

How to Use the Utah State Epidemiological Outcomes Workgroup Online Data System

The State Epidemiological Outcomes Workgroup (SEOW) website provides users with a relatively simple to use data viewing and download tool. In order to adopt the latest organizational structure, indicators in the online data system are organized according to the Center for Substance Abuse Prevention's Strategic Prevention Framework (SPF) Model. Indicators are classified into three main categories: a) consumption indicators (substance use estimates), b) consequence indicators (substance related consequences), or c) causal factors (predictor variables of substance use and abuse). Additionally, indicators are categorized into three substance types: a) alcohol, b) tobacco, or c) illicit drugs. It should be noted, however, that data historically collected by the Division of Substance Abuse and Mental Health that are more specifically related to the Hawkins and Catalano Risk and Protective Factor Model are also included in the online data system. These data can be queried using the "Search by Risk Factor" tab (see below for more information about search features).

Search Methods

There are several different methods for searching and browsing the system. The first step to finding indicators of interest is to click on the "Indicators" tab. From there, several search options become available. Each search option provides different strengths. In general, the Indicator Browse search option provides the most flexibility and information about each indicator, and therefore is the recommended for most users. Brief descriptions of the search options offered by each tab are provided below.

- 1) **View Data** – The "View Data" tab provides a dropdown menu containing links to all of the available indicators within the online data tool, in alphabetical order. This method of searching the indicators within the database provides easy accessibility for users who know the names of the indicators they are interested in querying.
- 2) **Indicator Browse (Recommended)** – The "Indicator Browse" tab provides a list of all the indicators in the system as well, but also provides general information about each indicator. By default, the Indicator Browse feature provides: a) the *Indicator Type* (consumption, consequence or causal factor), b) the *Substance Type* (alcohol, tobacco or illicit drugs), and c) any specific *Risk Factors* the indicator is related to. Users can also view a description of the indicator and/or source information by checking the "*Show Description*" and/or "*Show Source*" checkboxes at the top of the frame. Another useful feature of the Indicator Browse tab is the ability to sort indicators by any of the attributes displayed. For example, clicking on the column header for "*Indicator Type*" sorts all of the indicators by the indicator type attribute (consumption, consequence or causal factor). Similarly, clicking on the column header for "*Substance Type*" sorts all of the indicators by substance type (alcohol, tobacco, or illicit drugs).
- 3) **Indicator Search** – The "Indicator Search" tab provides an indicator searching mechanism for users who are interested in identifying data related to a particular "*Indicator Type*" and/or "*Substance Type*." Searches can specify one or multiple indicator and/or substance types as desired.

- 4) **Search By Risk Factor** – The “Search By Risk Factor” tab allows users to find indicators related to specific risk factors from the Hawkins and Catalano Risk and Protective Factor Model. The indicators linked to the Risk and Protective Factor Model have historically been collected in Utah by the Division of Substance Abuse Mental Health, and presented through archival indicator reports (see: www.dsambh.utah.gov/archival.htm for a downloadable version of the most recent archival report). Please note that not all indicators are associated with a specific risk or protective factor.

Viewing the Data

For most indicators in the online data system, a variety of data viewing options are available. For example, users might be interested in viewing a trend in the indicator for a particular county or comparing a county (or multiple counties) to the state. Alternatively, users may be interested in comparing a county and a region to the state or in examining data at the state level by a demographic variable such as age group, grade level or gender.

Step 1: Specifying Data Levels. After choosing an indicator to view, you will be asked to specify a data level using the “*Data Level*” drop box menu for that particular indicator. The data system will automatically provide the data level choices that are available for the indicator you have chosen. For example, when county and region data are available, the drop box menu will allow choices for examining trends over time within counties (and comparing counties to the state), within regions, or for comparing counties and regions. On the other hand, if the indicator is only available at the state and national levels, the choices will be limited accordingly. A brief description of the most common data viewing levels available is provided below:

- 1) **State and County Data** – Allows examination of trends within a single or multiple counties, as well as county-to-county and county-to-state comparisons.
- 2) **State and Region Data** - Allows examination of trends within a single or multiple regions, as well as region-to-region and region-to-state comparisons.
- 3) **State, Region and County Data** – Allows examination of trends across counties and regions, as well as region-to-county-to-state comparisons.
- 4) **Nation and State Data** – Provides a comparison of state and national level data for the indicator.
- 5) **State and Region Data by “Demographic”**– Provides state and region data for demographic categories available for the indicator. For example, “State and Region Data by Gender” would allow viewing of state and regional data for males and females. When choosing a demographic data level, the system will provide an additional dropdown box (labeled “View”) for selecting either a specific demographic category (e.g., only males or only females), or for comparing across “all” demographic categories (e.g., males and females in the same chart).

