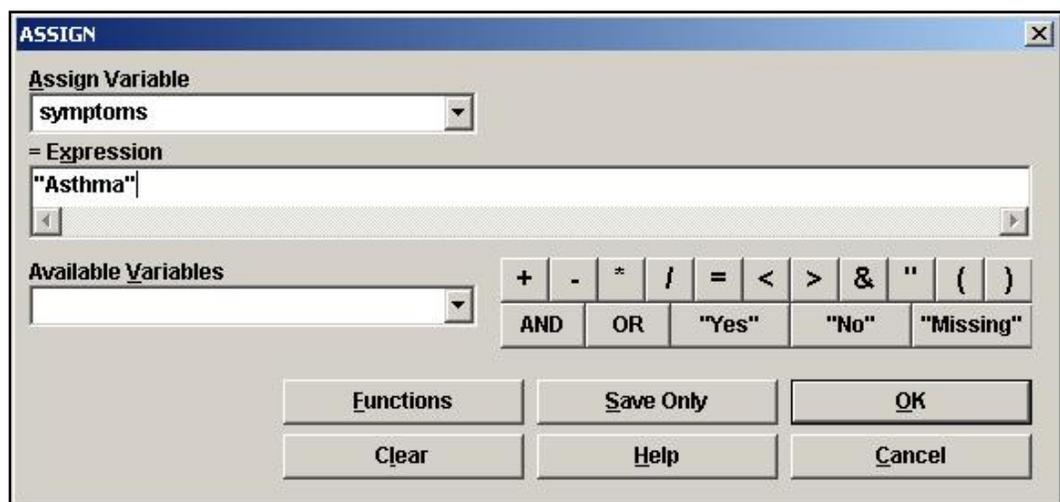
- 1.** Click **Read/Import**. The READ dialog box opens.
- 2.** Click **Change Project**.
- 3.** From the EIHA Tutorial folder, select SymptomsbyAge.MDB.
- 4.** Click **Open**.
- 5.** Select the table AllSymptoms.
- 6.** Click **OK**.
- 7.** List your variables.
 - Your new project contains only the variables you specified when you wrote the new file.
 - The new data is made up of the data table AllSymptoms. There is no view associated with the table.
 - Notice that the field Age is populated.

Write and Append Tables

You are going to use the new project and data table to create a graph that has one record for each person-symptom pair. To do this, you are going to write out a new table, which contains the symptoms you select, and the age of the individual with the symptoms. This will create a second table inside the SymptomsByAge.mdb.

You must define the table, select the criteria, and write it to the new table. You will then append the table to include all four of the symptoms.

1. Click **Define**. The DEFINE dialog box opens.
2. In the Variable Name field, type *symptoms*.
3. Select Standard as the Scope.
4. Click **OK**.
5. From the Command Tree Select/If folder, click **Select**. The SELECT dialog box opens.
6. Use the Select Dialog box to create the code `Asthma="Yes"`.
7. Click **OK**. You should see a Record Count of 91.
8. Click **Assign**. The ASSIGN dialog box opens.
9. From the Assign Variable drop-down, select symptoms.
10. In the =Expression field, type or use the Available Variables drop-downs to create the variable "Asthma".
 - The variable Asthma is a text field so you must enclose it in quotes.

