# User Guide:

A Companion to the Sample Dashboard for Measuring the Progress and Impact of Alcohol-Related Initiatives

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Don’t let the length of this User Guide intimidate you! Instructions are accompanied by diagrams, and the basic steps for data entry and chart preparation are the same for each data source. If you are new to Excel, stay with The Basics (pages 3-25). More advanced users may want to explore optional steps to further customize the dashboard (pages 26-61), but this is not required.

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Critical to the success of community coalitions is the process of selecting, tracking, and reporting on indicators of progress and outcome. Groups that take the time to define what success looks like—both the end result and the signposts along the way—save valuable resources and increase impact. A coalition with a high-performance measurement culture is committed to a data-driven process that builds accountability, trust, and cross-sector engagement.

The CHIA Sample Dashboard for Measuring the Progress and Impact of Alcohol-Related Initiatives was developed by Community Health Improvement in Action (CHIA) as a resource to help communities organize and present data in a way that is easy to read, track, and understand. The Dashboard serves not only as a tracking and reporting mechanism, but also as a training in presenting data effectively in Microsoft Excel. Charts and tables follow best practices for visualizing data, and detailed instructions make it easy for users to adapt the dashboard to fit local needs.

Intended for use by coalitions and agencies working to improve the health of their communities, the CHIA Sample Dashboard is a template that can be used for any health focus area and with any indicators. As the CHIA project uses alcohol misuse as the stage on which to practice skills in implementation and evaluation, the CHIA Sample Dashboard is alcohol-focused. The dashboard presents a limited number of SAMPLE alcohol-related indicators that were selected by a committee of subject matter experts (see Acknowledgements).

Prior to developing a dashboard for your community, we urge you to choose the indicators that best represent your coalition’s mission, local conditions, and efforts. Creating a logic model for coalition work (or a strategy map or theory of change) is essential in selecting appropriate indicators to track. Good measures of progress and impact vary by coalition. The right indicators will provide your coalition with the information you need to make decisions and take efficient and impactful action. Indicator selection is beyond the scope of this User Guide. For a comprehensive overview of alcohol-related strategies and indicators, as well as sample local strategy maps, please see the CHIA Strategy Map for Preventing and Reducing Alcohol Misuse, available on the CHIA Resources page under the Alcohol-Related Resources tab at www.wicommunityhealth.org.

In addition to this User Guide, video tutorials are available to introduce you to the CHIA Dashboard. Watch them at www.wicommunityhealth.org (on the CHIA Resources page under the Alcohol-Related Resources tab).

Community Health Improvement in Action (2014-2017) is a project of the Wisconsin Association of Local Health Departments and Boards and is funded by a grant from the University of Wisconsin School of Medicine and Public Health through the Wisconsin Partnership Program.
An Overview of the Dashboard Tabs

The CHIA Sample Dashboard is an Excel file with multiple inter-related tabs. Here is a summary of the tabs and how they are interconnected:

- **The Introduction** tab offers a brief description of the dashboard and refers users to this guide.

- **The Report** tab provides a template for presenting an overview of findings. To maximize reader attention and understanding, the report uses best practices of visual processing theory, such as clean lines, intentional use of color, and easy-to-interpret charts. You may print this report as a 2-page pdf. First, you will need to input your data (on the data source tabs for YRBS, BRFSS, Epi Report, and Outlet Density) and prepare your charts on the Tables & Charts tab.

The charts on the main body of the Report tab (shown in red boxes in the figure below) pull data from the Tables & Charts tab.

- **The Tables & Charts** tab is where the charts for the Dashboard Report are created. Data from the charts on the Tables & Charts tab are automatically updated on the Report tab. (However, some chart elements, like titles, will need to be revised individually on both the Report and Tables tabs.)
Why is the Tables & Charts tab needed? Many of the charts on the Dashboard Report use benchmark lines that require special formatting. That’s why the tables on this tab have extra shaded gray cells, as shown below.

Don’t input data on the Tables & Charts tab. Cells on this tab pull information from the data source tabs (YRBS, BRFSS, Epi Report, and Outlet Density). Once your data has been entered on the related data source tabs, you’ll visit the Tables & Charts tab to make minor revisions and create new chart titles.

- There are six data source tabs:
  - **YRBS** (Youth Risk Behavior Survey)
  - **Binge Drinkers BRFSS** (Behavioral Risk Factor Surveillance System)
  - **Arrests Epi Report** (Wisconsin Epidemiological Profile on Alcohol and Other Drug Use)
  - **Hospitalizations Epi Report** (Wisconsin Epidemiological Profile on Alcohol and Other Drug Use)
  - **Outlet Density**
  - **DFC (Drug-Free Communities) or STOP Act** (Sober Truth on Preventing Underage Drinking Act)

Each data source tab provides a spreadsheet for entering your data that also functions as a dashboard for reporting on progress (as depicted below). Data from the data source tabs feed into the Tables & Charts tab and then are reflected in the Report tab.
As shown in the example below, each data source tab includes a dashboard that helps you quickly visualize key elements of your progress, such as completion of coalition objectives (shown with check marks), trend/sparklines, and comparisons to state and national averages (red dots indicate local data is worse for this measure).

![Youth Risk Behavior Survey Data Table]

**General Tips for Dashboard Use**

To fully use the dashboard, it’s helpful to have a basic understanding of Excel. Excel Easy is one free website for Excel tutorials: [http://www.excel-easy.com/](http://www.excel-easy.com/). In addition, Flinders University provides a pdf overview of Excel 2013: [https://www.flinders.edu.au/staff-development-files/computer/Excel%202013%20Intro.pdf](https://www.flinders.edu.au/staff-development-files/computer/Excel%202013%20Intro.pdf)

The instructions we provide here use Excel 2013. If you have a different version of Excel, you may need to search online for how to complete a specific step using your version.

As outlined in the section above, the order of the tabs on the Excel dashboard begins with the Report and ends with data source tabs. However, you’ll want to proceed as directed in this User Guide: start by entering your data in the data source tabs, then prepare your charts in the Tables & Charts tab, and finally put the finishing touches on your Report.

As you enter your data and adapt the dashboard to fit your local needs, we recommend you periodically use the “Save As” function to create a new version of the document. This way, you can revert to an earlier version if needed. If you make a mistake, “undo” the action (Ctrl-Z). If you mistakenly undo a step, “redo” it (Ctrl-Y).
We hope you enjoy the Dashboard and welcome your questions and feedback: visit www.WICommunityHealth.org; contact Sara Jesse, CHIA Project Manager, at sara.jesse@badgerbay.co or 608-432-3042; or contact WALHDAB at WALHDAB@badgerbay.co or 920-560-5635.
The Basics

Step 1: Enter Your Data

Data Source Tabs: YRBS, BRFSS, Epi Report, Outlet Density, and DFC or STOP Act

The CHIA Sample Dashboard has multiple data source tabs: YRBS, Binge Drinkers BRFSS, Arrests Epi Report, Hospitalizations Epi Report, Outlet Density, and DFC or STOP Act. Essentially, the layout for each data source tab is the same, so instructions for entering your data are very similar across all data source tabs. We recommend you proceed with the instructions below one tab at a time, focusing on the details that are relevant to that tab.

There are ten basic steps to entering your data, outlined below. Once you take these steps, if you’d like to try more advanced and optional data entry steps, see these entries in the Optional Customizations section, hyperlinked below:

- Enter More Recent Statewide and National Benchmark Data
- Add More Columns of Local Data
- Adjust the Data Range of Trend/Sparklines
- Have New Rows in the “Tables & Charts” Tab Self Populate with Data from a Data Source Tab
- Adjust Elements of Trend/Sparklines, such as Axis Settings
- Change or Add Conditional Formatting Rules:
  - Checkmark Rule
  - Red Dot Rules for Comparing Local Data to State and National Figures
  - Pink and Red Dot Rules for Rank in State on the Outlet Density Tab

10 Basic Steps to Enter Your Data:

1) Review each indicator in Column A, making sure you understand it and its data source fully. (See the About the Data Sources section for information.)

   - The setup of indicators on the Outlet Density tab is different from the other data source tabs. Geographic areas are listed in Column A. The main indicators on this tab are People per License (represented in Columns O through W) and Licenses per 500 People (in Columns X through AD). See figure below.

   All cells with a small red triangle in the upper right corner have comments associated with them. Hover over one of these cells to see its comment pop up (the light pink shaded box below).
Read each indicator’s comment. To see the comment, hover over the indicator cell (in Column A for all data source tabs except Outlet Density). The comment explains if, for the purposes of this dashboard, a bigger number is “better” or “worse” for this indicator. This is important because it determines both of these dashboard elements:

- The direction of the coalition’s objective for the indicator: Are we trying to increase or decrease this number? Objectives are included on the YRBS, BRFSS, Hospitalizations, and DFC tabs.