- 6) **Nation and State Data by “Demographic”**– Provides a comparison of state and national level data for demographic categories available for the indicator. When choosing this option, the system will provide an additional dropdown box for selecting either a specific demographic category, or for comparing across demographic categories.

Step 2: Selecting a Chart or Data Presentation. Once an indicator and data level are specified, the system will present chart and map options that are available for the indicator. Two types of data charts are available through the online data tool. These include: a) trend charts showing values on the chosen indicator over time for a particular geography (county, region, state and/or nation), or demographic group (age or gender), and b) maps showing the relative rates of an indicator across the state by either county or region.

Helpful Tip: By checking the “*Show Chart Table*” box below the county/region selection boxes, a table of the actual data values presented in the chart will be provided. Additionally, these charts can be saved as images and be inserted into documents and presentations.

- 1) **County and Region Charts** – For county and region charts, up to three counties/regions can be selected for comparison. The state values are also provided by default for easy comparisons between the selected counties/regions and the state.

To Chart: Choose the counties and/or regions from the dropdown boxes you would like to examine, then click the “*Draw Chart*” button. For charts presenting state and national data only, there will be no dropdown choices to specify, simply click the “*Draw Chart*” button.

Reading the Charts: For standard rate/percentage charts presenting county-to-county or region-to-region comparisons, the lines within the chart represent the selected counties or regions as well as the state rate for the indicator. The blue bars show the range of all the counties (when creating a county-to-county chart) or regions (when creating a region-to-region chart). The range essentially illustrates what the highest rate and lowest rate were in a given year across all counties (for county-to-county charts) or regions (for region-to-region charts). Range bars are not provided for charts showing both counties and regions together.

View Rates vs. Numbers Toggle: The online system trend charts present rates (or percentages) as a default. For indicators where numbers data is available in addition to rate data, a “*show numbers*” link will appear above the upper right corner of the chart. Clicking on the link will change the chart presentation from a rate presentation to the actual number of events associated with the indicator. To toggle back to rates, simply click on the “*show rates*” link in the upper right corner. Note: Number charts do not have the state value or range bars included in the charts.

- 2) **Maps** – The “Map” presentation option presents a map comparing counties or regions across the state on the chosen indicator for a specific year.

To Map: Simply choose the year from the drop box menu and click the “*Draw Map*” button. Checking the “*Show Map Table*” box will provide a table of values displayed in the map.

Reading the Maps: The maps present the relative rates of each county or region across the state. Counties or regions with relatively high rates are shaded in red, counties or regions with relatively low rates are shaded in green, and counties with intermediate rates are shaded in yellow or orange. To remap another year for the same indicator, simply specify a different year in the map dropdown box and click the “*Draw Map*” button.

- 3) **Demographic Data Charts** – Where available, indicators can be examined by demographic categories such as age, grade or gender. In particular, youth survey indicators are typically available for grades 6, 8, 10 and 12.

To Chart: When demographic data is available for an indicator, you will have an option to choose a data level with demographic data (e.g., “State and Region Data by Grade”). In selecting a demographic data option, you will be asked to specify a “*View*” from a drop down menu that presents the different demographic data options available for that indicator. If you choose to view “*All*” levels of the demographic category, a bar chart will be displayed which presents the data grouped by demographic categories for up to five years of values. Next, choose the region of interest (if applicable) and click the “*Draw Chart*” button. If you choose to view a particular demographic group (when available), such as 10th graders, you will be able to create a trend chart or map for that specific demographic group as described in the county/region charts and map sections above.

Step 3: Viewing or Downloading the Data. The online data tool allows users to view data associated with charts, or download entire datasets for an indicator.

- 1) **Viewing Data from Charts** - To view the data presented in a chart of map, simply check the “*Show Chart Table*” checkbox in the chart dialogue box, then click the “*Draw Chart*” button. A data table presenting the values within the chart will display below the chart image. These data can be copied and pasted into a spreadsheet for use if desired.
- 2) **Downloading Datasets** – To download the entire dataset for an indicator, click on the “*download data*” link found below the chart and/or map dialogue boxes. The data file will export as a comma separated values data file.

Charting Limitations Associated with Single Values and Missing Data

- 1) When viewing trend charts, the system is designed to show trends over time. When only a single data point is available for an area (county, state or region), the chart will not properly display the value of that area.
- 2) When there are missing values in the dataset for the area you have chosen to view, the charting program will extrapolate those missing values in the trend chart by drawing a

line between the values that exist for other years. The extrapolated portion of the trend chart will appear as a grey line giving the trend line for that area a two-toned appearance.

In cases where data appear to be missing from a chart or a grey line appears in the chart, we recommend users check the “Show Chart Table” box and redraw the chart. This will allow the user to examine the actual values (or missing values) for the area of interest for each year of available data.