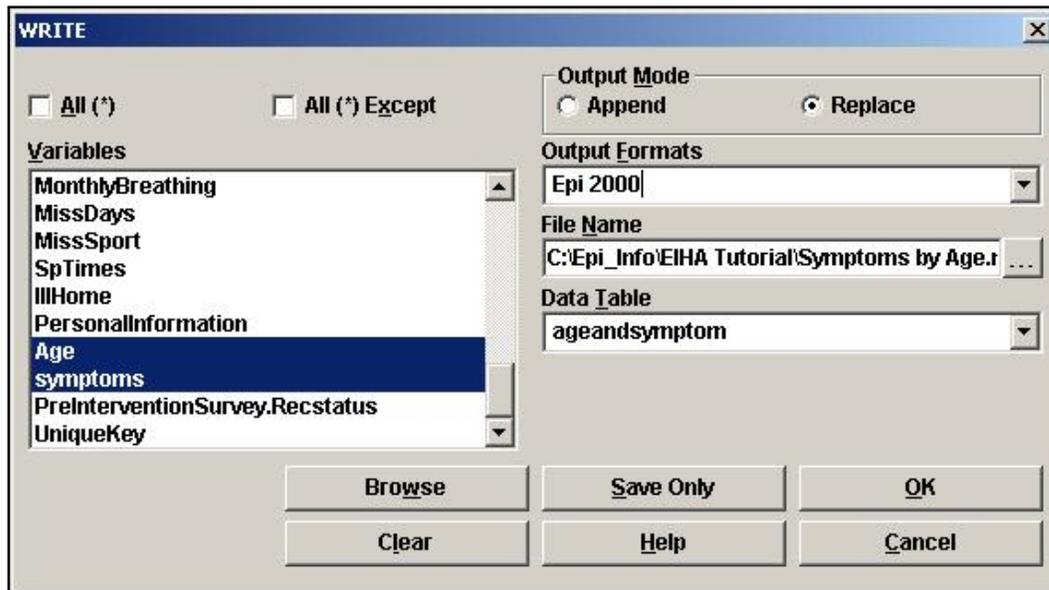


11. Click **OK**. The code in the Program Editor appears like the following:

```
DEFINE symptoms  
SELECT Asthma= (+)  
ASSIGN symptoms= "Asthma"
```

Write the 91 asthma records to a new table

1. Click **Write/Export**. The WRITE dialog box opens. You only want to include the variables you want to graph in the new table.
2. From the Variables box, select Age and symptoms.
 - Remember symptoms contains your Asthma=Yes values. You are constructing a new table that contains the Yes answers per symptom and the Age of the student answering Yes. You will add the information for each symptom/age to this table.
3. In the Output Mode section, select Replace.
4. Click the File Name **Browse** button.
5. Select the project SymptomsByAge.mdb.
6. Click **Save**. The File Name field populates.
7. In the Data Table field, type *ageandsymptom*.
8. Click **OK**.



The code inside the Program Editor should appear as follows:

```
WRITE REPLACE "Epi 2000" 'C:\Epi_Info\EIHA
Tutorial\SymptomsbyAge.mdb':ageandsymptom Age symptoms
```

9. Click **Cancel Select**.

- Now you need to complete a similar series of steps to add Bronchitis, RAD, and Wheezing Yes answers to the new table.

Add/Append Symptoms

- 1.** Select Bronchitis=Yes. There should be Record Count of 86.
- 2.** Assign symptoms="Bronchitis".
- 3.** Click **Write/Export**. The WRITE dialog box opens.
- 4.** From the Variables box, select Age and symptoms.
- 5.** In the Output Mode section, select Append.
 - You want to add or append this information to the asthma data table you created earlier.
- 6.** Click the File Name **Browse** button.
- 7.** Select the project SymptomsByAge.mdb.
- 8.** Click **Save**.
- 9.** From the Data Table drop-down, select ageandsymptom.
- 10.** Click **OK**
- 11.** Click **Cancel Select**.

Now follow the **Bronchitis** procedure and create the code to add data for **RAD** and **Wheezing** to the **ageandsymptoms** table.

- RAD contains 93 records.
- Wheezing contains 99 records.
- Do not forget to select Append as the Output Mode and to Cancel Select when switching between variables.

- Remember that RAD and Wheezing must be enclosed in quotes in the ASSIGN command.

Your final code should look like the following:

```
DEFINE symptoms

SELECT Asthma= (+)
ASSIGN symptoms="Asthma"
WRITE REPLACE "Epi 2000" 'C:\Epi_Info\EIHA
Tutorial\SymptomsbyAge.mdb':ageandsymptom Age symptoms
SELECT

SELECT Bronchitis= (+)
ASSIGN symptoms="Bronchitis"
WRITE APPEND "Epi 2000" 'C:\Epi_Info\EIHA
Tutorial\SymptomsbyAge.mdb':ageandsymptom Age symptoms
SELECT

SELECT RAD= (+)
ASSIGN symptoms="RAD"
WRITE APPEND "Epi 2000" 'C:\Epi_Info\EIHA
Tutorial\SymptomsbyAge.mdb':ageandsymptom Age symptoms
SELECT

SELECT Wheezing= (+)
ASSIGN symptoms="Wheezing"
WRITE APPEND "Epi 2000" 'C:\Epi_Info\EIHA
Tutorial\SymptomsbyAge.mdb':ageandsymptom Age symptoms
SELECT
```

