

Texas Population Data (1980 - 2030) VitalPro User's Guide



Expert Health Data Programming, Inc.

Texas Population Data (1980 - 2030) VitalPro User's Guide

Expert Health Data Programming, Inc.

Texas Population Data (1980 - 2030) VitalPro User's Guide

Copyright 1998-2003 by Expert Health Data Programming, Inc. All rights Reserved

Published by Expert Health Data Programming, Inc., Seattle, WA USA

This user's guide has been carefully prepared, but is not guaranteed against errors or omissions. Please report any errors, omissions, or suggestions concerning the user's guide, VitalPro, or Vitalnet, using the contact system at the www.ehdp.com web site. The web site also has current information on VitalPro software and other Vitalnet systems.

Birtha, Epidemic, Epigram, MedTrend, MultiCod, Oncogram, PopTrend, PregData, Vitalnet, VitalWeb, VitalPro, and VitalWeb Wizard are trademarks of Expert Health Data Programming, Inc. Other product and company names mentioned may be the trademarks of their owners.

Table of Contents

1: Introduction	2
Advantages and Benefits	3
Data Within PopTrend	3
Access Methods	4
TDH Network Access	4
Confidentiality Policy	5
2: Understanding Results	6
Typical PopTrend Table	7
Table #1 to Interpret	8
Table #1, Interpreted	9
Table #2 to Interpret	10
Table #2, Interpreted	11
3: Using the PopTrend Interface	12
PopTrend Main Menu	13
PopTrend Submenus	14
Geographic Submenu	15
Select Another Submenu	16
Years Submenu	17
Produce a Table	18
Save Results to Log File	19
Formats for Exporting	20
Explore the Data	21
Continue with Analyses	22
Outlines of Submenus	23
Submenus for Designing Table Layout	24
Submenus for Modifying Data Variables, Other Settings	25
More Practice Analyses	26
4: PopTrend Parameters	27
Statistic [Outcome]	28
Row Variable, Row Sorting, Column Variable	28
Multi-Tables	29
Geo Selection [Area Sets]	30
Other Variables	31
Race Groups	31
Age Groups	31
Sex	31
Years	31
Other Settings	32
Confidence Intervals	32
Decimal Places	32
Trend Analysis	33
Glossary	34

1: Introduction

Vitalnet is a comprehensive, integrated system for analyzing health data. Texas PopTrend is the Vitalnet module for analyzing Texas population data. The software is designed to be easily used without a user's guide. However, many users learn better from a written text, and all users will benefit from an overview of what the software can do before using it.

This user's guide describes PopTrend Professional Version (VitalPro), which runs directly on a PC or LAN, or remotely by telnet or modem. Web Versions of Vitalnet (VitalWeb) are described at the <http://www.ehdp.com/> web site. Either Vitalnet system will greatly ease and speed your work.

Notes for Adobe Acrobat pdf version: The screen snapshots are best viewed at a 125% magnification, and will be somewhat fuzzy at other magnifications. The snapshots will be sharp when printed.

This user's guide incorporates a tutorial. Carrying out the tutorial will help you quickly become an expert at using Vitalnet. All procedures you are expected to carry out as part of the tutorial are highlighted by a different text appearance, as shown in this example:

Sample Tutorial Step - Press 'A' to add Texas as one area set.

Here's how this user's guide is organized:

Chapter 1: Introduction - Describes general characteristics of Texas PopTrend, access methods, and confidentiality requirements.

Chapter 2: Understanding Results - Explains the organization and content of PopTrend tables (the results you get from using PopTrend). Shows and explains typical tables.

Chapter 3: Using the PopTrend Interface - Describes how to use PopTrend menus to select parameters, produce tables, and save output, with examples. Guides you step-by-step to produce your first table. Outlines available menus.

Chapter 4: Texas PopTrend Parameters - Describes allowed selections for age groups, area sets (counties and regions), race groups, years, and other options.

Glossary - Defines terms related to analyzing population data and using PopTrend.

Citation for PopTrend - Expert Health Data Programming, Inc., Texas VitalPro User's Guide: Data Warehouse Software for Analyzing Texas Population Data. Seattle, Washington. 1998-2004. Browse <http://www.ehdp.com/vitalnet/> for more information about the software or to contact EHDP.

Acknowledgements - We gratefully acknowledge the cooperation and assistance of staff from the Texas Department of Health and other users.

Advantages and Benefits

PopTrend makes it easy to analyze Texas population data.

- **Fast** - You get results in seconds or minutes. Depending on the analysis, alternate methods could easily require hours to weeks to complete.
 - **Flexible** - A wide variety of tables may be produced. Set rows and columns however you want. Standard parameters may be selected and combined as needed.
 - **Efficient** - You can make a whole series of tables with one keystroke (multi-tables). Bar graphs allow for quick scanning for trends.
 - **Easy to use** - Operations are menu-driven. Scrolling windows are used to select items from lists. You don't need to know any special codes such as FIPS codes.
 - **Well-documented** - Although PopTrend has been designed to be self-explanatory, it also includes extensive on-line help. Each menu has its own help screen. Also, you may select from a list of on-line help topics, providing advice on all topics related to PopTrend. The on-line help complements the information included in this user's guide. Finally, all output is fully documented.
 - **Integrates with other software** - Tables may be saved to a log file in ASCII format for subsequent editing and printing with any editor. You may also save PopTrend tables in tab-delimited format or as a dBASE III file, for easy importing into data analysis, spreadsheet, mapping, graphing or other presentation software. Or, tables may be saved as HTML for display in a web browser.
-

Data Within PopTrend

PopTrend links and analyzes population and geographic data.

- **Geographic information** - PopTrend includes a database of Texas counties and regions, linked to the population data sets.
- **Population data** - The Center for Health Statistics at TDH provides 1980-1999 Texas population data. The Texas State Data Center at Texas A&M provides Texas population data for 2000 and beyond. The Texas State Data Center periodically revises its estimates for years between censuses, but the changes are typically small. The population variables included within PopTrend are age, county of residence, race, sex, and year.

Access Methods

Both local and remote access are available for Texas PopTrend.

- **Local access (PC's and local area networks)** - If you are a Texas Department of Health employee, you will typically use Texas PopTrend from the TDH local area networks. Texas PopTrend may also be installed to a stand-alone IBM-compatible PC or laptop running any version of Windows.

Execution speed - PopTrend is fast. Analyses that might otherwise take hours to weeks to set up and run are done in seconds or minutes. For those who access Texas PopTrend on a PC network, the program execution speed depends on the type of PC you are using and the characteristics of the network you are working on. The program has been tested to work well on all IBM-compatible PC's, and simply runs faster on faster PC's.

TDH Network Access

TDH employees may access Texas PopTrend from the TDH networks.

Windows - The following assumes that you are a Texas Department of Health employee, and are using a PC attached to a TDH network. Using any version of Windows, click on the PopTrend icon to start the program. The icon looks like a doctor's bag. If you do not have an icon, request that your network manager set things up so that PopTrend can be run from your network.

When you are done - After you finish using Texas PopTrend, you will still be logged on to your own server, so you do not need to reboot your PC. If you have a problem accessing Texas PopTrend from a TDH network, ask your local network manager for help first.

Confidentiality Policy

Texas PopTrend users must comply with confidentiality requirements.

Confidentiality policy - Your use of Texas PopTrend indicates your agreement to the following conditions: You will not try to use Texas PopTrend results nor let anyone else use Texas PopTrend results for any purpose other than statistical analysis. If you discover the identity of a population number, you will advise the Director of the Bureau of Vital Statistics at the Texas Department of Health of the incident, will safeguard or delete the information that would identify the individual, will make no use of the knowledge, and will inform no one else of the discovered identity.