- The comparison of local data to state and national figures: Red dots, automatically generated on the data source tabs, mean that local data for a given indicator is “worse” than state or national data. You should know if “worse” means a higher or lower number for each indicator.

Note: for the Arrest Epi Report tab, you may not agree that a higher rate of arrests is worse, as indicated on the dashboard with a red dot for local arrest rates higher than state or national averages. You must talk to law enforcement to correctly interpret trend and comparison data for arrests. More Operating While Intoxicated (OWI) and liquor law arrests could be due to an increase in the problem (a bigger number would be “worse”) or an increase in enforcement (a bigger number might be considered “better” if the objective is to increase enforcement).

In the figure below, we’ve hovered over Cell A4, Youth Current Drinkers, on the YRBS tab to show the comment. A bigger number is worse for this indicator, so the coalition objective is to “Decrease to” a specific number, 30%, by a specific date, 12/31/18 (Cells B4, C4, and D4 respectively). When the objective is met by the most recent data point (here, 2015) in Cell O4, a checkmark will be automatically generated in Cell E4. The Youth Current Drinkers percentage for 2015 was 31, so the checkmark is not present. A red dot will be automatically generated in Cells R4 and S4 if the same year of local data (in hidden Cell Q4) is worse (higher) than state and national figures. In the example below, local rates are not worse (higher) than state and national ones for the same year, so no red dots are generated for Rows 4 and 5.
For the YRBS, BRFSS, and DFC tabs, note that comments on Column A also include the survey question used and how to calculate the measure.

- On the YRBS tab, especially note that the indicators for “Youth who get alcohol from social sources” and “Youth who get alcohol from retail sources” use calculations made from all students who answered the question (not just the students who reported drinking alcohol in the last 30 days). This is so you can see progress on these indicators.

2) **Make sure each indicator you track is relevant to your coalition’s mission and efforts.** Your coalition’s action plan and logic model will help you determine the relevance of an indicator to your work. For an overview of alcohol-related strategies and related indicators, as well as sample local strategy maps, please see the CHIA Strategy Map for Preventing and Reducing Alcohol Misuse, available on the CHIA Resources page under the Alcohol-Related Resources tab at [www.wicommunityhealth.org](http://www.wicommunityhealth.org).

3) **If needed, change your indicators and/or the name of the tab.** As a template, indicators and tab names on the CHIA Sample Dashboard can be easily changed:

   - To change the tab name, right click on the tab (on the bottom of the screen) and select “Rename.” (Or double click on the tab.) Type the new name and press Enter. Change the title of the tab (Cell A1) as well.

   - To change an indicator, click on the indicator cell you wish to change and type in your indicator of choice. Remember to be aware of the direction of an indicator—whether a bigger number is better or worse. Where possible, use an indicator that has the same direction as on the template so as not to have to change the conditional formatting rules that create checkmarks and red and/or pink dots. If you must change the direction of an indicator, see the section on **Changing Conditional Formatting Rules.**
To edit or delete the comment associated with the indicator, right click on the cell and choose Edit Comment or Delete Comment.

If there is no statewide and/or national data available for your new indicator and one was given for the template indicator, write “na” in the appropriate column(s) on the data source tab. Then go to the Tables & Charts tab and Clear Contents of the Statewide Average cells for that indicator’s table. (Select cells, right click, then choose Clear Contents.) Doing so will delete the statewide average benchmark line from your column chart for this indicator. See example below.

On the Tables & Charts tab below, we went to the table for the indicator we wanted to change and for which we don’t have state average data (depicted below is Youth Current Drinkers). We’ve selected the cells that relate to the State Average: C22-C34 in this example. To clear the contents of these cells, right click on this selection and choose “Clear Contents” from the dropdown menu.

4) Access your data from the appropriate data sources, summarized here (see the section About the Data Sources for more information).

- **YRBS**: Visit the About the Data Sources section for tips on advocating for and accessing local data from the Online YRBS. For the official Wisconsin (paper-based survey) YRBS sample average (Column R), download the Summary Table at http://dpi.wi.gov/sspwy/rbs. For the official national (paper-based survey) sample average (Column S), visit: http://www.cdc.gov/healthyyouth/data/yrbs/index.htm. **PROCEED WITH CAUTION** when comparing local (from online survey) YRBS data to state and national sample averages (from the official paper-based survey of a representative
sampling of high schools), as these survey methodologies are different.

- **Binge Drinkers BRFSS**: Access binge drinking data from BRFSS via WISH (Wisconsin Interactive Statistics on Health) query using the Trend Module: https://www.dhs.wisconsin.gov/wish/brfs/form.htm. For county-level results:
  
  o **Step 1**: Choose a topic: binge drinking.
  
  o **Step 2**: Choose age-adjusted results (for a more accurate comparison of your data with other geographic regions).
  
  o **Step 3**: Choose Geographic Areas as a column variable.
  
  o **Step 4**: Choose Survey Years. IMPORTANT: For results of less-populated counties, you must select multiple years of data (hold down the control key and select the desired years). All counties in Wisconsin are represented in query results when 3 years – e.g., 2014, 2013 and 2012 – are all selected. For more populous counties, data may be available annually or in two-year periods. Experiment to get the best data for your area. The BRFSS tab has 9 columns available for entering local data (Columns F through N, with most of these hidden; see below for instructions for unhiding columns).
  
  Note that starting with 2011, BRFSS began including both landline and cell phone interviews, obtained from separate samples and later combined and weighted by the U.S. Centers for Disease Control and Prevention (CDC). Prior to 2011, only landline telephone numbers were sampled. Estimates using combined landline and cell phone BRFSS data from 2011 and forward should not be directly compared to estimates from earlier years when only landlines were used.
  
  o **Step 5**: Choose a Geographic Area.
    
    - For local data, select "County" and then choose one or more counties. (Or select “Milwaukee” and then choose city and/or surrounding area.)
    
    - Select "Statewide" for the Wisconsin average.

Source of National BRFSS data: by query at http://www.cdc.gov/brfss/brfssprevalence/. You must calculate the US average (click on cell Q4 to see the formula).

  
  o For county and state rates, see Table: Operating a motor vehicle while intoxicated (OWI) and liquor law arrests, rate per 100,000 population, Wisconsin by county.
More recent data may be available from local law enforcement agencies and/or Arrests in Wisconsin, an annual report by the Wisconsin Department of Justice: https://wilenet.org/html/justice-programs/programs/justice-stats/library.htm with population data from Wisconsin Interactive Statistics on Health (WISH) population module: https://www.dhs.wisconsin.gov/wish/population/index.htm.

Again, it is important to talk to local law enforcement leaders about how to interpret changes in arrest rates. A lower arrest rate could be caused by less problem behavior or less enforcement, for example.

- For national rates, see Figure 10. Arrests (adult and juvenile) for operating a motor vehicle while intoxicated (OWI), rate per 100,000 population, Wisconsin and the U.S. and Figure 11. Liquor law arrests (adult and juvenile), rate per 100,000 population, Wisconsin and the U.S.


If you want more recent data, you will need to calculate local and state estimates according to the methods used by the Epi Report using (1) the Wisconsin hospital inpatient discharge database (Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services) and 2) Alcohol-Related Disease Impact (ARDI) specifications from the CDC (https://nccd.cdc.gov/DPH_ARD1/default/default.aspx). For details on methods, see the 2016 Epi Report, p.112 (Appendix 2: Data Sources, Other Data Sources for this Report, Estimating Alcohol-Related Hospitalizations).

- **Outlet Density tab**: Municipal clerks annually report the number of alcohol licenses to the Wisconsin Department of Revenue (DOR). The Outlet Density tab uses four main data sources: local DOR data, as reported in county-specific 2012 Density Reports; compilations of local DOR 2015-6 licensing data maintained by Julia Sherman of the Wisconsin Alcohol Policy Project; population estimates from the Wisconsin Department of Administration, Demographic Services Center; and state and national licensing information from the Fact Book 2013 (The Beverage Information Group). Due to differences in how DOR data was compiled, there may be discrepancies between the 2012 Density Reports and more recent data. Be careful about comparing local data to national figures: since every state licenses alcohol differently, national figures and comparisons across states can be problematic.
- Download the 2012 Alcohol License Overview for your county, available at: https://www.dhs.wisconsin.gov/aoda/alcdensity.htm. Also known as Wisconsin County Alcohol Outlet Density Reports, and here referred to as “Density Reports,” these publications were a joint project of the Wisconsin Department of Health Services and the Wisconsin Alcohol Policy Project. As of March, 2017, there are no plans to publish reports in this format in 2017.

