Creating Data Entry Tools with Form Designer

Introduction

Epi Info 7 is a series of freely-distributable tools and utilities for Microsoft Windows for use by public health professionals to conduct outbreak investigations, manage databases for public health surveillance and other tasks, and general database and statistics applications. It enables physicians, epidemiologists, and other public health and medical officials to rapidly develop a questionnaire or form, customize the data entry process, and enter and analyze data.

Form Designer

Form Designer creates the questionnaire, form, or form to collect and view data. The Form Designer replaces the Make View program from earlier versions of Epi Info. The Form Designer module allows you to place prompts and data entry fields on one or more pages of a form. Since this process also defines the database(s) that are created, Form Designer can be regarded as the database design environment.

Data and field types are available for text, number, dates, Yes/No, and phone numbers. Other features include multiline fields that can receive very large amounts of text, checkboxes and the ability to embed a grid or table.

The Check Code editor within Form Designer customizes data entry providing many commands and functions. Check code can be inserted in any field to implement IF statements, ASSIGN values to variables, GOTO another field, enforce particular rules or perform calculations during entry or exit from the field. This enables operators to validate data as they are entered, auto-calculate fields, provide skip patterns, and deliver messages to the data entry user.

EXERCISES

Create a New Project and Form

Now you will create the asthma survey/questionnaire. The information entered here will populate your database and be used for analyses in a later lesson.

1. From the Epi Info main menu, select **Create Forms** or select **Tools > Create Forms**. The Form Designer window opens.

2. Select **File > New Project**. The New Project window opens.

3. In the Project **Name** field, type **AsthmaSurvey**. Project names cannot have spaces or begin with numbers.

4. Save the project to a designated location. Click on the **ellipsis (…)** button on the right of the Project **Location** field to open the **Browse for Folder** dialog. Using the tree menu, select your desired location. Create a new folder and give it a name. Save your project in this new folder.

5. In the **Form Name** field, type **PreInterventionSurvey**. Form names cannot have spaces or begin with numbers.

6. Click **OK**.

Create Fields

1. Create a Label/Title Field

*   The Make/Edit Form window is the form, survey, or questionnaire design space. Fields are created, edited, and designed from this area of the application using the Field Definition dialog box.

- To create a field, right click inside the Make/Edit Form workspace. A pop-up menu will appear. Move the mouse over the **New Field** option. A sub-menu will appear. **Select Label/Title**.

- In the Question or Prompt field, type the title of your survey. ***Parent School Asthma Pre-Intervention Survey***.

- In the Field Name field, highlight the default field name, and type ***PreSurvey***.

- Click Font. The Font dialog box opens. Select a font from the list. Make the font Bold and size 14. Click **OK**. Your title text has been formatted with the new font type.

Add these instructions

- Right click in your workspace to open the Field Definition pop-up.

- Create a Label/Title Field that states, ***"Please answer all the questions below, whether or not your child has asthma."*** Give your variable the Field Name **Instruction**. Make the font size for your instructions 12. Move your instructions underneath the title.

Follow the same process to create Text type fields for the following:

Prompt/Question	Variable Type	Field Name	Other
School ID Number	Text	SchoolNum	
Student ID Number	Text	StudentID	Select Required Option
Zip Code	Text	Zip	

2. **Create a legal value field**

- Right click on the Form Page to open the Field Definition pop-up menu. Move the cursor over the New Field option. Select **Legal Values** from the submenu.

- In the Question/Prompt field, type **Gender**. Use the default Field Name, Gender.

- Click the **ellipses (…)** button to the right of the Data Source box.

- Click **Create New** to enter the legal values to answer the question. Existing tables can also be used to create legal values. An entry box opens for your selected value.

- In the first line, type **Female** and press Enter, then type **Male** and press Enter.

- Click the **Do not sort** checkbox. Form Designer sorts Legal Values alphabetically, unless you select Do not sort.

- Click OK to accept the Legal Values. Click OK to accept definition entries.

3. **Create a date field**

- Right click on the Page to open the Field Definition pop-up menu. Move the cursor over the New Field option. Select **Date** from the submenu.

- In the Question/Prompt field, type Child's Date of Birth.

- In the Field Name section, type **DOB**.

- Select the Required option. Click **OK**.

4. **Create a numeric field**

- Select **Number** from the submenu.

- In the Question/Prompt field, type **Age**.

- From the Pattern drop-down, select **##**.
- Use the default Field Name, Age.
- Select the Read Only option. Click OK.

Create the Phone Number and PS School Number fields.

Prompt/Question	Variable Type	Field Name	Other
Home Phone Number	Phone Number	Phone	*###-###-####*
PS School Number	Text	PSNumber	Select Read Only Option

5. **To set the tab Order**
   - Select the fields you want to order by left clicking and dragging the selection box over the desired fields. Right click in the area of the page you want to customize the tab order.
   - Click **Tab > Show Tab Order** to show the current order of field entry.
   - Click **Tab > Start New Tab Order** to arrange order of field entry according to the defaults.
   - Click **Tab > Continue Tab Order** to continue the tab order of fields you have selected. All fields within the selection box will be ordered starting with the next field tab number after the last field in your current tab order.

6. **Name the page**
   - Right click the page from the Page Names window. The Page Name dialog box opens.
   - Type **Personal Information** in the Page Name field.
   - Click OK. The page name appears in the list of pages.