2: Understanding Results

Review - Texas PopTrend is a powerful tool for analyzing Texas population data. The program compares just about anything with anything, and makes just about any kind of output table you want. Chapter 1 explained how PopTrend makes analyzing population data easy, listed the linked data sets used by Texas PopTrend, described the access methods, and spelled out the confidentiality policy.

What's in this chapter - Before jumping in and using the program (Chapter 3), it is advised to get a good understanding of the results of the program. This chapter explains the organization and content of PopTrend tables (the results you get from using PopTrend). This chapter explains the four sections of a table:

- **Header** - Basic analysis parameters.
- **Data section** - Numerical results.
- **Bar graphs** - Graphical results.
- **Footnotes** - Other analysis parameters.

In addition, this chapter shows examples of actual Texas PopTrend tables, to give you an idea of what is possible. You are given an opportunity to practice interpreting sample tables.

Typical PopTrend Table

A typical PopTrend table has a header, data section, bar graphs, and footnotes.

```
Population
Tabulated by Age and Sex
Years: 2000
Place of Residence: Galveston, Harris

Age                Male          Female         Total
-----
Birth-19           566,937       547,337       1,114,274
20-39              582,844       574,295       1,157,139
40-59              454,842       471,562       926,404
60-99+            155,304       202,304       357,608
-----
Total              1,759,927    1,795,498    3,555,425

Horizontal Bar Graphs (X = 38,856 Population, x = 19,428):

Age                Male          Female
-----
Birth-19          XXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXX
20-39             XXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXX
40-59             XXXXXXXXXXXXXXXx XXXXXXXXXXXXXXXX
60-99+           XXXX          XXXXX
-----

Analysis Footnotes:
Unique ID, for Keeping Track of Analyses: 414MRQKR
Output Produced: Sat Apr 14 10:55:52 2001, by Texas VitalNet
Population Data Source (Pre-1990): TDH State Health Data (1/95)
Population Data Source (1990+): TAMU TX State Data Center (8/98)
```

This is a typical PopTrend table. It has 4 parts:

The **header** documents the basic type of analysis that was done. The table analyzes population for 2000 for two counties: Galveston and Harris.

The **data section** contains the results, organized into columns and rows. The columns and rows can be set however you want. In this example, there is one column for each sex and one row for each of four age groups. Verify for yourself that there were 471,562 women age 40-59, 1,759,927 males, and a total of 3,555,425 residents. By the way, each result, such as 471,562, is called a "cell".

The **horizontal bar graphs** represent the results in a useful graphical format, with a legend. In this example, the legend indicates that each 'X' (big X) symbol represents 38,856 population. Although the bar graphs are optional, you should usually include them, because they make it so easy to scan and understand the results. The bar graphs show that the greatest population is in the 20-39 age group, for both sexes.

The **footnote** documents less important aspects of the analysis, such as when the table was produced, and assigns a unique ID to the table for future reference.

Table #1, Interpreted

Here is the same table, and a suggested interpretation. If you had a problem, try reading through the answers again or ask a local data analyst for help.

```

Population
Tabulated by Race-Ethnicity and Sex
Years: 2000
Place of Residence: Galveston, Harris

Race           Male           Female          Total
-----
White          814,096        846,813        1,660,909
Black          288,063        333,237        621,300
Hispanic       552,787        512,603        1,065,390
Other          104,981        102,845        207,826
-----
Total          1,759,927     1,795,498     3,555,425

Horizontal Bar Graphs (X = 56,454 Population, x = 28,227):

Race           Male           Female
-----
White          XXXXXXXXXXXXXXXXx XXXXXXXXXXXXXXXX
Black          XXXXX          XXXXX
Hispanic       XXXXXXXXXXXX   XXXXXXXXXXXX
Other          XX             XX
-----
    
```

Header	Basic result type (statistic):	Population
	Years analyzed:	2000
	Geographic areas analyzed:	Galveston, Harris Counties
	Age groups analyzed:	All ages
Data Section	Rows used in this example:	Row for each race
	Columns used in this example:	Column for each sex
	How many females, total:	1,795,498
	How many Hispanic males:	552,787
Bar Graphs	Population count symbolized by big 'X':	56,454

Table #2, Interpreted

Here is the second table again, and our interpretation of the results. If you had difficulty, carefully read the answers again and consult with local data experts for more help.

Median Population Age (Years) Tabulated by Area Set and Sex Years: 2000 Place of Residence: Harris, Hidalgo, Kerr						
Area Set	Male Median, Population		Female Median, Population		Total Median, Population	
Kerr	40.9	20,139	45.8	22,393	43.4	42,532
Harris	31.0	1,644,682	32.4	1,675,755	31.7	3,320,437
Hidalgo	25.3	268,839	27.3	277,812	26.3	546,651
Total	30.2	1,933,660	31.8	1,975,960	31.0	3,909,620

Horizontal Bar Graphs (X = 3.1 Years, x = 1.5):

Area Set	Male Median	Female Median	Total Median
Kerr	XXXXXXXXXXXXXx	XXXXXXXXXXXXXXX	XXXXXXXXXXXXXXX
Harris	XXXXXXXXXXXX	XXXXXXXXXXXXx	XXXXXXXXXXXXx
Hidalgo	XXXXXXXXXXXXx	XXXXXXXXXXXX	XXXXXXXXXXXXx
Total	XXXXXXXXXXXX	XXXXXXXXXXXXx	XXXXXXXXXXXX

Header	Basic result type (statistic):	Median population
	Years analyzed:	2000
	Geographic areas analyzed:	Harris, Hidalgo, Kerr
Data Section	Rows used in this example:	Row for each area
	Columns used in this example:	Column for each sex
	Harris County median population:	31.7
	Total population for areas analyzed:	3,909,620
	Female median population for Kerr County:	45.8
Bar Graphs	Median population symbolized by big 'X':	3.1 years

3: Using the PopTrend Interface

Review - Chapter 1 explained how PopTrend makes it easy to analyze Texas population data, listed the linked data sets contained within Texas PopTrend, discussed the access methods, and described the confidentiality policy. Chapter 2 explained the layout of an output table, and presented sample tables for discussion and interpretation.

What's in this chapter - Finally, you will get to use the program! This is probably what you have been waiting for! You will learn to navigate the interface, select parameters, and produce a few tables like those you learned about in the previous chapter. The chapter also has a schematic overview of all Texas PopTrend menus, for your reference.

Access the program - A tutorial runs through this chapter. All procedures you are expected to do as part of the tutorial are highlighted in a different type style, as shown below. At this point, do the following:

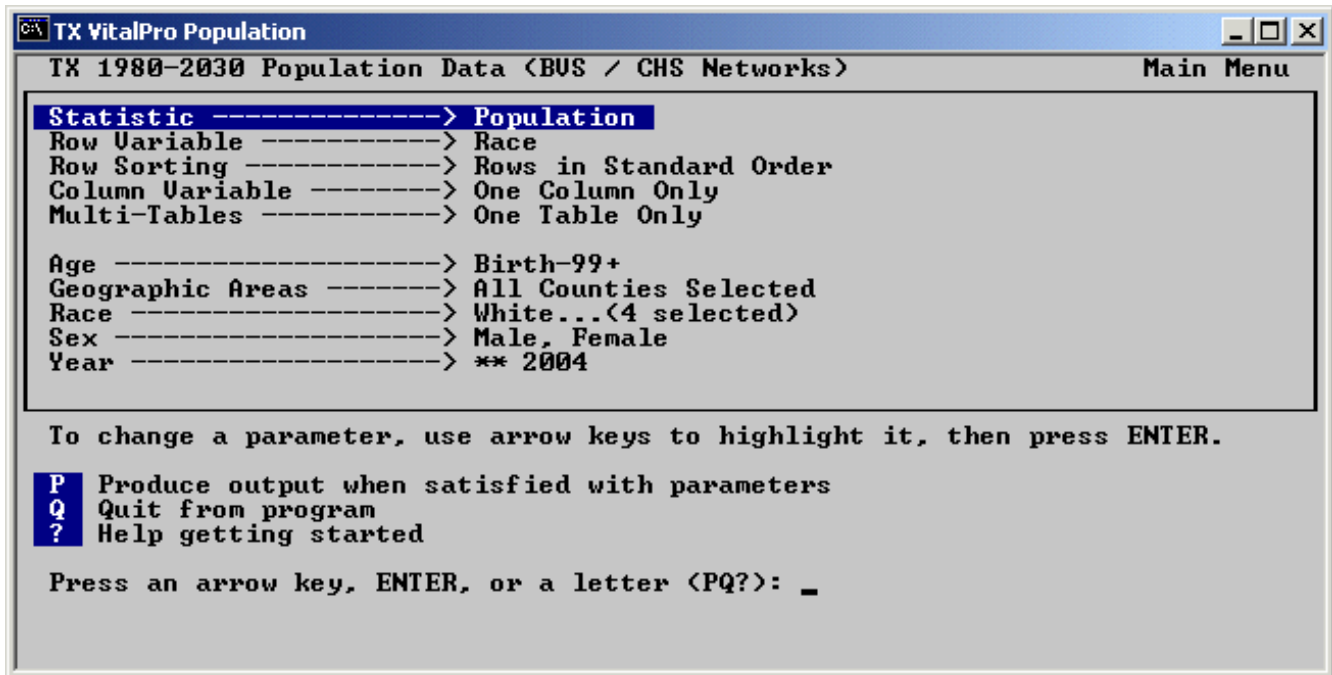
Access and start Texas PopTrend using [one of the methods](#) listed previously.

You will either click on a **Windows icon**, select a item from the **TDH menus**, dial a number with your **modem**, or **telnet** to an Internet address. If needed, get assistance from another Texas PopTrend user. You will start at the Main Menu (shown on next page).

PopTrend Main Menu

You will constantly return to the Main Menu.

After PopTrend starts, you are presented with the Main Menu, similar to the following:



The Main Menu is the "command center" - You move to submenus to modify parameters, but return to the Main Menu to make a table. The Main Menu lists all parameters currently selected, providing an overview.

Highlighting a parameter - One of the parameters, such as "Outcome", is highlighted with a "light bar" that you move by pressing an arrow key. The parameter list will scroll when you reach the bottom. Note that you do not use a mouse to run the program. Do the following:

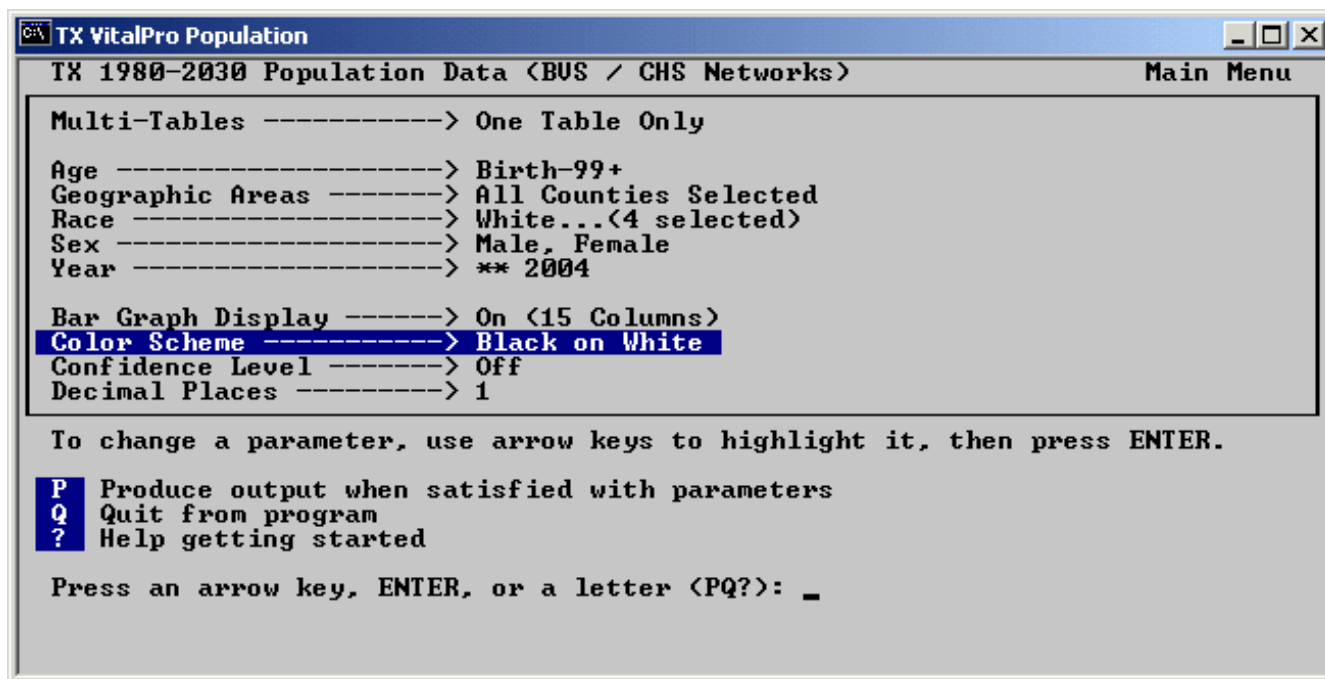
Press down arrow key to move light bar down. Keep pressing to see the parameter list scroll down.

The prompt is worth reading - The Main Menu (and every other PopTrend menu) has a prompt at the bottom with guidance on what to do next. In this situation you can press an arrow key, the ENTER key, one of two letters (P or Q), or '?' for help.

Changing window appearance if running directly on PC - The font size for the window running VitalPro may be changed from the Windows toolbar, to suit your screen. The size "8 x 12", as shown, is a reasonable size. The window running VitalPro may be toggled to full screen (and back) by pressing ALT-ENTER (hold down the ALT key and press the ENTER key).

PopTrend Submenus

Access a submenu by highlighting an item and pressing ENTER.



Selecting parameter to change - To change one of the parameters, highlight the parameter (using the arrow keys) and press ENTER.