To ease data entry using your county’s 2012 Density Report pdf, consider decrypting the pdf so you can cut and paste data. Adobe Acrobat is a good tool for decryption, but there are also free apps, such as PDFill free PDF Tools, available for download at: https://www.pdfill.com/pdf_tools_free.html. Note that if you are copying and pasting data from the Density Report, it is helpful to make use of your Clipboard: it’s possible to cut several data items, one at a time, from the Density Report, and then paste them, one at a time, to the Dashboard Outlet Density tab.

Use data from the following tables in the Density Report:

- Table 4, County Overview: for county population (for 2007 in B8 and for 2011 in C8) and licenses issued (for 2007-2008 in G8 and for 2011-2012 in H8). Note that People per License for these years (Columns N and O) contain a formula for automatically computing each cell: = Population/Licenses.

- Table 5: County People/License and Rank within the State: for Cell U8, Rank in State (2011-2012).

- Use only if more recent data is not available: Table 8: Licenses Issued by License Type for Cells L8 and M8: Class A and B Licenses Issued in 2011-2012.

  Note: The number of licenses by type (A and B) will not always add up to the total number of establishments issued licenses (“licenses issued”) due to reporting omissions, establishments that receive more than one license type, and outlets that are issued a class C license only (Class C licenses are for restaurants who qualify, for the sale of wine. They are included in the total number of licenses issued).

- Table 10: Municipalities Not Issuing Alcohol Licenses by Year: note these in the text box under the table on the Outlet Density tab.

- Table 11: Municipality Licenses/500 People Rank within County and State, will supply the data for municipalities that issue licenses in your county: Population in 2007 and 2011 (Columns B and C); Licenses Issued in 2007-08 and 2011-12 (Columns G and H); and Rank in State 2011-12
If more recent data is available to you, we suggest you use that information for Columns L and M (Class A and Class B Licenses Issued). Input this data from the 2012 Density Report Table 11 ONLY if 2015-16 data is not available to you.

For more recent data (Columns I, L and M), you can obtain an Excel spreadsheet that lists the 2015-16 licensees in your county by municipality from Julia Sherman, coordinator of the Wisconsin Alcohol Policy Project: 608-262-0370 or julia.sherman@wisc.edu. Otherwise, you can obtain this information locally, although you will likely have to ask each municipality in your county separately.

Note: When processing information on licenses, count Class A, B, and C licenses using the following key:

- **Class A licenses include:**
  - AB = Class "A" beer (off-sale): convenience/grocery stores
  - AL = "Class A" liquor (off-sale): drug stores, wineries
  - ALB = Class A beer/Class A liquor (includes wine); off-sale only

- **Class B licenses include:**
  - BB = Class "B" beer only (on/off sales) or in combination with "Class C" wine
  - BLB = Class "B" beer and "Class B" liquor (taverns, supper clubs, etc.)
  - BL = Class "B" Liquor Only (winery)

- **Class C licenses:**
  - CW = "Class C" wine (on-sale): restaurants who qualify

Since licenses for WB (Wholesale beer) and WAB (Wholesale beer distributor and Class "A" beer) are regulated by the state, you need not include them in your counts.

- **Enter 2015 population estimates in Column D.** The Wisconsin Department of Administration, Demographic Services Center annually produces population estimates for Wisconsin counties and municipalities, available at [http://www.doa.wi.gov/divisions/intergovernmental-relations/demographic-services-center/estimates](http://www.doa.wi.gov/divisions/intergovernmental-relations/demographic-services-center/estimates).
For ease of data entry, first “sort and filter” Column E (County) on the Municipality Final Population Estimates spreadsheet. To do so, select cells E4 through E1854. Then click on Sort & Filter on the Home tab of Excel and select "Sort A to Z" on the dropdown menu. Select "Expand the selection" and then "Sort" on the window that pops up. Now all municipalities are grouped by county, except for the municipalities in multiple counties. Remember that some municipalities may not have issued alcohol licenses; note their 2015 population in the Notes section under the table on the Outlet Density tab).

- For county population, download in Excel format “County Final Population Estimates” under the heading January 1, 2016 Final Population Estimates.

- For municipalities in multiple counties, download in Excel format “Final Population Estimates for Municipalities in Multiple Counties.” Use the search feature (Control-f) to find municipalities in your county.

- State and national data on People per License (Columns V and W) and Licenses per 500 Population (Columns AC and AD): alcohol license counts are reported in The Fact Book 2013 from The Beverage Information Group (2013), pages 12-13; population data is based on U.S. Census Bureau estimates for 2013. More recent figures may be available, as the Fact Book is an annual publication. The 2016 Fact Book costs $525. Again, since every state licenses alcohol differently, national figures and comparisons across states can be problematic.

- **DFC or STOP Act Tab:** The first risk factor listed here, Youth 30 Day Use in Row 4, pulls data from the YRBS tab (including in hidden Columns I-N), so enter this data in the YRBS tab first and it will auto-populate here. Note that column headers (for year of data point) are not pulled from the YRBS tab and therefore may need to be adjusted. For all other DFC or STOP Act indicators, you will need to enter the data manually from your data sources.

5) For YRBS, BRFSS, Epi Report Hospitalizations, and DFC tabs: **Choose an objective for each indicator** (as appropriate to your coalition’s efforts) and enter each number in Column C.

Unless necessary, do not change the direction of the objective in Column B (e.g., from “decrease” to “increase”), as this will affect the conditional formatting rules used to generate check marks in Column E and red dots in columns comparing local data to state and national rates. If you must change the direction of Column B, see the section on Changing Conditional Formatting Rules.

As depicted below on the YRBS tab, conditional formatting rules automatically generate a check mark in Column E if your objective has been met for that indicator. Columns R and S use conditional
formatting to automatically generate a red dot if your local data for that year is worse than state or national figures. All these rules depend on the direction of your objective in Column B to indicate if a bigger number is “better” or “worse.” So don’t change the direction of the indicator’s objective or you’ll need to change the conditional formatting rules as well.

6) **Unhide all hidden columns on the table.** Scanning the column headers on each data source tab, you’ll notice that there are hidden columns. For example, on the YRBS tab depicted above, Column H is followed by Column O with double lines between them, indicating that Columns I-N are hidden. To unhide columns, select the columns before and after the hidden ones (in our YRBS example, Columns H and O). Do this by selecting column headers H and O all the way at the top of the spreadsheet, right click, then select Unhide from the dropdown menu. You’ll see this changes the sparklines on the table, but don’t worry. Later, you can hide any unused columns and the sparklines will adjust accordingly. The columns that are hidden vary by data source tab:

- **On the YRBS and DFC tabs,** Columns I-N are hidden between Columns H and O. Column Q is hidden between Columns P and R.

- **On the Binge Drinkers BRFSS tab,** Columns G-M are hidden between Columns F and N.

- **On the Arrests Epi Report tab,** Columns K-M are hidden between Columns J and N.
• On the Hospitalizations Epi Report tab, Columns O-Q are hidden between Columns N and R.

• On the Outlet Density tab, several groups of columns and rows are hidden: Columns E and F are hidden between Columns D and G; Columns J and K are hidden between Columns I and L; Columns R and S are hidden between Columns Q and T; Columns AA and AB are hidden between Columns Z and AC; and Rows 27-65 are hidden between Rows 26 and 66. To unhide all columns at once, select Columns A through V, right click, and then select Unhide. To Unhide rows, select Rows 26-66 (do this by clicking on the 26 and 66 headers all the way to the left of the spreadsheet), right click, then select Unhide. You’ll see this generates lots of error messages in Columns Q-S and that it changes the sparklines, but this is okay. Later, you can hide any unused columns and all will be restored to order.

To unhide all columns at once on the YRBS tab, select H through R and choose Unhide from the dropdown menu.

With all columns now unhidden, it’s time to enter your local data.

As explained in step 7 below, enter local data in the appropriate columns (here above on the YRBS tab, Columns F-O, shown in the red box). Keep the most recent year in the last column of local data (Column O in the example above).
Next, **enter your local data** in chronological order in the appropriate columns, changing the year in the heading as needed. **You must keep your most recent local data in the last column for local data** because the conditional formatting rules used to generate checkmarks and red dots depend on the value in this last column of local data.

Before entering your most recent data point: If you want to keep the data that currently exists in the last column of local data, manually transfer it to another column designated for local data. You can NOT use the usual cut and paste because this would change the conditional formatting rules. Then manually enter your most recent data in the last column of local data. The conditional formatting rules for checkmarks and dots will remain the same.

If you are adding other data points, you can use any of the other columns designated for local data. These columns are not specially formatted; you can cut and paste to your heart’s content within these columns.

Local data columns by tab:

- **YRBS and DFC tabs**: enter most recent data in Column O. Use any Column F-N for all other local data points.

- **Binge Drinkers BRFSS and Arrests Epi Report tabs**: enter most recent data in Column N. Use any Column F-M for all other local data points.