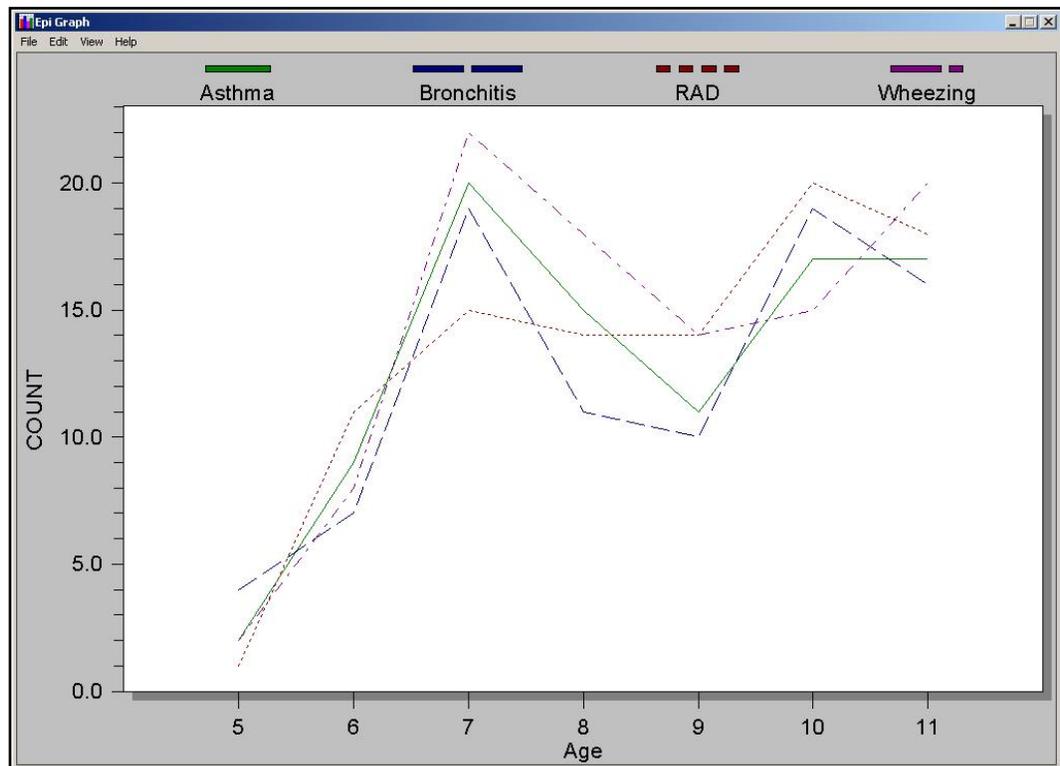
Read in the new data table

1. Click **Read/Import**.
 - Be sure the Current Project and Data Source is SymptomsbyAge.
2. Select the table ageandsymptom. Remember to select All in the Read dialog box to see the new tables.
3. Click **OK**.
 - There should be 369 records.

Create the graph

1. Click **Graph**. The GRAPH dialog box opens.
2. From the Graph Type drop-down, select Line.
3. From the Main Variables drop-down, select Age.
4. From the Line for Each Value of drop-down, select symptoms.
5. Click **OK**.
6. Open Epi Graph.