Quick changes - Some parameters have a very simple submenu. Try this:

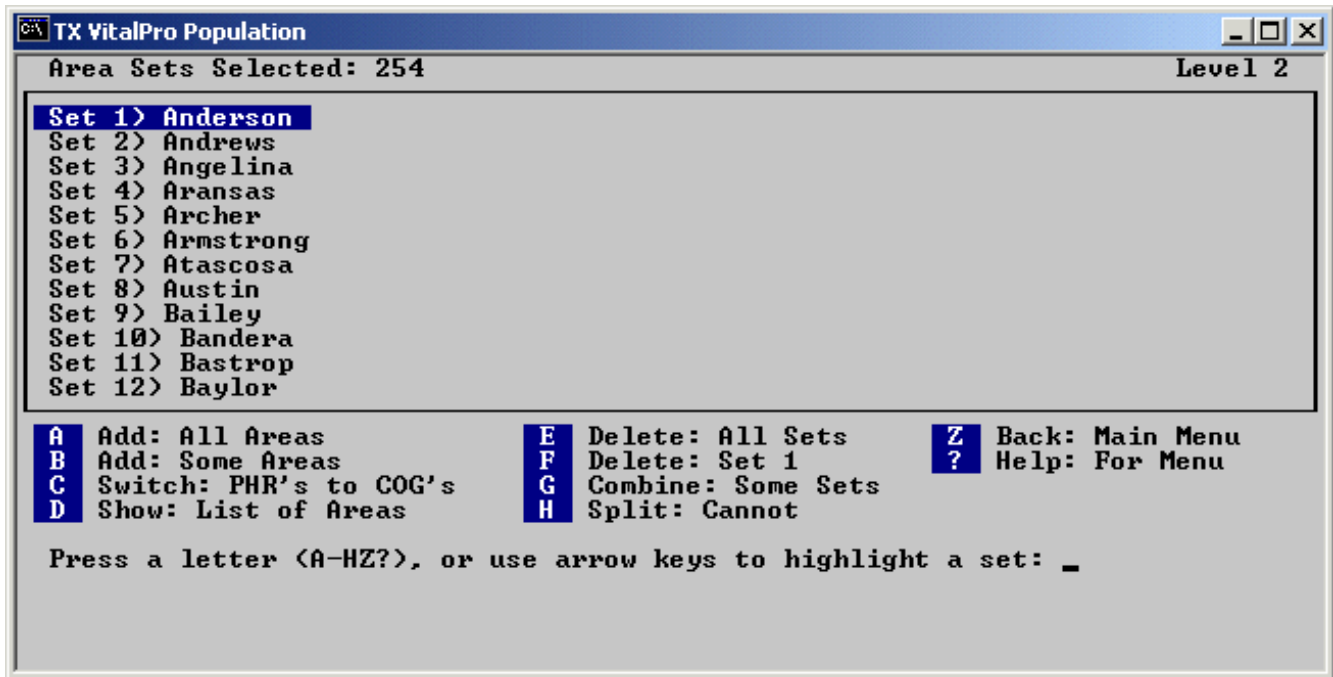
Highlight "Color Scheme" parameter by using the arrow keys. Press ENTER key to access simple submenu. Select different color scheme. Press ESCAPE key or 'Z' to return to main menu.

More complex changes - For more complex parameters, a more complicated submenu will appear and help you change the parameter. For example, to change the geographic selection, you would highlight the parameter "Geographic Areas", and press ENTER. Do the following:

Use arrows keys to highlight "Geographic Areas". Then, press ENTER to access the submenu.

Geographic Submenu

Submenus guide you step-by-step in selecting parameters.



Submenu with scrolling window - This is a typical PopTrend submenu. It has a scrolling window with a list of items (currently list of selected Counties). One or more of the items may be highlighted by using the arrow keys.

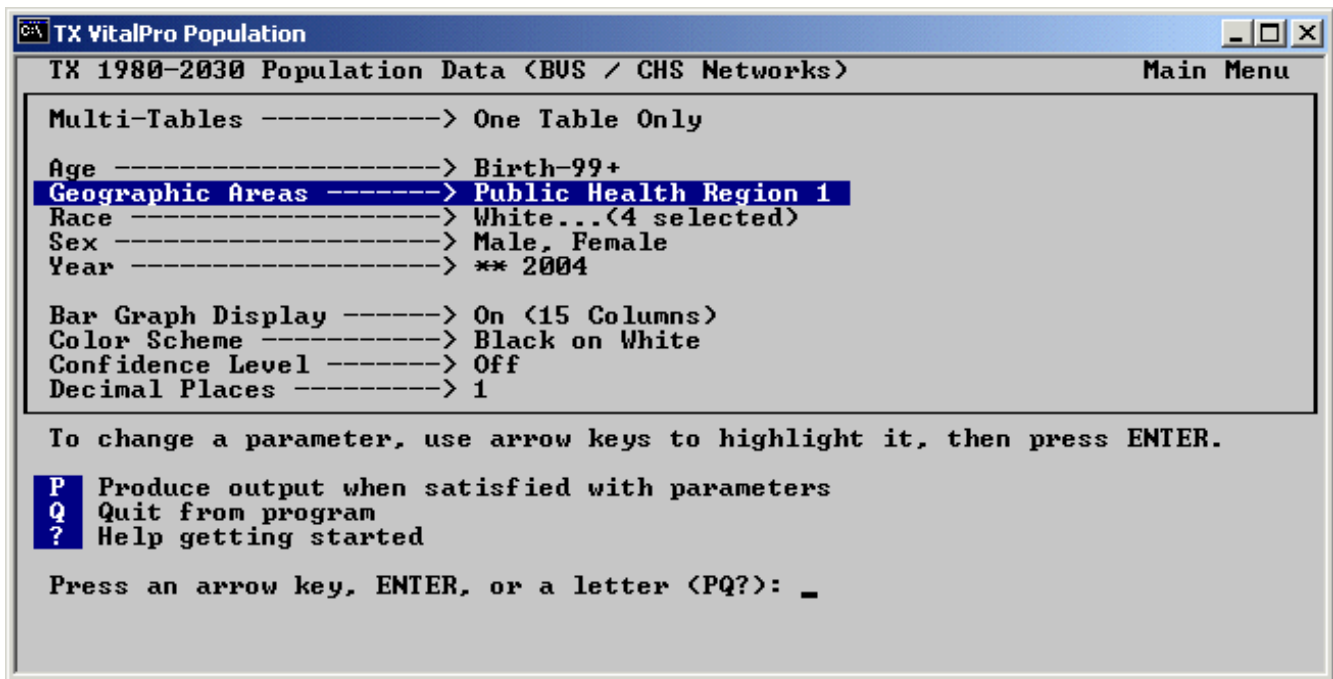
Letters are action items - This submenu has a list of actions, such as " E Delete all sets". Pressing the letter (such as 'E') carries out the action.

Adding an area - Carry out the following steps to add an area:

1. Press 'E' to delete all areas sets. You may be asked to confirm.
2. Then, press 'B' to add some areas.
3. Highlight "Public Health Region 1", and press ENTER to add.
4. Then, press ESCAPE key to return to previous menu.
5. Note that an item is added to the scrolling window.
6. Finally, press ESCAPE key to return to the Main Menu.

Select Another Submenu

Access another submenu by highlighting an item and pressing ENTER.