- **Hospitalizations Epi Report tab**: enter most recent data in Column R. Use any Column F-Q for all other local data points.

- **Outlet Density tab**: There is no need to keep the most recent data in a specific column on this tab. Enter local data in Columns A-M. (In Columns L and M, breakdown the number of Class A and Class B licenses for the most recent year available.) The remainder of the local data columns on this tab contain formulas that will auto-populate for you: People per License and Licenses per 500 Population. Note that the rules used to generate red and pink dots in Column U are fixed: they do not depend on data in any other column. For more information, see the section on Pink and red dot rules for rank in state on the Outlet Density tab.

In the example below, we added 2017 local data to the YRBS tab in Column O. Before doing so, we manually transferred the 2015 data that used to be in Column O to Column I. As directed in step 8 below, we will next hide Columns J-N again by selecting them, right clicking, and selecting Hide.
8) **Hide any unused columns of local data:** click on the blank columns you want to hide (select the header letter(s) of the column(s) all the way at the top of the spreadsheet, as shown in the example above), right click, and then select Hide. Your Trend/Sparklines will return to normal.

9) Information entered on the data source tabs are linked to cells on the Tables & Charts tab. **Go to the Tables & Charts tab.** Notice that on each table on the Tables & Charts tab, there are hidden rows. For example, on the first YRBS table on the Tables & Charts tab, Youth Current Drinkers, rows 26-31 are hidden. To **Unhide rows**, select rows before and after the hidden ones. (Select Rows 25 and 32 in this example; do this by clicking on the headers 25 and 32 all the way to the left of the spreadsheet). Once selected, right click, and then select Unhide from the dropdown menu. You’ll see this changes the column chart to the right, but don’t be concerned. Later, you can hide any unused rows and the chart will adjust accordingly. **Unhide the rows for all of the tables** on the Tables & Charts tab that are associated with the data source tab you are working on. (There are 4 tables on the Tables & Charts tab that are associated with data on the YRBS tab; 2 tables associated with the Arrests Epi Report tab, and 1 table associated with each tab for Binge Drinkers, Hospitalizations, and Outlet Density.)

**Below, we will Unhide rows 27-32 on the Youth Current Drinkers table.**

Now unhidden, note that YRBS data for 2015 has self-populated in row 27. All unused local data columns on the YRBS tab (J-N in our example) populate here with zeros in rows 28-32. As directed in step 10 below, we’ll hide them again: select rows 28-32 and select Hide.
10) **Still on the Tables & Charts tab**, note that the rows have self-populated with the data you entered on the data source tab. Now re-hide any unused rows that are populated with zeros: click on the rows you want to hide (select the header number(s) of the row(s) all the way to the left of the spreadsheet), right click, and then select Hide. Your column charts will adjust to the data that is shown (that is, not hidden).

Return to the data source tab you were working on to complete any of the Optional Steps for Customizing Data Source Tabs.

**STEP 2: PREPARE YOUR CHARTS ON THE TABLES & CHARTS TAB**

The Tables & Charts tab is where charts with benchmark lines are generated. The tables on this tab are specially formatted to create charts with nice long benchmark lines. We have tried to make the charts as easy for viewers to interpret as possible by incorporating best practices of visual processing theory, such as clean lines, intentional use of color, and a one-sentence descriptive title.

**Do not enter data on the Tables & Charts tab.** This tab pulls data from the data source tabs (YRBS, Binge Drinkers BRFSS, Arrests Epi Report, Hospitalizations Epi Report, and Outlet Density). Unless you prefer to enter data twice (here and on the data source tab), do not enter data on the Tables & Charts tab. Instead, follow the link for "Data Entry" next to each table to enter your data on the appropriate data source tab, following the steps for data entry in the previous section, Step 1: Enter Your Data. Note that the data entry instructions include steps for unhiding and rehiding rows of data in the tables on this Tables & Charts tab.
Once your data has been entered, you will need to change chart titles to accurately reflect your data. To do so, simply click on the text box in the title area of the chart and edit the text. Best practice for chart titles: rather than a heading, such as "Binge Drinkers," chart titles should be a one-sentence description of the data. For more on this topic, see http://stephanieevergreen.com/how-to-rock-the-text-in-your-data-visualization/.

Shaded cells on the tables are intentionally left blank; do not delete these rows. The blank cells are needed to create longer state and national benchmark lines that extend beyond the columns of local data on the charts. For more on how to create a benchmark line in Excel, see instructions below in the section To make new charts in this style, or visit: http://stephanieevergreen.com/adding-a-benchmark-line/.

The tables on this tab are used to make the charts on the Report tab. When you make changes to the charts on the Tables & Charts tab, the Report tab should update automatically with the revisions, except for the text boxes, including chart titles. Please check both tabs to make sure all chart elements are correct, especially chart titles and other text boxes. Note: for titles, the charts use text boxes instead of title boxes because, due to a quirk in Excel 2013, title boxes cannot be resized or moved.

You may also copy and paste charts on the Tables & Charts tab to other documents in Word, Excel, PowerPoint, etc.

To add new charts, format charts, or further customize the Tables & Charts tab to meet your needs, see the section Optional: Create a New Chart on the Tables & Charts Tab.

**STEP 3: PERSONALIZE THE DASHBOARD REPORT**

The Report tab provides a template for presenting an overview of findings. To maximize reader attention and understanding, the report uses best practices of visual processing theory, such as clean lines, intentional use of color, and easy-to-interpret charts. The charts on the Report tab pull data from the Tables & Charts tab. To avoid duplication of efforts, please review the previous section, Step 2: Prepare Your Charts on the “Tables & Charts” Tab, before changing the charts on the Report tab. Provided below is a style guide and instructions on the specific elements of the Dashboard Report that you’ll need to change.

**Style Guide:** for reference when working on the Dashboard Report

- Note the green file folder shapes at the top of each page of the report are made up of several overlapping shapes, as design formatting options are limited in Excel. The green color used has an RGB of Red: 195; Green: 233, and Blue: 145. [To select this color, select the shape, then go to
the Format tab and choose Shape Fill (circled in red in the example below). Choose More Colors from the initial color palette, then input the RGB code on the Custom tab. See diagram below.

- The burnt orange color has an RGB of 190, 81, 8.
- The nickel gray color’s RGB code: 114, 114, 114.
- The straw color used for the columns of data: 223, 204, 116
- The darker Aztec gold/brown color: 203, 144, 77
- Fonts: We use Candara for the Dashboard Report title and side bar, and Corbel for chart elements, including titles. Note: The CHIA Dashboard uses these fonts because they are nice looking sans serif fonts that come standard with all versions of Microsoft Office. However, we strongly recommend an alternate condensed font for use on your charts, such as Franklin Gothic Condensed (available for free download online at http://fontsgeek.com/fonts/Franklin-Gothic-Std-Condensed: click on ZIP download, then open the downloaded file and click on Install). If you choose a different font, stay away from Arial or Calibri, as these are overused and can make your work look boring.
• Chart titles use a 12 point font, with the data source listed below the title in a 10 point font.

• Chart data labels are in 10.5 font. X-axis (years) are in 10 point font.

5 Steps to a Personalized Dashboard Report for Your Community

1. **Change the title of the Dashboard Report.** You could simply replace ABCDEFG with your geographic area, or create an entirely new title. You may want to add your logo: we suggest using the space on the right sidebar, moving the sidebar graphic up or down as needed.

2. **Edit the estimated cost of excessive alcohol use** in the green file folder shape at the top of the report. Enter the estimated cost to your geographic area (e.g., $16.7 million) from the Burden of Excessive Alcohol Use in Wisconsin report. Change ABCDEFG to your geographic area. To download the data: [https://law.wisc.edu/wapp/burden_of_alcohol.html](https://law.wisc.edu/wapp/burden_of_alcohol.html).

3. **Review all charts to ensure that all their elements are correct and placed appropriately**, including titles, labels, and any shapes that were added (such as the arrow and text box on the chart depicting sources of alcohol for youth). Note that text boxes (including titles) do not automatically update when changes to them are made on the Tables & Charts tab. You may also need to adjust the placement of labels, text boxes, and plot area: for more on this, see **Simplify the Chart’s Look** section in the instructions for the Tables & Charts tab.

4. **Edit the sidebar on arrests data** on the first page of the report. Calculations are available to help you compare your local rate to state and national figures: see the rows under the two tables for arrest data on the Tables & Charts tab.

5. **Edit the sidebar icon array** on the second page of the report. Calculate how many youth should be depicted and in what colors. Use burnt orange color as the action color (e.g., for 1 in 5, the 1 would be orange and the other 4 gray.)

![Icon Array](image)

You may need to add additional youth icons, or even a half/third/quarter icon. Several icons in both colors are provided— to the right of the Dashboard Report and depicted above— for you to cut, copy, and paste. You can also crop an icon: select the image, right click, and choose Crop to create a half/third/quarter student.

