Epi Info™
Community Health Assessment Tutorial

Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Public Health Informatics

Acknowledgements

The Epi Info™ Community Health Assessment Tutorial was produced by the collaborative efforts of the Centers for Disease Control and Prevention (CDC), the Assessment Initiative (AI), and the New York State Department of Health (NYSDOH).

The CDC is one of the thirteen major operating components of the U.S. Department of Health and Human Services. It is at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats. Today, CDC is globally recognized for conducting research and investigations, and for its action-oriented approaches to issues of public health. CDC uses its research and findings to improve people's daily lives, and respond to local, national, and international health emergencies.

The Assessment Initiative (AI) comprises a cooperative program between CDC and state health departments that supports the development of innovative systems and methods to improve the way data is used to provide information for public health decisions and policy. Through the AI, funded states work together with local health jurisdictions and communities to improve access to data, improve skills to accurately interpret and understand data, and use of the data so that assessment findings ultimately drive public health program and policy decisions.

New York State's AI has been awarded a new five-year cooperative agreement by the CDC to strengthen assessment capacity and practice. This is the third round of AI funding offered through the CDC, and it is the second time that the NYSDOH has been successful in getting the award.

This tutorial for using the Epi Info software program has been created by the CDC Epi Info™ development team at the request of the NYSDOH Assessment Initiative, and has been designed using asthma data provided to the CDC by the NYSDOH.

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Introduction to the Tutorial

Epi Info™ Health Assessment Tutorial

Epi Info™ is a series of programs for Microsoft Windows for use by public health professionals in conducting outbreak investigations, managing databases for public health surveillance and other tasks, and general database and statistics applications. With Epi Info™ a user can rapidly develop a questionnaire or form, customize the data entry process, and enter and analyze data.

The Epi Info™ program is divided into five core modules: Make View, Enter Data, Analysis, Epi Map, and Epi Report. Each module has stand-alone capabilities; however, using them for one project from start to finish adds functionality and efficiency. The Make View module is the questionnaire or survey designer. You will start your project in Make View, where you will create a survey and begin setting up your database. Using Enter Data, you will populate your database with information specific to your survey. The data entered, along with additional datasets, will be imported into Analysis for detailed study. Data will be plotted in the Epi Map module. Finally, you will use Epi Report to create a presentation of the findings. This training does not cover every component of Epi Info™ and is meant for the beginning and intermediate level user.

How to Use this Tutorial

This tutorial will introduce you to the basic concepts of Epi Info™. Each lesson builds upon knowledge gained from the previous lesson. It is recommended that you follow the lessons in the order presented. Finish all the listed steps and practices before progressing to the next lesson as many of the lessons build upon data gathered from a previous lesson. Data specific to the course and the scenario will be provided to you as part of the training package. At various points in the course, you will be asked to access this data to complete the lessons. Read the Five Goals listed at the start of each lesson to review the core functions you should understand by the end of each lesson.

Step One

Read the Overview section for each lesson. Each Overview contains a Getting Started breakdown of the module and information on ways to navigate. The Overview also provides information on the commands, dialog boxes, or other special features that are unique to each module as well as information on navigating the module. Epi Info™ uses standard windows features for navigation such as drop-down boxes and menu navigation, as well as unique features such as wild card (*) searches. The Overview also provides you with screenshots of the module and introduces you to the basic concepts used in each lesson.

Step Two

Complete all the step-by-step instructions to learn the basics. Numbered instructions with some screenshots are provided for you to learn the core functions of each module. Numbered lessons and instructions can be followed and applied when using Epi Info™ outside of the classroom.

Step Three

Complete the Practice Lessons and Skills Review Exercises when provided. Practice lessons build upon skills learned during basic lessons. Practices and reviews are opportunities to try skills without detailed instruction. Skills Reviews will consist of hands-on activities to further your understanding or a series of questions meant to reinforce basic knowledge. An Intermediate Analysis lesson is provided at the end of the course. The Intermediate Analysis Lesson builds upon the skills from earlier lessons and includes tasks that are more complex. Each section in Intermediate Analysis includes real world data examples from sources such as the United States Census Bureau and the Behavioral Risk Factor Surveillance System (BRFSS).