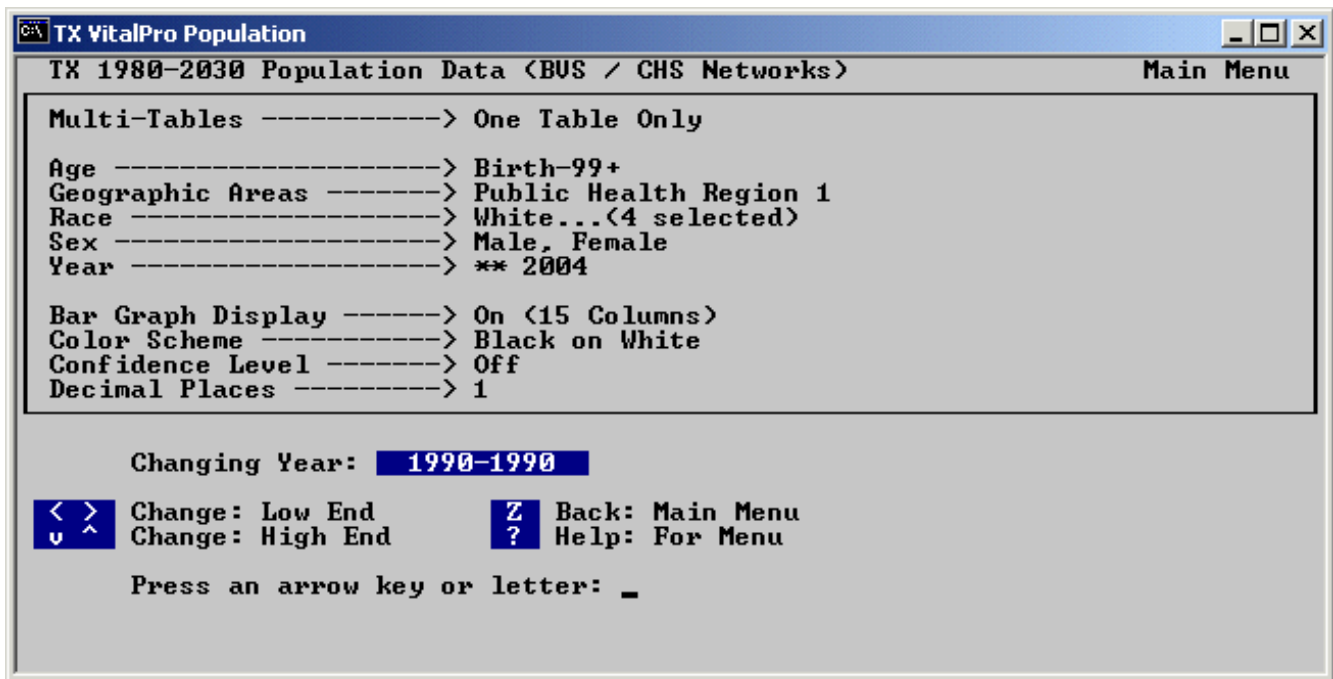


Make sure you're back - You should now be back at the Main Menu. Note that "Geographic Areas" has been modified (it is now set to Public Health Region 1). If you are not back at the Main Menu, get assistance from a coworker familiar with using Texas PopTrend. Next, do the following steps, to access the submenu for modifying years:

1. Use the arrow keys to highlight "Year of Population".
2. Then, press ENTER to move to a submenu for modifying the years.

Years Submenu

Submenus help you quickly and easily change parameters.



Submenu for a single range - Your screen should look similar to that shown above. This is the type of submenu used to modify a single range, such as a range of years. Next, do the following to modify the range and return to the Main Menu:

1. Press LEFT or RIGHT arrow key to change the low end.
2. Next, press the UP or DOWN arrow key to change the high end.
3. Or, press HOME or END key to select the maximum range.
4. Keep modifying range until you have selected a single year, such as 2000.
5. When satisfied, press 'Z' (or ESCAPE key) to return to the Main Menu.

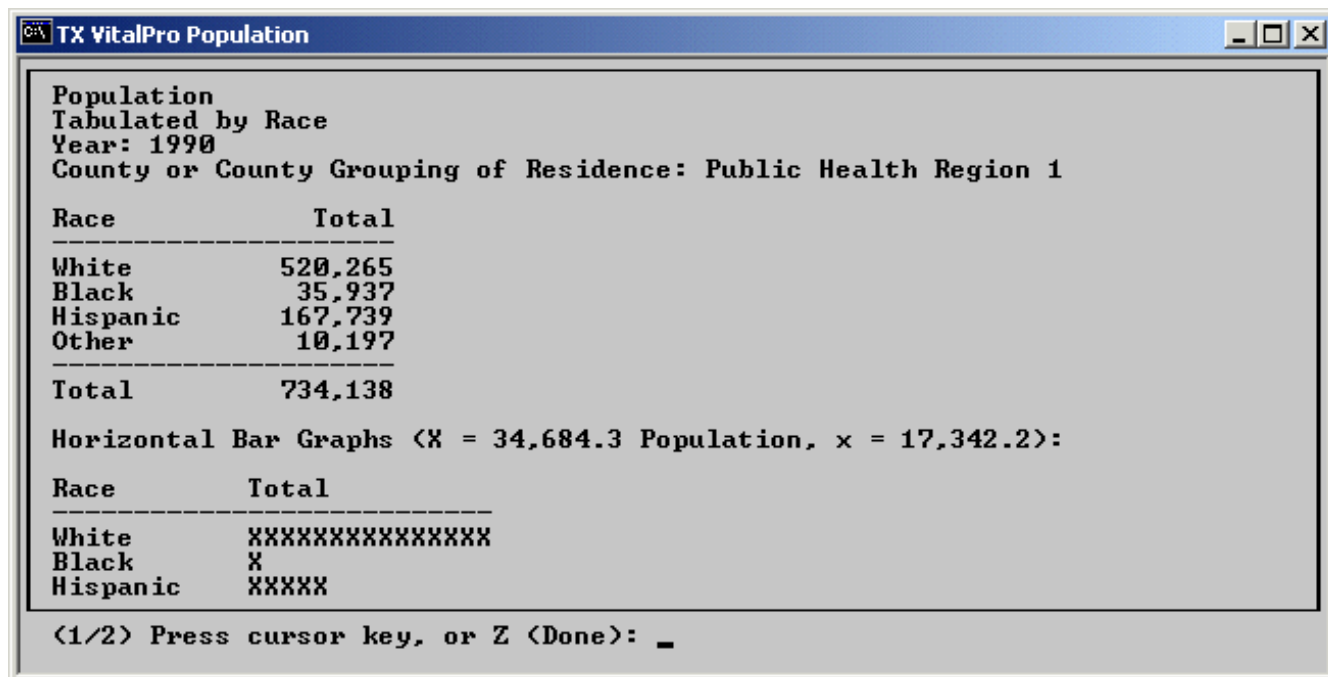
Produce a Table

Press 'P' at Main Menu when you are ready to make a table.

Check that you at the Main Menu - You should now be back at the Main Menu. You have used the submenus to select a few parameters, and are now ready to produce your first table!

Produce a table - From the Main Menu, you can press 'P' to produce output. Go ahead and do it:

Press the letter 'P' to produce a table similar to the following:



```
TX VitalPro Population
Population
Tabulated by Race
Year: 1990
County or County Grouping of Residence: Public Health Region 1

Race          Total
-----
White         520,265
Black         35,937
Hispanic      167,739
Other         10,197
-----
Total         734,138

Horizontal Bar Graphs (X = 34,684.3 Population, x = 17,342.2):

Race          Total
-----
White         XXXXXXXXXXXXXXXXXXXX
Black         X
Hispanic      XXXXX

<1/2> Press cursor key, or Z <Done>: _
```

Time required - After you press 'P' from the Main Menu, PopTrend calculates the results. The amount of time required depends on which parameters are selected and what kind of computer you are using, but is typically seconds. When PopTrend finishes calculating the results, the output table will appear in a new window, as shown above.

Examining the table - You may browse the table with the arrow keys and other cursor keys (PgUp, PgDn, HOME, END). When you are finished examining the table, press the ESCAPE key (or 'Z'). PopTrend will ask if you want to save the table to your log file (see next page). Depending on your access method and which menu options are selected, you may also be asked if you want to print the table or to save to an [alternate format](#) (tab-delimited, dBASE III, HTML). Try this:

Press down arrow key and other cursor keys to examine the results. Press ESCAPE or 'Z' when you are finished viewing the results. For now, press 'N' when asked to save or print the table.