**You may print this report as a 2-page pdf.** When printing, you will need to create custom margins (menu option is circled in red below: 0 for top, bottom, left, and right).
Optional Customizations

Steps for Further Customizing Data Source Tabs

Before proceeding with more detailed customizations of data source tabs, complete the 10 Basic Steps to Enter Your Data. Outlined below are additional steps you may want to take to adapt the dashboard to your needs:

- Enter More Recent Statewide and National Benchmark Data
- Add More Columns of Local Data
- Adjust the Data Range of Trend/Sparklines
- Have New Rows in the “Tables & Charts” Tab Self- Populate with Data from a Data Source Tab
- Adjust Elements of Trend/Sparklines, such as Axis Settings
- Change or Add Conditional Formatting Rules:
  - Checkmark Rule
  - Red Dot Rules for Comparing Local Data to State and National Figures
  - Pink and Red Dot Rules for Rank in State on the Outlet Density Tab

Enter More Recent Statewide and National Benchmark Data

Enter this data in the current column(s) for statewide and national figures, where available. Remember to change the year on the heading for each column. You will not be saving the old state and national benchmark data on this table; it will be deleted. (If you want to track statewide and/or national benchmark data over time, please create an additional table.)

Cells in the columns for state and national figures use conditional formatting to generate a red dot if local data for the same year is worse than the benchmark data. To avoid changing the conditional formatting rules, manually enter the local data that is to be compared to state and national benchmarks, rather than cutting and pasting. Depending on the data source tab, local data (for the same year as benchmark data) are in different columns:

- YRBS and DFC tabs: Statewide data is in Column R, National Data is in Column S, and local data for the same year as benchmark data is in a hidden column, Q. (On the DFC tab, the first indicator, Youth Current Drinkers, draws local, state, and national data from the YRBS tab. To the best of our knowledge, state and national data are not available for the other DFC/STOP Act indicators.) Since the benchmark year for the official paper-based YRBS may not be the same as the most recent year of local Online YRBS data, it was not possible to link the red dot rule to a column whose position would remain constant, so a hidden column, Q, was added. If you have not already done so, Unhide Column Q: select Columns P and R (do this by clicking on the P and R headers all the way at the top of the spreadsheet), right click, then select Unhide. Manually enter
your data in Column Q. When you are finished, Hide Column Q again.

- **Binge Drinkers BRFSS and Arrests Epi Report tabs:** Statewide data is in Column P, National Data is in Column Q, and local data for the same year as benchmark data is in Column N. None of these columns are hidden.

- **Hospitalizations Epi Report tab:** Statewide data is in Column T and local data for the same year as benchmark data is in Column R. None of these columns are hidden, and no national data is available to the best of our knowledge.

- **Outlet Density tab:** Rank in State data for People per License is in Column U. The conditional formatting rule in this column depends on the value in Column U itself. (See Pink and Red Dot Rules for Rank in State on the Outlet Density Tab.) Note that the Rank in State data was compiled by 2012 Wisconsin County Alcohol Outlet Density Reports: Alcohol License Overview; these reports may not be replicated in future years. Formulas for 2013 State and national averages for People per License is in Columns V and W; formulas for Licenses per 500 People is in Columns AC and AD. The source for 2013 state and national figures in Columns V, W, AC, and AD: The Fact Book 2013 (The Beverage Information Group), pages 12-13. More recent state and national data may be available. The Fact Book is an annual publication, but the 2016 edition costs $525 to purchase: https://beverage-handbook-store.myshopify.com/products/2016-fact-book?variant=12903981700

**Add More Columns of Local Data**

If additional columns of local data are needed, we suggest taking this step last, because adding columns will change the names of the columns referred to in the steps of these instructions. (For example, if you add one column of local data, what is called column Q in these instructions will now be R, R will be S, etc.). Once you’ve inserted columns as instructed in this section, you’ll also need to follow the directions to Adjust the Data Range of Trend Lines (Sparklines) and Have New Rows in the Tables & Charts Tab Self-Populate with Data from a Data Source Tab.

New columns insert to the left of your selection. Select the heading of any column designated for local data except the most recent data point. (Don’t select this or other special columns that are used in conditional formatting rules.) Right click, then choose insert.

*In the example below, we have annual data from the local online YRBS that we’ve collected since 2007, so we need to add one more column of data. We’ll select Column F, right click, and choose insert.*
Enter your data in the new column(s). In our example depicted above, 2007 data would be entered in the new (blank) Column F. The trend/sparklines may need to be revised to include your new column of data: see the next section for instructions.

**Adjust the Data Range of Trend Lines (Sparklines)**

After adding a column of local data, you may need to adjust the data range represented in the trend/sparklines. To do so, click on any trend/sparkline cell. Right click and, from the drop down menu, select Sparklines, and then Edit Group Location and Data. In the Edit Sparklines window that pops up, change the Data Range by selecting all of the data that should be displayed in your sparkline: select every cell of local data (not including column headers or the sparkline column itself). Then select “OK” to exit.

*In the example below, when we inserted a new column of local data in the YRBS tab, we needed to adjust the trend/sparklines to include the new column. In the Edit Sparklines window, for Data Range we selected all the cells that contain local data, F4:P10.*

Next, go to the Tables & Charts tab and insert rows for your newly added data point. New rows insert above the selection, so select the row displaying the year after your new data point, right click, and then choose Insert. You will need to do this for every table on the Tables & Charts tab that is associated with the data source tab you are working on (4 for the YRBS tab, 2 for the Arrests Epi Report tab, and 1 each for the BRFSS Binge Drinkers, Hospitalizations Epi Report, and Outlet Density).
We added 2007 data on the YRBS tab. To add this row to the Youth Current Drinkers table on the Tables & Charts tab, select Row 24, right click, and choose insert. Repeat for each of the four YRBS tables on the Tables & Charts tab.

You may need to change the fill on the new row from shaded gray to no fill. To do so, select the row, and then on the Home tab, select the paint bucket (fill) tool and choose “no fill.”

When you insert a new row in a table on the Tables & Charts tab, it will not automatically self-populate with data from the appropriate data source tab. You’ll need to do this manually; see the next section.

**Have New Rows in the Tables & Charts Tab Self-Populate with Data from a Data Source Tab**

Choose a cell on your new row and enter “=” in the formula bar. Then click on the cell in the data source tab that the data should be drawn from. See figure below. You will need to do this for each cell of the new row.

*In the example below, the formula for Cell A24 is “=YRBS!F3.” We entered “=” and then selected Cell F3 on the YRBS tab, where we had previously entered “2007” for the year of this data point. For Cell A25, the formula will read “=YRBS!G3”; Cell A26’s formula will be “=YRBS!H3”, etc.*
Adjust Elements of Trend/Sparklines, Such As Axis Settings

The vertical axis of sparklines has been set to best represent the data shown in the CHIA Sample Dashboard. If you'd like to change the maximum value of the vertical axis or another aspect of the sparklines: Select a cell that contains a sparkline. For example, P4 on the YRBS tab, shown in the selection box outlined in green below. Since this sparkline is part of a group of sparklines, all the sparkline cells in the group will automatically be selected (selection box outlined in blue below). On the ribbon at the top of your Excel screen, you should be in the Design tab, with Sparkline Tools highlighted above the tab (circled in red below). This is where you can adjust elements of the sparklines, such as the type of chart presented, sparkline color, and axis values.

To change axis values, click on the Axis icon, and from the drop-down menu, select “Custom Value” from the section, “Vertical Axis Maximum Value Options” (see red arrow below).
In the Sparkline Vertical Axis Setting window that pops up, type in the maximum value desired. On the YRBS tab, shown below, we are dealing in percentages, so the maximum value of the vertical axis of sparklines has been set at 100 (best practices dictate that minimum value is always 0). To change the maximum value, enter it in the pop-up window titled Sparkline Vertical Axis Setting.
Change or Add Conditional Formatting Rules

Don't panic. It's a bit time-consuming, but this advanced skill makes you feel like an Excel ninja. Conditional formatting rules create the checkmarks and red and pink dots you see on the data source tabs.

To Change the Checkmark Rule

For the YRBS, BRFSS Binge Drinkers, Hospitalizations Epi Report, and DFC or STOP Act tabs: Column E creates a checkmark when the most recent data point (Column O on YRBS and DFC tabs, Column N on BRFSS tab, and Column R on Hospitalizations tab) meets the objective in Columns B and C. Note that the cell value in Column E equals the value of the most recent column of local data. However, to streamline the viewing experience, the value is hidden (We'll show you how to hide or unhide it in a moment).