Epi Info™ Resources

Training documentation, technical information, or other resources are available on the Epi Info™ website at www.cdc.gov/epiinfo.

For questions or problems, contact the Helpline at epiinfo@cdc.gov or call 404.498.6190.

To speak with colleagues around that world about Epi Info™, visit the WebBoard at http://epiinfo.forum.cdc.gov.

File Set-Up

You must have the latest version of Epi Info™ installed on your computer. Check the Epi Info™ website for updates www.cdc.gov/epiinfo.

Once installed, Epi Info™ creates a folder on the C: drive called Epi_Info. Your tutorial datasets need to be installed inside this folder.

1. From the desktop, open My Computer.

2. Open your Local Disk drive, usually named C.

3. Locate the Epi_Info folder and open it.

4. If the EIHA Tutorial folder does not already exist, select **File>New>Folder** from the navigation menu.

   - If you have downloaded the EIHA Tutorial folder to a different location, right click the folder and copy/paste it to the new location inside the Epi_Info folder on your C: drive.

5. Name the folder EIHA Tutorial.

6. Copy (or download) the tutorial datasets to the EIHA Tutorial folder.

File Download List

You need download the following files to work through all the lessons in the tutorial. Files are available on the Epi Info™ website on the Tutorials page.

Tutorial Guide You need one of the following:	EIHAVer#.DOC (MS Word version) EIHAVer#.PDF (Adobe Reader version) EIHAVer#.HTM (HTML Browser version)
Project Files	Albany_demogz.MDB Asthma Survey 2005.MDB Asthma Final.MDB Asthma Survey 2005 Sample.MDB HospitalPoints.MDB SchoolPoints.MDB SymptomsByAgeSample.mdb
MS Excel Files	AshtmaTable.XLS
HTML Files	CensusAge.HTM Frequencies.HTM Frequencies.XML
Epi Report Files	My Epi Report2.EPT My Epi Report2.EPX WMonth Report2.EPT WMonth Report2.EPX
Graphics	WMonthPieGraph2.BMP
Map Files	Albany County boundary_region.DBF Albany County boundary_region.PRJ Albany County boundary_region.SHP Albany County boundary_region.SHX ALBZCTA_region.DBF ALBZCTA_region.PRJ ALBZCTA_region.SHP ALBZCTA_region.SHX

Tutorial Process Flow

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│      1       │      │      2       │      │      3       │      │      4       │
│  Make View   │ ───▶ │  Enter Data  │ ───▶ │   Analysis   │ ───▶ │   Epi Map    │
│ Design survey│      │ Paper surveys│      │Read primary  │      │  Geographic  │
│              │      │Primary data  │      │  data files  │      │representation│
│  Check code  │      │  collection  │      │              │      │   of data    │
│              │      │              │      │Merge with MS │      │              │
│              │      │              │      │Excel datasets│      │              │
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                                             │ and Charts   ││     │  of data     │
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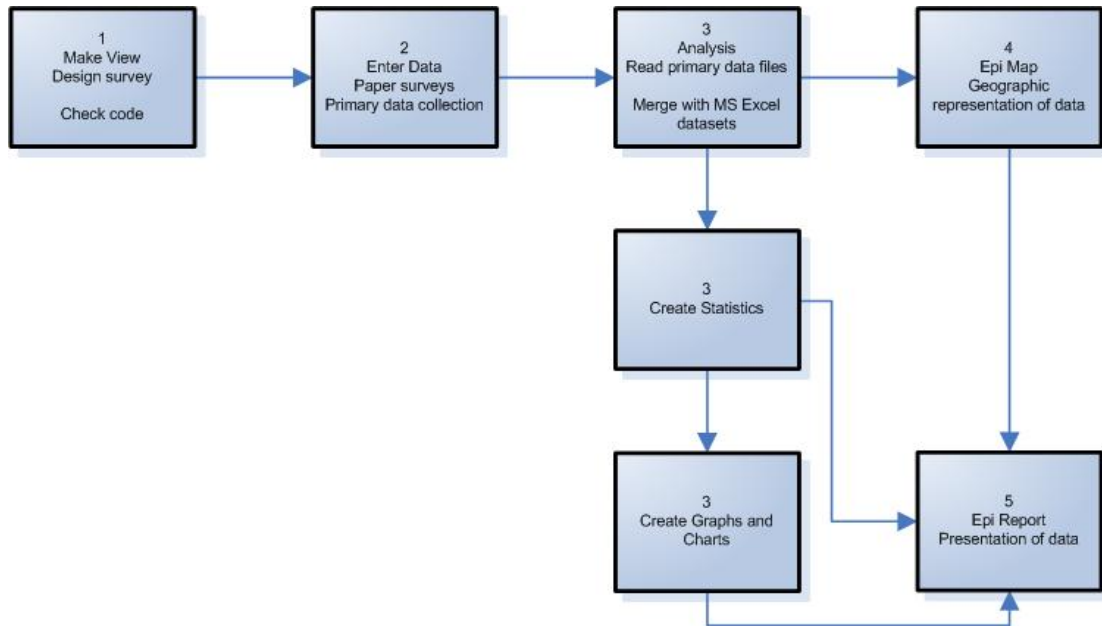
Introduction to the Scenario