Save Results to Log File

Each table may be saved to your log file.

```
TX VitalPro Population
-----
Other          10,197
-----
Total          734,138

Horizontal Bar Graphs (X = 34,684.3 Population, x = 17,342.2):

Race          Total
-----
White         XXXXXXXXXXXXXXXXXXXX
Black         X
Hispanic      XXXXX
Other         x
-----

=====

Analysis Footnotes:
Unique ID, for Keeping Track of Analyses: 517GRXPX
Output Produced: Mon May 17 13:19:48 2004, by Texas VitalPro
Population Data Source (Pre-1990): Texas Department of Health (1/1995)
Population Data Source (1990+): Texas State Data Center (2/2004)

Save to C:\TEMP\POPTREND.003 (Y/N/Change)? _
```

Purpose of the log file - PopTrend always has a log file ready for saving the results exactly as you see them on the screen. After you finish viewing a table, PopTrend always asks if you want to save it to your log file. If you press 'Y' the table will be appended to the log file (added to the end) as ASCII text. At any time, you may close the current log file and open a new one with a new name.

Log file location (local PC or LAN access) - If you are using Texas PopTrend on a PC local area network or a stand-alone PC, the log file will be saved directly on a network disk or local disk. You can save to any directory where you have write permission. PopTrend always tells you the location, such as "C:\POPTREND.001". If you are accessing the software by telnet, the log file will be located on the UNIX computer, and another method will be used to transfer the log file to you.

Word processing hints - After you finish using PopTrend, you may edit and print the log files using any word processor. Use a non-proportional font such as Courier to keep the columns aligned. If needed, adjust the page orientation, margins or font size so the text does not wrap to the next line.

Directly printing the results - Local users (stand-alone PC, LAN PC, possibly UNIX) have the additional option of immediately printing an output table. After you view the output, PopTrend may ask if you want to print the results. By the way, if you never want to print, you may disable printing from the Main Menu. NOTE: If you are connected to a network printer, your local network manager may need to enable printing from command windows.

Formats for Exporting

Results may be saved to a tab-delimited, database, or HTML file.

Saving to a second format - After you finish viewing the results, PopTrend may ask if you want to save to a tab-delimited (tsv), HTML (htm), or dBASE III (dbf) file. If you never want to save to these optional file formats, set the "Second Format" option on the Main Menu to "None".

Tab-delimited file (best for spreadsheets) - As shown below, tab-delimited output has a tab between each output item, and each text item is surrounded by "double quotes". Bar graphs are not included in tab-delimited output since the purpose of tab-delimited output is usually to import into presentation software capable of more sophisticated graphics. Tab-delimited output is ideal for importing into spreadsheet software. Tab-delimited output can also be imported into other types of software, but dBASE III format is usually better.

```
"Population"
"Tabulated by Race-Ethnicity and Sex"
"Years: 1990"
"Place of Residence: PHR 1"

"Race" "Male" "Female" "Total"
"-----"
"White" 250520 269745 520265
"Black" 17348 18589 35937
"Hispanic" 85674 82065 167739
"Other" 5259 4938 10197
"-----"
"Total" 358801 375337 734138

"Analysis Footnotes:"
"Unique ID, for Keeping Track of Analyses: 414YARTW"
"Output Produced: Sat Apr 14 10:41:02 2001, by Texas VitalNet"
"Population Data Source (Pre-1990): TDH State Health Data (1/95)"
"Population Data Source (1990+): TAMU TX State Data Center (8/98)"
```

Example of Tab-Delimited Output

dBASE III file (useful for many other applications) - Results may also be saved to a dBASE III database file (dbf extension). Database files are excellent for importing into almost any data analysis, graphics, spreadsheet, mapping or other presentation software. Field names are automatically imported along with the data. Suppressed cells are represented by the number "-1".

dBASE III limitations - 1) Header and footer information listing analysis parameters is not included in database files. To help out, you may want to make the name of the dBASE file the same as the table ID, such as "405MFAQB.DBF" so you can refer to the table later. 2) No more than 128 output columns may be saved to a dBASE III file. This rarely presents a problem, because an unlimited number of rows is allowed.

Explore the Data

PopTrend allows rapid exploratory data analysis.

The analysis cycle - Exploratory data analysis means you systematically refine your analyses. Once you have made a table, look it over. If it meets your needs, save it to your log file. Possibly save the results to a tab-delimited file or a dBASE III file. Next, look over the parameters on the Main Menu, highlight the parameter you want to change, and press ENTER. A submenu will lead you through the modification process. After setting all parameters as desired, return to the Main Menu and produce another table by pressing 'P'. Try it:

At the Main Menu, modify a parameter or two. Then press 'P' to produce and view another output table. Try some of the [sample analyses](#) shown later.

Hints for avoiding misinterpretation -

- Double-check the header and footer of each table to verify it was the analysis you intended.
- Use confidence intervals to help decide if differences are statistically significant.
- Find the right balance between:
 - Aggregation (fewer rows and columns, easier to present, more stable rates).
 - Stratification (more rows and columns, more information, shows differences).
- Acknowledge limitations in population data, including:
 - Possible census miscounts.
 - Difficulty projecting estimates to years between censuses.
- Use confidence intervals to help decide if differences and trends are statistically significant.
- If uncertainties remain, contact local data experts for advice.

Continue with Analyses

PopTrend lets you quickly carry out a wide variety of analyses.

It's easy - Once you get the hang of it, using PopTrend is a snap. If you have gotten this far, you should be able to carry out about any analysis you desire. Explore the menus - that way, you'll know what is available. Don't be afraid to experiment and try out different options. Refer to the help files and to other sections of this user's guide.

On-line help - Although PopTrend has been designed to be as self-explanatory as possible, it also includes extensive on-line help. To access on-line help from any menu, press '?'. A help screen will appear, with information related to the current menu. After viewing the help screen, a scrolling list of help topics may be viewed, for your selection. Try it:

At the Main Menu, press '?' and explore the help system.

Quitting PopTrend - The 'Z' or ESCAPE key always returns to the previous menu. Later, when you are done, you may press the 'Q' key from the Main Menu to quit PopTrend.

What other menus and options are available? - If you have done the examples in this chapter, you should have a good understanding of how to use PopTrend menus to select parameters. However, you have just scratched the surface of the capabilities and power of PopTrend. For your reference, the following pages list all of the Texas PopTrend menus. The purpose of the list of menus is to help you become aware of what is available so that you can take fullest advantage of the software. Do this:

Referring to the outline on the next pages, explore the menus to learn what is available.

Outlines of Submenus

Using Texas PopTrend, explore the menus listed below.

Main Menu allows you to:

1. First, design table layout:

- [Statistic Menu](#)
- [Row Variable Menu](#)
- [Row Sorting Menu](#)
- [Column Variable Menu](#)
- [Multi-Tables Menu](#)

2. Next, modify data variables:

- [Age Groups Menu](#)
- [Area Sets Menu](#)
- [Race Groups Menu](#)
- [Sex Menu](#)
- [Year Ranges Menu](#)
- [Other Settings from Main Menu](#)

3. When ready, carry out an action:

- Produce Table (s)
- Exit PopTrend

Submenus for Designing Table Layout

Using Texas PopTrend, explore menus for designing table layout.

Statistic Menu sets type of result:

- Median population age
- Percent total population in age group
- Population

Row / Column / Multi-Table Menus.

Row / Column / Table for each selected:

- Only one row / column / table
- Age group
- Area set
- Race group
- Sex
- Year

Row Sorting Menu options:

- Rows unsorted
- Rows sorted by total data, high to low
- Rows sorted by total data, low to high

Submenus for Modifying Data Variables, Other Settings

Using Texas PopTrend, explore menus for modifying variables.