On the YRBS tab below, when Cell E4 is selected, you see in the formula bar that its value is =O4. The value for Cell E5 =O5, etc. These values are not shown on the table; only the checkmark is visible in Column E.
Changing or adding conditional formatting rules that generate checkmarks is done one cell at a time. Select Cell E4. In Excel 2013: on the Home tab at the top of the screen, click on Conditional Formatting and choose Manage Rules from the drop-down menu. (See diagram below.)

A new window will pop up: the Conditional Formatting Rules Manager. Click on Edit Rule (circled in red below). If Edit Rule is not an option because conditional formatting was not in place for this cell, click on New Rule. The instructions below are the same for both new and edited rules.
A new window opens: Edit Formatting Rule. For Rule Type, keep the default option, “Format all cells based on their values.”

Under Rule Description:

- For Format Style, choose Icon Sets. For Icon Style, choose any icon set from the drop down menu for now; we will be making our own, as we only want a checkmark if the objective has been met, and that is not a default option. Check the box marked “Show icon only” (see red circle in example below). This is how you hide the value in this cell, showing only a checkmark for objectives that have been met by the most recent data point. Displaying the value here wouldn’t fit the column title “Objective Met?”, but if you want to display the value, simply make sure the box marked “Show icon only” is unchecked.

- Under “Display each icon according to these rules”, you will use this rule for all rows that have an objective (Columns B and C) to Decrease to ## (Rows 4-7 and 9-10 on the YRBS tab; all rows on other tabs that have an objective). For these rows, a higher number is worse.
  - For the first icon, choose “no cell icon” from the dropdown menu when value is (choose “>”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box for Value, and select the cell in Column C in the same row that you are formatting. Because we are formatting E4 in this example, we’ll select Cell C4. You’ll notice in our example that the Edit Formatting Rule pop up window is covering the cell we want to select, C4, so we’ll need to either collapse or move the pop-up window:
• To collapse the pop-up window, click on the icon in the Value box (see red arrow in depiction above). Once you’ve selected your cell (C4), you’ll need to click on the icon in the collapsed window to expand it again.

• To move the Edit Formatting Rule pop-up window over, simply click on any white space in the window and drag the window over so you can select Cell C4.

Once you’ve selected C4, the value in the box will read =$C$4.

In the example below, we’ve collapsed the Edit Formatting Rule pop-up window so that we can click on Cell C4. (We did that by clicking on the icon in the Value box on the expanded pop-up window, indicated by the red arrow in the previous figure above.) To return to the expanded Edit Formatting Rule window, click on the icon (see arrow below).

- For the second icon, do the same: choose “no cell icon” when value is (choose “>”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box for Value, and select the same cell in Column C as you did for the first icon. Again C4 in this example; the value in the box will read =$C$4.

- For the third icon, choose the checkmark from the drop down menu. The rule automatically generated is when <= formula. Your rule is now set: generate a checkmark in E4 when the value in E4 (=O4, the most recent data point for this indicator in our
example) is less than or equal to your objective for this indicator (C4).

Click on OK to exit the window. Then click OK to exit the Conditional Formatting Rules window.

Repeat for every cell with a similar rule/direction of objective:

- On the YRBS tab: E5, E6, E7, E9 and E10.
- On the BRFSS and Hospitalizations tabs: not applicable, as there is just one indicator.
- On the DFC tab: E5-E9

For the YRBS tab only: When formatting cell E8: under “Display each icon according to these rules,” you will use the rule below, because the objective in Row 8 Columns B and C is to Increase to ## (i.e., for this row, a higher number is better).

- For the first icon, choose the checkmark when value is (choose “>=”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box under Value, and select the cell in Column C in the same row that you are formatting. Because we are formatting E8 in this example, select cell C8. The value in the box will read =$C$8. This is your rule: generate a checkmark in E4 when the value in E4 (=O4, the most recent data point for this indicator) is greater than or equal to your objective for this indicator.

- For the second icon, choose “no cell icon” when value is (choose “>=”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box under Value, and select the cell in Column C in the same row that you are formatting. Because we are formatting E8 in this example, select cell C8. The value in the box will read =$C$8.

- For the third icon, choose “no cell icon.” The rule automatically generated is when > formula. Click on OK to exit the window. Then click OK to exit the Conditional Formatting Rules Manager.

Repeat for every cell with a similar rule. The original CHIA Dashboard has this rule only for cell E8, but if you change objectives to “Increase to ##” for any other indicator, you will use this kind of rule.

To Change the Red Dot Rules that Compare Local to State and National Data (for all data source tabs except Outlet Density)

In columns for state and national data, a red dot is automatically generated when the same year of local data is worse. Depending on the data source tab, local data (for the same year as benchmark data) are in different columns:

- YRBS and DFC tabs: Statewide data is in Column R, national Data is in Column S, and local data for the same year as benchmark data is in a hidden column, Q. (On the DFC tab, the first indicator, Youth Current Drinkers, draws local, state, and national data from the YRBS tab. To the best of our knowledge, state and national data are not available for the other DFC/STOP Act indicators.) Since the benchmark year for the official paper-based YRBS may not be the same as the most recent year of local Online YRBS data, it was not possible to link the red dot rule to a
column whose position would remain constant, so a hidden Column, Q, was added. If you have not already done so, Unhide Column Q: select Columns P and R (do this by clicking on the P and R all the way at the top of the spreadsheet), right click, then select Unhide. When you are finished with changing conditional formatting rules for this tab, Hide Column Q again.

- **Binge Drinkers BRFSS and Arrests Epi Report tabs**: Statewide data is in Column P, national Data is in Column Q, and local data for the same year as benchmark data is in Column N. None of these columns are hidden.

- **Hospitalizations Epi Report tab**: Statewide data is in Column T and local data for the same year as benchmark data is in Column R. None of these columns are hidden, and no national data is available to the best of our knowledge.

Changing or adding conditional formatting rules that generate red dots is done one cell at a time. Select the first cell in the column for state or national data. (For example, Cell R4 on the YRBS tab, shown below.) In Excel 2013: on the Home tab at the top of the screen, click on Conditional Formatting and choose Manage Rules from the drop-down menu. (See red circle below.)

A new window will pop up, the Conditional Formatting Rules Manager. Click on Edit Rule, circled in red below. (Or, if Edit Rule is not an option because conditional formatting is not present for this cell, click on New Rule).
A new window opens: Edit Formatting Rule. For Rule Type, keep the default option, “Format all cells based on their values.”

Under Rule Description:
- For Format Style, choose Icon Sets. For Icon Style, choose any icon set from the drop down menu for now; we will be making our own, as we only want a red dot if the relevant local data (Cell Q4 in our YRBS example above) is worse than (i.e., greater than) the data in the cell we are formatting (R4 in our example), and that is not a default option. Don’t check the box marked “Show icon only,” as we want the value for the state or national figure to be displayed in this cell along with an icon if the local data is worse.
• Under “Display each icon according to these rules,” you will use this rule for all cells (except R8 and S8 on the YRBS tab), since a higher number is worse for these rows.

  o For the first icon, choose “no cell icon” when value is (choose “>”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box for Value, and select the cell with the relevant local data. Because we are formatting R4 in this example, we select cell Q4. In this example, the Edit Formatting Rule pop up box is not covering the cell we want to select, Q4, so there is no need to collapse or move the pop-up box. The value in the box will read =$Q$4.

    ▪ If the pop-up box is covering the cell you want to select: you can select the cell you want either by (1) clicking on the icon in the Value box (see red arrow in depiction above) to collapse the Edit Formatting Rule pop-up box (you’ll need to click on the icon in the collapsed box to expand it again); or (2) by moving the Edit Formatting Rule pop-up box over so you can select the cell you want. For a depiction of collapsing the pop up window and selecting a cell, see the section above, Change the checkmark rule.

  o For the second icon, the steps are almost identical to the first: choose “no cell icon” when value is (BUT here choose “>=”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box for Value, and select the relevant cell for local data. Because we are formatting R4 in this example, we’ll select cell Q4. The value in the box will read =$Q$4.

  o For the third icon, choose the red dot (the rule automatically generated is when < formula). Your rule for this cell is now set: generate a red dot in R4 when the value in R4 is less than (=better than) the local data for this indicator. In other words, a red dot is generated when local data is worse.

  o Click on OK to exit the window. Then click OK to exit the Conditional Formatting Rules Manager.

Repeat for every cell in the state and national columns, except for where this data is unavailable, and except for Cells R8 and S8 on the YRBS tab.

When formatting cells R8 and S8 on the YRBS tab: under “Display each icon according to these rules,” you will use this rule, because the objective in row 8 Columns B and C is to Increase to ## (i.e., for this row, a higher number is better).

  • For the first icon, choose the red dot when value is (choose “>”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box for Value, and select the relevant cell for local data. Because we are formatting R8 in this example, we’ll select cell Q8. The value in the box will read =$Q$8. This is your rule: generate a red dot in R8 when the value in
R8 is greater than (= better than) the local data in Q8. In other words, the red dot is generated when local data is worse than the state data.