This tutorial is set up to teach Epi Info™ by following a scenario. The tutorial includes a survey adapted from one used in New York State; however, the survey data used for the analyses were created for the tutorial. Anonymous data relating to New York State were taken from different datasets referenced in Appendix I: Data Sources. The survey and datasets presented here relate to Community Health Assessments, and specifically Asthma; however, they can be used to teach the Epi Info™ program to any user, and to illustrate how the program can be used to gather, analyze, and present data.

Scenario

The local health department (LHD) director of County X gets a Request for Proposal (RFP) from the state health department saying there are funds available for an asthma initiative. There is a good chance of getting the funding as the LHD has already done some work with asthma. To apply for the funding, the director meets with the health education coordinator/planner to identify data that is needed to write a strong proposal. The director and the planner determine that there are several types of data that would be useful to present as part of their proposal.

To support the scenario, data has been collected from a variety of current sources. Provided datasets include aggregate data, map, shape, census, and primary data. In this scenario example, you will be using a primary data source (paper survey) to collect information for the sample population of students from County X. You will use Make View to create the electronic survey, Enter to add records to your survey, Analysis to import and analyze results, Epi Map to plot the results, and Epi Report to present your findings. Below is a To-Do list of the basic steps you will be accomplishing to develop the data needed to apply for funds for the asthma initiative.

To Do List for Lessons 1-10

Use Make View Create the Electronic Survey

☐ Create your project .MDB- Lesson 1

☐ Create an electronic version of the survey- Lesson 1

Use the Make View Program Editor to Develop Check Code

☐ Create Check Code to simplify the data entry process- Lesson 2

Use Enter Data to Add Student Records

☐ Enter records into your survey and data table- Lesson 3

Use Analysis to Merge Data and Create Statistics

☐ Open your project .MDB in Analysis and view the entered records/data- Lesson 4

☐ Merge your project .MDB with records from an MS Excel file- Lesson 5

☐ Create Frequencies, Means, and Tables using your data and record the results- Lesson 5

☐ Create Graphs using your data and record the results- Lesson 6

Use Analysis to Manage and Export Data

☐ Use the RECODE command to view date information from the survey in a specified order- Lesson 7

☐ Export selected data to a new table and create a line graph using the selected records- Lesson 7

☐ Use the SUMMARIZE and FREQUENCY commands to create aggregate data sets of survey information that can be mapped- Lesson 8

Use Epi Map to Develop Maps to Illustrate the Data

☐ Create a choropleth and case-based map combination in Epi Map to look for relationships between income and asthma- Lesson 9

☐ Create Point Maps for the locations of regional hospitals and schools- Lesson 9

☐ Create a map plotting the count of students with bronchitis per zip code- Lesson 9

Use Epi Report to Develop Report Data

☐ Use Epi Report to create a report that contains survey data and graphic output from the first nine lessons- Lesson 10