Race Menu / Sex Menu:

- Select categories as sets
- Delete one / all sets
- Combine sets into new set
- Split previously combined set

Year Ranges Menu:

- Select a standard set, such as 2-year
- Extend upper / lower end of year range
- Split year range into individual years
- Delete a year range

Age Groups Menu:

- Select standard set, such as 10-year
- Extend upper / lower end of age group
- Split age group into separate groups
- Delete an age group

Area Sets Menu:

- Add all areas
- Add areas / area sets (submenu)
- Change area grouping (region type)
- Show list of areas, possibly print
- Delete one / all area sets
- Combine area sets into new set
- Split area set into component sets

Other settings from Main Menu:

- Change log file for saving output
- Enable display of bar graphs
- Enable dBASE, delimited, HTML output
- Enable row / column percents in output
- Set color scheme
- Set confidence level, or turn off
- Set level of detail for trends
- Set number of decimal places to show

More Practice Analyses

For additional practice, and to gain more understanding of how Texas PopTrend can speed and simplify data analysis, carry out the following sample analyses. Columns are by sex for each practice table, unless otherwise noted. Do the following:

1. For each practice analysis, select the parameters as shown below.
2. Then, press 'P' from the Main Menu to produce output.

1. 1995 population by age, separate table for each county:

Statistic - Population	Area sets - All	
Second format - Delimited	Row for each - Age group	Races - All
Table for each - Area set	Ages - 20-year groups	Years - 1995

2. Counties ranked from high to low by median age of population:

Statistic - Median population age	Area sets - All counties	Years - 1995
Column for each - One only	Row for each - Area set	Races - All
Table for each - One only	Ages - All ages	

3. Time trend for median age of female population:

Statistic - Median population age	Area sets - All counties	Years - All
Column for each - One only	Row for each - Year	Races - All
Table for each - One only	Ages - All ages	Sex - Female

4. Race / sex breakdown of population for one area

Statistic - Population	Area sets - Travis	Years - 2000
Column for each - Sex	Row for each - Race	Races - All
Table for each - One only	Ages - All ages	Sex - Both

4: PopTrend Parameters

Review - In the previous chapters, you have learned what PopTrend is and how to use it. Chapter 1 explained that PopTrend analyzes Texas population data, listed the linked data sets, discussed access methods, and outlined confidentiality requirements. Chapter 2 described the layout and interpretation of an PopTrend output table. Chapter 3 showed how to use the interface to select parameters and produce output tables.

What's in this chapter - This chapter lists and explains the parameters and special options you may modify using the Texas PopTrend interface. PopTrend allows great flexibility in selecting and modifying parameters. The program allows you to mix and match parameters just about any way needed. Also, PopTrend prevents you from selecting incompatible parameters.

Here are the parameters, options and concepts covered in this chapter:

- Age groups
- Confidence intervals
- Decimal places
- Geographic selection (area sets)
- Multi-tables
- Race
- Sex
- Statistic (outcome)
- Table columns
- Table rows
- Table row sort settings
- Trend analysis
- Years

Statistic [Outcome]

The statistic is the basic type of number in a table.

What is a statistic? - Every table has a statistic. The statistic (or outcome) is the basic type of data generated in an output table.

Available Statistics -

- Population
- Median population age
- Percent population in age group

Each statistic is defined in the glossary, and on-line help files give calculation methods.

Row Variable, Row Sorting, Column Variable

Table rows and columns may be set however you want.

Rows and columns - Rows are horizontal lines in a data table. Columns go up and down.

Every table has a row variable and a column variable. Rows and columns may be set to any of the following:

Sorted rows - Any table may be sorted as follows:

- Rows in standard order (not sorted by data):
 - For example, area sets in alphabetical order, such as Bexar before El Paso.
- Rows sorted from high to low, by total data
- Rows sorted from low to high, by total data

Multi-Tables

You may automatically produce a series of tables.

```
Population
Tabulated by Race-Ethnicity and Sex
Years: 1990
Place of Residence: Anderson

Race          Male    Female   Total
-----
White         17,023  15,656   32,679
Black         7,714   3,387    11,101
Hispanic      2,910   1,037    3,947
Other         174     123      297
-----
Total         27,821  20,203   48,024

*** Tables omitted to save space ***

Population
Tabulated by Race-Ethnicity and Sex
Years: 1990
Place of Residence: Zavala

Race          Male    Female   Total
-----
White         446     511      957
Black         277      8        285
Hispanic      5,392   5,482   10,874
Other         26       20       46
-----
Total         6,141   6,021   12,162
```

Purpose of multi-tables - Suppose you want to make a separate table for each county. It would be tedious to select the first county, make a table, select the second county, make a table, etc. Multi-tables automates the production of such a series of tables into one operation. The multi-table setting may be one of the following:

- Only one table (the default)
- One table per selected age group
- One table per selected area set
- One table per selected race group
- One table per selected year

Geo Selection [Area Sets]

Every table has a geographic specification.

Geographical Areas - Texas PopTrend analyzes data to the county level. Texas has 254 counties, organized into regions (a group of several counties), as follows:

- 11 Public Health Regions (PHR's) (Effective 3/1/93)
- 24 Councils of Government (COG's)

You may select any combination of areas - PopTrend makes it easy to compare results between different groupings ("sets") of geographic areas (Counties and County groupings), or limit analysis to specific geographic areas. One or more geographic areas may be combined into an area set, and compared with other sets.

Selection is quick and easy - All geographic operations are grouped together on one submenu, to allow quick and easy selection of any combination of areas desired. [A previous interface snapshot](#) shows the main geographic menu.

Other Variables

Race Groups

You may select any combination of race groups to analyze. Races may be combined into "sets" as needed. A separate submenu allows easy selection. When analyzing data by race, keep in mind that differences in health status between races may be due to socio-economic differences. Each is classified as White, Black, Hispanic, or Other, according to the following method:

1. If race is reported as Black, the category is "Black".
2. If race is reported as Chinese, Japanese, Hawaiian, Filipino, Asian Indian, Korean, Samoan, Vietnamese, or Guamanian, the category is "Other".
3. Of the remainder, those said to be of Hispanic origin are counted as "Hispanic".
4. Of the remainder, if race is reported as Other, North American Indian, Central or South American Indian, or not classifiable, the category is "Other".
5. All remaining are classified as "White".

Age Groups

PopTrend lets you combine and analyze age groups in just about any way needed. You may select any contiguous (adjoining) range of one or more age groups to analyze, such as 22-34. In addition, you may select a set of age ranges, such as birth-9, 10-19, 20-39, 40-64, and 65-99+.

The program will let you know which age groups are available for use. Standard age groupings, such as 5-year, 10-year, and 20-year age groups are easily selected. Age groups may be combined in just about any way desired.

Up to age 21, an age group may be any range of 1-year ages (for example, 3 or 11-17). For 22 and over, an age group may use any combination of 5-year groups (for example, 40-44 or 30-49). Due to availability of population data, the highest group is currently 75-99+ (75 and over).

Sex

You may select Male, Female, or both sexes combined.

Years

You may select any continuous range of one or more years to analyze, such as 1980-1983. In addition, you may select a set of year ranges for comparing, such as 1990-1991, 1992-1993, 1994-1995. The program will let you know which years are available for use. Standard groupings, such as 1-year, 2-year, and 3-year groups are easily selected. Year groups may be combined in just about any way desired.

Other Settings

Confidence Intervals

Confidence interval definition - A confidence interval (also known as confidence limits) is the range of values within which the true value of a variable is thought to occur, with a specified confidence level (95%, 90%, 80%, etc.). A higher confidence level (for example, 99%) is more stringent and results in a smaller interval than a lower confidence level (for example, 80%). Use the 95% confidence level unless you have a reason to do otherwise.

Methods for confidence intervals - Confidence intervals for trend analysis are calculated using Student's t-distribution.

Decimal Places

PopTrend also allows specification of the number of decimal places in your results. For example, the number 64.29 has two decimal places. The number 64 has zero decimal places.