- For the second icon, choose “no cell icon” when value is (choose “>=”). Skip Value for now: first change Type to “Formula.” Then go back to Value, place your cursor in the box for Value, and select the same relevant cell for local data. Because we are formatting R8 in this example, we’ll select cell Q8. The value in the box will read =$Q$8.

- For the third icon, choose “no cell icon.” The rule automatically generated is when > formula. Click on OK to exit the window. Then click OK to exit the Conditional Formatting Rules Manager.

Repeat for every cell with a similar rule (R8 and S8). The original CHIA Dashboard has this rule only for cells R8 and S8, but if you change indicators (with objectives to “Increase to ##”; that is, for which a higher number is better) you will use this kind of rule.

**To Change the Pink and Red Dot Rules for Rank in State on the Outlet Density Tab:**

Column U on the Outlet Density tab contains rankings for people per license and uses conditional formatting to automatically generate a red or pink dot for the worst and second worst quartiles, respectively. Rank is reported in the 2012 Density Reports (Table 11: Municipality Licenses/500 People Rank within County and State), and (as of March 2017) is the most recent data for this indicator currently available. Keep in mind that this rank is within Wisconsin, which in 2009 had the 9th highest density of people per license in the US (2012 Density Report, Appendix 1, Table 1). So even the “better” municipalities in Wisconsin may compare poorly to the US average for alcohol outlet density.

How county rankings were calculated: Rank is among all 72 counties in Wisconsin. 1 has the most dense concentration of alcohol outlets in state (i.e., fewest people per license, or "worst"). 72 has the least dense concentration (most people per license, or "best"). To create the quartiles used to generate red and pink dots, we took the total number of counties (72) and divided it into 4 quartiles:

- 1 through 18: “Worst” quartile (densest in state) = Red Dot
- 19 through 36: Second “worst” quartile (second densest in state) = Pink Dot
- 37 through 54: Second “best” quartile (second least dense in state), no dot
- 55 through 72: “Best” quartile (least dense in state), no dot

For municipality rankings: Rank is among all municipalities in Wisconsin that issued licenses in 2011-12: 1,618. 1 has most dense concentration of alcohol outlets in state (i.e., fewest people per license, or "worst"); 1618 has the least dense concentration (most people per license, or "best"). To create the quartiles, we took the total number of municipalities that issued licenses in 2011-12 (1,618), and divided it into 4 quartiles:

- 1 through 405: “Worst” quartile (densest in state) = Red Dot
- 406 through 809: Second “worst” quartile (second densest in state) = Pink Dot
- 810 through 1214: Second “best” quartile (second least dense in state), no dot
- 1215 through 1618: “Best” quartile (least dense in state), no dot
About the conditional formatting used in Column U to generate pink and red dots: There should be no need for you to edit the conditional formatting rules for this ranking data. If a more recent rank year is available, we suggest keeping this column conditionally formatted as is: simply enter the more recent rank data, remembering to change the date in the heading for this column as well, and pink and red dots will be generated according to the rules set for 2011-12 data. Our rationale for maintaining the formatting for future years of data: it is likely that the total number of municipalities in Wisconsin issuing licenses will not change substantially, so the quartile limits will not change significantly. If a rank of greater than 1,618 is reported for a municipality, the rule will no longer fit this cell and no dot will be generated, but that is acceptable because no dot would be generated in any case for this “best” quartile. If conditional formatting is lost, or for those of you who are curious, here are instructions on how to conditionally format these cells.

Select the cell for county rank, U8. In Excel 2013: on the Home tab at the top of the screen, click on Conditional Formatting and choose Manage Rules from the drop-down menu. A new window will pop up, the Conditional Formatting Rules Manager. Click on Edit Rule (circled in red below). If this is not an option because conditional formatting is not present for this cell, click on New Rule.

A new window opens: Edit Formatting Rule. For Rule Type, keep the default option, “Format all cells based on their values.”

Under Rule Description:

- For Format Style, choose Icon Sets. For Icon Style, choose any icon set from the drop down menu for now; we will be making our own, as we want a plain red dot for the densest quartile and a plain pink dot for the second densest, and this is not a default option. (Don’t check the box marked “Show icon only,” as we want the value for rank to be displayed in this cell along with an icon for the two densest quartiles. Leave the box unchecked, as shown below.)
• Under “Display each icon according to these rules,” you will use this rule for cell U8 only. Remember, a lower rank is “worse,” meaning a higher density of alcohol outlets.

  o For the first icon, choose “no cell icon” when value is (choose “>=”). Skip Value for now: first change Type to “Number.” Then go back to Value, place your cursor in the box for Value, and enter 37. We want no cell icon when the rank is in the two “better” county quartiles: a value >= 37.

  o For the second icon, choose the plain pink dot when value is (choose “>=”). Skip Value for now: first change Type to “Number.” Then go back to Value, place your cursor in the box for Value, and enter 19. We want a pink dot when the rank is in the second “worse” county quartile, < 37 and >= 19.

  o For the third icon, choose the red dot. The rule automatically generated is when < 19. We want a red dot when the rank is in the “worst” county quartile, <19.

Click on OK to exit the window. Then click OK to exit the Conditional Formatting Rules Manager.

For municipality ranks: select Cell U9. In Excel 2013: on the Home tab at the top of the screen, click on Conditional Formatting and choose Manage Rules from the drop-down menu. A new window will pop up, the Conditional Formatting Rules Manager. Click on Edit Rule (or, if this is not an option because conditional formatting has been lost for this cell, click on New Rule). A new window opens. For Rule Type, keep the default option, “Format all cells based on their values.”

Under Rule Description:
• For Format Style, choose Icon Sets. For Icon Style, choose any icon set from the drop down menu for now; we will be making our own, as we want a plain red dot for the densest quartile and a plain pink dot for the second densest, and this is not a default option. (Don’t check the box marked “Show icon only,” as we want the value for rank to be displayed in this cell along with an
icon for the two densest quartiles. Leave the box unchecked, as shown below.

- Under “Display each icon according to these rules,” you will use this rule for Cell U9 and the remainder of Column U (see below for a short cut to copy this rule to all other cells in the column). Remember, a lower rank is “worse,” meaning a higher density of alcohol outlets.

  o For the first icon, choose “no cell icon” when value is (choose “>=”). Skip Value for now: first change Type to “Number.” Then go back to Value, place your cursor in the box for Value, and enter 810. We want no cell icon when the rank is in the two “better” quartiles: a value >= 810.

  o For the second icon, choose the plain pink dot when value is (choose “>=”). Skip Value for now: first change Type to “Number.” Then go back to Value, place your cursor in the box for Value, and enter 406. We want a pink dot when the rank is in the second “worse” quartile, <810 and >= 406.

  o For the third icon, choose the red dot. The rule automatically generated is when < 406. We want a red dot when the rank is in the “worst” quartile, < 406.

Click on OK to exit this window, BUT don’t exit the Conditional Formatting Rules Manager yet. NOW, HERE’S A REALLY GREAT SHORTCUT for applying this rule to the remainder of Column U: In the Conditional Formatting Rules Manager, note the field under “applies to” and the table icon to the right of this field. Click on the table icon (this collapses this pop-up window) and select all the cells in Column U that you want this rule applied to: not Cell U8, as this is a county-level rank with different quartiles, but all the other cells in Column U: U9 to the end of your data. Click on the table icon again to expand the pop-up window, and then on OK to exit the Conditional Formatting Rules Manager.
Click on the icon (circled in red below) to collapse the Conditional Formatting Rules Manager window:

Now select all the cells in Column U that you want this rule applied to: U9 and below. Click on the table icon (circled in red below) to expand the pop-up window, and then on OK to exit the Conditional Formatting Rules Manager.

Your conditional formatting rule for municipal ranking now applies to all cells in Column U from U9 down.
Optional: Create a New Chart on the Tables & Charts Tab

The tables and charts on the Tables & Charts tab are meant to be templates that can be used with many types of data. Before you create your own table and chart from scratch for new data, try copying and pasting one of the tables and charts and then linking your new chart to new data. Here’s how:

Select a table from the Tables & Charts tab that most closely resembles your new data. For example, let’s say we want to create a chart on Youth Perception of Parental Attitudes towards Drinking. The Youth Current Drinkers table is similar, so let’s copy and paste that.

Below, we’ve selected all the cells in the table Youth Current Drinkers. Right click and choose Copy from the dropdown menu. (Or use Control-C.)

Then choose where you want to paste the table. We recommend you choose a blank section of the tab. In the example below, we selected Cell Q21, to the right of the existing table and chart. Then we pasted the table (either right-click and choose Paste or use Control-V).