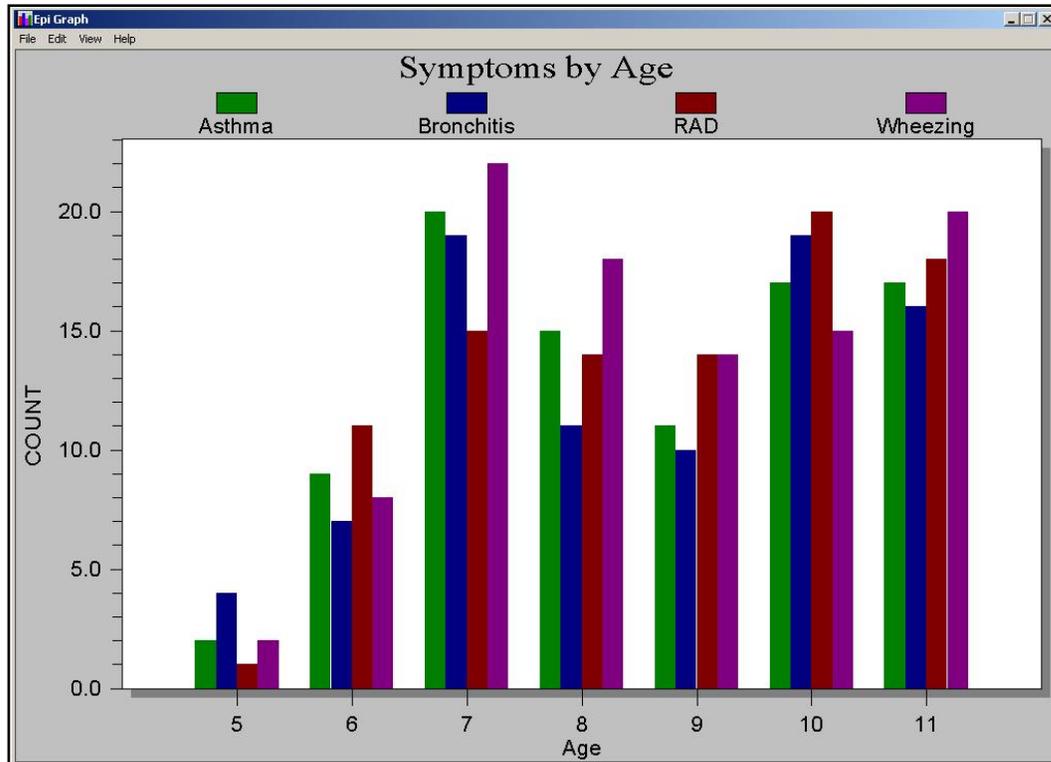
The graph should look like the following:



Customize the graph

1. Right click the graph and select Customization Dialog from the pop-up menu.
2. Title you graph *Symptoms by Age*.
3. Click the **Plot** tab.

4. Change the Plot Style to Bar.
5. Click **OK**.
6. Right click the graph and select **Export Dialog** from the pop-up menu.
7. Export the Symptoms by Age graph as a .JPG file to your EIHA Tutorial folder.
8. Close Epi Graph.



EXCEL**Write a File to Excel**

- 1.** Click **Read/Import**.
- 2.** From the Read dialog box, select the table All Symptoms.
 - Be sure the Current Project is Symptoms by Age and the Current Data Source is Symptoms by Age.
- 3.** Click **OK**.
- 4.** Click **Write/Export**.
- 5.** Select the All checkbox to export all the variables.
- 6.** In the Output mode section, select Replace.
- 7.** From the Output Formats drop-down, select Excel 4.0.
- 8.** Click **Browse** from the File Name field.
- 9.** Locate the EIHA Tutorial folder and create a new Excel file called *NewAsthmaTable*.
- 10.** Click **Save**.
- 11.** In the Files field, type *NewAsthmaData*.
- 12.** Click **OK**.
 - If you have Excel, you can open this file and view the exported data.
 - If the DOB fields in Excel contain ### rather than dates, expand your columns.

Skills Review

Place a checkmark next to the correct answer for each of the following questions. Refer to *Appendix D Skills Reviews Answer Key* for further details.

1. Which command allows you to designate a new Output file?

- WRITE
- READ
- ROUTEOUT

2. Which command allows you to create a new variable?

- SELECT
- ASSIGN
- DEFINE

3. Which command allows you to store the value of a variable or assigns the result of a mathematical expression?

- ASSIGN
- DEFINE
- LIST

4. When changing, assigning, or selecting text fields, the value must be enclosed in what?

- (Parenthesis)
- *Asterisks*
- "Quotes"

5. In the Program Editor, the value of Missing appears how?

- (=)
- (.)
- (+)

- 6.** To change a number variable to a date, what function would you use?
- TXTTONUM
 - NUMTODATE
 - TXTTODATE
- 7.** Which command allows you to create a new data table?
- MODIFY
 - READ
 - WRITE
- 8.** Which command allows you to open a new data table?
- READ
 - WRITE
 - LIST
- 9.** From the WRITE dialog box, what Output Mode would you select to add data to an existing table?
- Replace
 - Append
- 10.** The WRITE command can be used to export a data table to MS Excel.
- True
 - False

Lesson Complete!

WHAT YOU LEARNED

How to

- Use the `HEADER` and `PRINTOUT` commands to customize output.
- Use the `ROUTEOUT` and `CLOSEOUT` commands to create named output files.
- Use the `DEFINE` and `RECODE` commands to change variable values.
- Use the `WRITE/EXPORT` command to create new data tables.
- Use the `WRITE/EXPORT` command to create an MS Excel file.

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