7. **Create a code table**
   - Right click on the field **School ID Number** to open the pop-up menu.
   - Move the mouse over the **Change To** option. A sub-menu will appear. Select **Codes**.
   - Select **PSNumber** as the field you want to link to **SchoolNum**.
   - Click on the Data Source **ellipsis (…)** button.
   - Click **Create New**. A spreadsheet opens for you to enter the values for the Codes field and Linked fields. The left-most column displays the SchoolNum field. The right PSNumber field will receive codes based on the value of the SchoolNum field.
   - On the first line enter **A** as **SchoolNum**. Tab over and type **123** as the **PSNumber**. Use the tab key to navigate through the table set-up. Complete the series as follows:

SchoolNum	PSNumber
B	234
C	345
D	456

   - Select Do Not Sort. Click OK to accept the codes for each field. Click OK to close the Field Definition dialog box and place the fields in the form.

8. **Add a new page**

- From the Form Designer page panel, highlight the form (**PreInterventionSurvey**) where you want to add a page. Right click and select **Add Page** from the pop-up menu. Click **OK** in the dialog box that appears. The page appears in the Form Designer window and at the end of the existing pages listed in the Page Names window as **Page 2**.

- Right click inside your new page. The Field Definition dialog menu opens. Select Label/Title as your Variable Type.

- Enter the following Prompt: ***Has a health professional ever told you that your child has any of the following conditions?*** Type the Field Name: **Condition**. Click OK.

9. **Create a Checkbox**

- Under the question above, right click to open the Field Definition dialog menu. Select the variable Type of **Checkbox** from the submenu. Enter the following Prompt: **Asthma**. Use the default Field Name, Asthma. Click OK. The Asthma checkbox appears in your view.

- Follow the same process to create Checkbox type fields for the following:

Prompt/Question	Variable Type	Field Name
Reactive Airway Disease	Checkbox	RAD
Asthmatic Bronchitis or Wheezy Bronchitis	Checkbox	Bronchitis
Wheezing	Checkbox	Wheezing

10. **To create a group**

- Use the left mouse button to drag a rectangle around the checkbox fields that are to be included in the group. This includes the question and the four checkboxes.

- From the navigation menu select **Insert>Group**. The Group Properties Dialog box opens.

- In the Question/Prompt field, type **Asthmatic Conditions**.

- To select a different colour for the group, click **Color** in the Attributes section. Click the **OK**.

- To edit the group, right click on the group name. The Edit Group window opens. Select Properties. You can change the Group Name by typing a new name in the Group Name field. Click OK. The group appears with the selected edits.

- To delete a group box, right click anywhere on the box to open the pop-up box. Click Delete to delete the group box. **Note**: This will not delete your fields.

11. **Create a mirror field**

- Mirror fields allow you to show one field on many pages, but only enter the information once. Because there are several pages of information for each child, you want to place their Student ID on each page.

- Right click on the page to open the Field Definition dialog menu. Select the Variable Type: **Mirror**. Enter the Prompt as **ID**. Use the default Field Name, ID. From the **Assigned Variable** dropdown box select the variable **StudentID** from the list. Click OK.

- Move the field to the top of the page.

12. **Create a Yes/No field**

- Open the Field Definition dialog menu. Select the Variable Type: **Yes/No** from the submenu

- Enter the following Prompt: ***Has a health professional prescribed any medication to your child for breathing problems?***

- Type the Field Name: **Medication**. Click OK.

Create the following field types:

Prompt/Question	Variable Type	Field Name	Other
Select the month when your child's breathing was the worst	Text	WMonth	Select **Comment Legal** Enter each month of the year in the following format: 1-January 2-February 3-March 4- April 5-May 6-June 7-July 8-August 9-September 10-October 11-November 12-December Select Do not sort
During their worst breathing month, select how often the following symptoms occurred	Label/Title	Symptoms	
Wheeze or whistling in the chest?	Text	Whistle	Legal values The 5 values are: Never 2 times each week or less 3 to 6 times each week Every day, but not all day Every day, and all day Select Do not sort

| Have a cough? | Text | Cough | Legal value

You can use an existing legal value table to populate new tables

Click on the Data Source **ellipsis (…)** button.

Click on the **Use Existing** button

Select **codewhistling1** from the list of tables. Select **whistling.** Select Do not sort. Click **Ok.**

Click **Ok** |
|---|---|---|---|

- Create a group that contains the variable Symptoms, Whistle, and Cough. Name the group **Monthly Breathing Difficulties.**
- Name Page 2 **Asthma Symptoms**

13. Add a page to the view

14. Name Page 3 **Medical Information**

15. Create the following data types on this new page

Prompt/Question	Variable Type	Field Name	Other
How many days of school has your child missed due to breathing problems?	Number	MissDays	Pattern **###**
Have breathing problems stopped your child from participating in sports?	Yes/No	MissSport	

If Yes, how many times in the past month	Text	SPTimes	Legal values 2 times a month or fewer 3 to 4 times a month 1 to 3 times each week 4 times each week or more Select Do not sort
How many people living in your home, including this child, have asthma?	Number	IllHome	##

Verify the tab order for all your pages. You want your cursor to follow a logical data entry path.

16. **Create New Data Table**

Before you can enter data, you will need to create a data table. From the Form Designer navigation menu, select **Tools > Create Data Table**. The Create New Data Table dialog opens. It asks if you would like to create the data table. Click **No**. A new data table will be made next time you use it in **Enter Data**.

17. **To exit Form Designer**, select **File>Exit** from the Form Designer navigation menu or click the close X.