Trend Analysis

PopTrend automatically carries out trend analyses.

Purpose of trend analysis - When analyzing data with a year for each row, you usually want to know: Is there a trend up or down? Is the rate increasing or decreasing? Statistical analysis is helpful in quantifying the answer.

Least-squares line shows the trend - PopTrend automatically carries out a "least-squares" analysis for a time series. This finds the best straight line to describe the data for each data column. The line is defined by the value for the first year ("Y-intercept"), and the amount of change per year ("slope").

Confidence intervals show if significant trend - PopTrend also calculates a confidence interval for the slope. If the confidence interval does not include 0, there is a significant trend.

Simplified presentation - PopTrend allows the user to substitute a simplified presentation (not shown) that only says whether the trend is significantly up or down for each column.

```

Population
Tabulated by Year and Sex
Place of Residence: Texas

Year                Male                Female                Total
-----
1995-1997           28,369,279          28,922,310           57,291,589
1998-2000           29,726,292          30,373,548           60,099,840
2001-2003           31,240,811          31,934,698           63,175,509
-----
Total                89,336,382          91,230,556          180,566,938

Horizontal Bar Graphs (X = 2,128,980 Population, x = 1,064,490):

Year                Male                Female
-----
1995-1997           XXXXXXXXXXXXXXXXx  XXXXXXXXXXXXXXXXx
1998-2000           XXXXXXXXXXXXXXXXX  XXXXXXXXXXXXXXXXx
2001-2003           XXXXXXXXXXXXXXXXx  XXXXXXXXXXXXXXXXX
-----

Detailed Least-Squares Analysis, to Detect Linear Trend:

Column    1995-1997 Y-intercept          Slope          95% CI (1 df, t=12.706)
-----
Male      28,343,028          +1,435,766          +858049 to +2013483 **
Female    28,903,991          +1,506,194          +1103047 to +1909341 **
Total     57,247,019          +2,941,960          +1961096 to +3922824 **
-----

Y-intercept and slope may be used to draw least-squares line.
If confidence interval (CI) does not include 0, trend is significant [**].
    
```

Significant Upward Trends for Population

Glossary

Area set - One or more areas combined.

ASCII file - A text file, with only alphabetical, numerical, and punctuation characters, like you would see in normal text. Vitalnet can produce output in ASCII format.

Bar graphs - A section of a Vitalnet table. Gives a useful graphical representation of the data. May be omitted from the output table.

CDC - Centers for Disease Control and Prevention. US federal health agency.

Cell - A space for a single numerical result in a table, at a row-column intersection.

Cell suppression - An asterisk "*" is placed in cells with fewer deaths than a limit set by the user. Row / column totals with exactly one suppressed cell in the row / column are also suppressed. If more than one cell in the row / column is suppressed, the row / column total is displayed.

Columns - Vertical groupings of data in a Vitalnet table, such as a column for each race group.

Councils of Government (COG's) - Groupings of Texas counties. There are 24 COG's.

Cursor key - Arrow key, PgDn, or PgUp key. Used to navigate a web page or computer program.

Data mining - Finding unexpected relationships in a data set. Similar to exploratory data analysis. Vitalnet is excellent at data mining. Of course, keep in mind that the more you look, the more unusual events you will find, just by chance.

Data warehouse - Software system, such as Vitalnet, making large complex databases readily available for querying and analysis.

dBASE III format - A widely used file format derived from the database software of the same name. Files in this format may be readily imported into almost any data analysis, graphing, mapping, or other presentation software. Has dbf extension. Suppressed cells are represented as the number "-1". Vitalnet produces dBASE III output.

Denominator - The number on the bottom of a fraction. Population data are often referred to as "denominator data", as they are used as denominators to calculate population-based rates.

ENTER key - A key on your keyboard. Sometimes called RETURN key. Often used to select an item or complete an operation.

ESCAPE key - A key on your keyboard, often on the upper left. Tells Vitalnet to return to a higher-level (previous) menu. Pressing 'Z' usually does the same thing.

Export - Produce output that can be read into other computer programs. Vitalnet produces ASCII text, tab-delimited (tsv extension), HTML (htm extension), and dBASE III (dbf extension) files for export.

Footer - Last part of a Vitalnet table. Lists other details of the analysis, such as the date and time produced, and the data sources. Each table is assigned a unique ID, listed in the footer, to assist you in keeping track of and organizing analyses.

Header - First part of a Vitalnet table. Lists basic parameters you selected to define the table, such as years analyzed.

Import - Read information into a computer program. ASCII text, tab-delimited files, HTML, and dBASE III files from Vitalnet are easily imported into word processing, spreadsheet, data analysis, mapping, graphing, and other presentation software programs.

Least-squares - A standard method for fitting the best straight line to a set of points. Produces a Y-intercept and a slope defining the least-squares line.

Light bar - A highlighted area on the computer screen that you can move by pressing an arrow key or other cursor keys. The light bar highlights an item that you may select, add or delete.

Local area network (LAN) - A computer networking product, such as Novell Netware or Windows NT. Vitalnet may be accessed from a local area network.

Log file - A computer file for saving Vitalnet tables, and other Vitalnet output.

Main Menu - The top level Vitalnet menu. All parameters are summarized on the Main Menu, and you will always return to the Main Menu before producing a table.

Median population age - A measure of the overall age of a population. Half the population is younger than the median, half is older. Assuming a population of 100,000 people, 50,000 people would be older than the median age, 50,000 younger.

Multiple age groups - One age group for each row or column of a table. Example: Birth-19, 20-39, 40-59, 60-99+.

Multi-tables - Vitalnet option to automatically produce a series of tables. For example, there may be one table for each selected race.

NCHS - National Center for Health Statistics. US health statistics agency. Part of the CDC.

Outcome - Same as "Statistic".

Percent total population in age group - A population statistic. Useful for assessing the relative age of the population. If the total population is 100,000, and 8,000 are under age 10, the percent of the total population under 10 is 8 percent.

PHR - Public Health Region. Groupings of Texas counties. There are 11 PHRs.

Population - The number of people living in an area.

Public Health Regions (PHR) - Groupings of Texas counties. There are 11 Public Health Regions.

Rows - Horizontal lines in a Vitalnet table, such as a row for each race group.

Row sort settings - Vitalnet rows may be sorted in ascending or descending order.

Set - A combination of one or more things. For example, several areas may be combined into an area set.

Single age group - Only one age group (30-49, for example) is selected. A single age group is used for tables that do not have age columns or age rows.

Stand-alone PC - A desktop or laptop computer running off its own local hard disk. Vitalnet may be run from a stand-alone PC.

Statistic - Outcome. The basic type of number displayed in a table or map, such as population.

Submenu - A menu accessed from a higher level menu. A submenu helps select or modify a parameter listed on the higher level menu.

Tab-delimited format - Also called tab-separated format. A type of computer output that is readily imported into other software, especially spreadsheet software. Each output item is separated by a tab from surrounding items, and each output text item is surrounded by "double quotes". Vitalnet produces tab-delimited output. A tab-delimited file has "tsv" extension.

Table - A set of results produced by Vitalnet. A table has several parts:

1. Header - lists basic analysis settings
2. Data section - numerical results
3. Horizontal bar graphs - graphical representation of the data
4. Footer - lists other analysis settings

UNIX - A widely used computer operating system. Vitalnet can run on UNIX, either remotely, locally, or by client-server.

Windows - A widely used set of PC operating systems, including Windows 3.1, 95, 98, NT, 2000, and XP. Vitalnet will run under any version of Windows.

World Wide Web (WWW) - A widely used part of the internet that may be easily accessed with a web browser. Vitalnet runs on the WWW.