Notice that on each table on the Tables & Charts tab, including this new table, there are hidden rows. Here below, rows 27-32 are hidden. To Unhide rows, select rows before and after the hidden ones. (Select Rows 26 and 33 in the example below; do this by clicking on the 26 and 33 headers all the way to the left of the spreadsheet, circled in red below). Once selected, right click, and then select Unhide from the dropdown menu.

The original table contained formulas that pulled data from the YRBS tab, and these are no longer valid on our new table (hence all the zeroes in the example below). Since we are pulling data from another part of the YRBS tab for the new table on Youth Perception of Parental Attitudes towards Drinking, let’s update these formulas.
To have the data for a cell drawn from another cell on a data source tab, choose a cell in your new table and enter “=” in the formula bar, then click on the cell in the data source tab that the data should be drawn from. You will need to do this for each cell of the new table.

In the example below, we selected Cell Q21. We entered “=” in the formula bar and then selected Cell A8 on the YRBS tab. The new formula for Cell Q21 is “=YRBS!A8”. For Cell Q24, the formula will read “=YRBS!F3”; Cell A25’s formula will be “=YRBS!G3”, etc. The data points that are unused on the YRBS tab auto populate with zeroes.
Next, rehide the rows of data that are not in use. Select rows 27 through 32 in the example above, right click, and choose Hide. Since we have no state benchmark data for this indicator, we will clear contents of these cells. To do so, select Cells S23-S34, right click, and select Clear Contents. Our table is now prepared:

![Table Image]

Next, copy and paste the chart. We’ll choose the chart for Youth Current Drinkers, copying and pasting it to the right of the new table. We’ll need to connect this new chart to the data on the new table. Right click on the chart plot area of your new chart (in the space around the bars of data, not on the bars themselves) and choose “Select Data” from the drop down menu (circled in red below).

![Chart Image]

On the Select Data Source window that pops up, under Legend Entries (Series), select the first series and click on Edit (circled in red below).
On the Edit Series window that opens: under Series Name, choose the cell on your new table that names this series of data. (In the example below, My parents would disapprove of me drinking). Note that I had to move the Edit Series window over so that I could choose the appropriate cell, Q21.

Under Series Values, click on the icon to select cells from the table. This collapses the Edit Series window. Again, you may need to move the window over to select the data cells from your table (including those shaded cells if needed for the benchmark line). In the example below, we have no state
benchmark data, so we selected Cells R24 through R33. Click on the icon again to expand the window, then click on OK to exit the Edit Series window.

If needed, do the same to edit the second series, the benchmark data. In our example, we have no benchmark data, so we will remove the second series (select it and then Remove, circled in red below).

Next, to edit the years, in the Select Data Source window under Horizontal (Category) axis labels, select Edit. On the Axis Labels window that opens, select the cells for years from your new table (as depicted below), plus the shaded rows before and after those years if your data contains a benchmark line. Click OK to exit the Axis Labels window and OK to exit the Select Data Source window.
Now your new table and chart are linked. You’ll need to do some reformatting of the chart’s colors, labels, and title: see the Format Chart section below for instructions.

**To create a chart from scratch in the same style as these templates:**

Create a table of data. Then select the local data to be displayed in the chart. For example, on the first table, Youth Current Drinkers, we’d select cells B24-B33.

Insert a column chart: in Excel 2013, go to the Insert tab at the top of the screen (circled in red below). Choose the column chart icon from the Chart menu (in the top center of the screen, circled in red below), then choose the first option in the dropdown menu (circled in red below).
If the chart that opens is on top of your data, move the chart over: click anywhere on the chart and drag it to where you want it.

Add benchmark (e.g., state average) data: Right click on the chart plot area (in the space around the bars of data, not on the bars themselves) and choose “Select Data” from the drop down menu (circled in red on the diagram to the right).

On the Select Data Source window, under Legend Entries (Series), choose Add (circled in red below).

On the Edit Series window that opens: under Series Name, choose cell C4 (State Average). Under Series Values, click on the icon to collapse the pop-up window and select cells from the table. In this example, we’d select cells C23-C34.
Click on OK to exit the Edit Series window. Stay in the Select Data Source window for the next step. Add the years on your X-axis: In the Select Data Source window, under Horizontal (category) axis labels, select Edit (circled in red below).

On the Axis Labels window that opens, click on the icon to collapse the pop-up window and select the years from your table, plus the rows before and after those years if you have a benchmark line (Cells A23-A34 in our example below).
Click on the icon to expand the pop-up window, then on OK to exit the Axis Labels window. Stay in the Select Data Source window for the next step.

Make your local data line up with the correct year (adding those blank years has thrown it off): under Legend Entries (Series), choose Series 1 and click on Edit (circled in red below).

On the Edit Series window that opens: ignore Series Name. Under Series Values, click on the icon to collapse the pop-up window and select cells from the table. In this example, we’d select cells B23-B34 (including the shaded cells). Click on the icon to expand the pop-up window, then OK to exit the Edit Series window, and OK to exit the Select Data Source window.

Turn your benchmark data into a line: on your chart, select the columns of data that show the state average by clicking once on one of the columns (all of them should be selected with when one is clicked on once).

Right click, and choose Change Series Chart Type from the dropdown menu (circled in red on the diagram to the right).
At the bottom of the Change Chart Type window that opens, find “State Average” under series name. Choose the first icon for line chart, circled in red below. (Leave Series 1 as a clustered column chart.) Click OK to exit. You now have a benchmark line for statewide data. You’ll need to format the style of your new chart; see the next section for details.
Format Chart Style:

Make the data columns straw-colored with no border and wide. Select the columns of local data by clicking on one of them. (Just click once. If you click twice, you’ll select just one column. Then you’ll need to unselect it by clicking somewhere else on the chart, and then try again.) Right click and choose Format Data Series. The Format Data Series window opens to the side. Click on the bucket icon near the top of this window, then click on FILL to expand the menu. Select Solid fill. To choose the straw color: on the FILL menu, click on the bucket icon to the right of “Color” to open the color palette. Select More Colors (circled in red below).

Click on the custom tab of the Colors window. Select RGB for Color Model and enter this RGB code: Red: 223; Green: 204; Blue: 116. Click OK to exit the Colors window.

Still in the paint bucket tab of the Format Data Series window, click on Border and select “no line”. This removes the blue outline around the columns of data.

Make the columns wider, click on the third tab of the Format Data Series window, the columns icon. Decrease the Gap Width to 80% (circled in red below). Exit the Format Data Series window by clicking on the X in the upper right corner.
Add labels to your data columns: Select the columns of local data by clicking on one of them. Right click, choose Add Data Labels (selected below), and then again on the menu that opens to the side, choose Add Data Labels. [Note the plural: if the menu says “Add Data Label,” you’ve selected just one column by accident (likely by clicking on it twice). Unselect it by clicking on a different part of the chart, then click again (just once) on a column to select them all.]
Labels have been added to your chart. The default is to have these labels outside the columns. Some say this distorts the data by making the columns look taller than they are. To change the placement of the data labels, select the data labels by clicking once on one of them. (If you double click, just one column will be selected, and you’ll need to unselect it by clicking on another part of the chart and then trying again.) Right click, then select Format Data Labels (circled in red below).

The Format Data Labels window opens to the side. On it, under label position, select Inside End (circled in red below). Exit the Format Data Labels window
**Format the font for data labels on columns.** Select all data labels for your columns by clicking on one. On the Home tab at the top of your screen, change the font to Corbel and the font size to 10.5. Change the font color to dark gray. Note: The CHIA Dashboard uses Corbel because it is a nice looking sans serif font that comes standard with all versions of Microsoft Office. However, we strongly recommend an alternate condensed font, such as Franklin Gothic Condensed (available for free download online at http://fontsgeek.com/fonts/Franklin-Gothic-Std-Condensed, click on ZIP download, then open the downloaded file and click on Install). If you choose a different font, stay away from Arial or Calibri, as these are overused and can make your work look boring.

**Format the benchmark line's color.** Select all data points on the benchmark line by right clicking once on one of them. (If you click twice, you will mistakenly select just one data label). Choose Format Data Series from the dropdown menu. The Format Data Series window opens to the side. Click on the color bucket, then click on FILL. To choose the burnt orange color: click on the bucket icon (to the right of Color on the FILL menu). Select More Colors at the bottom of the color palette that opens. Click on the custom tab. Choose RGB as the Color Mode and enter this RGB code: Red: 190; Green: 81; Blue: 8. Click OK to exit, then exit the Format Data Series window.

**Add a name label to the first point on your benchmark line.** Click on the benchmark line (all points will be selected), then click on just the left-most data point to select just this point. Right click, choose Add Data
Label, and on the dropdown menu that opens to the side, select Add Data Label again. [Note the singular (not Labels). If plural, go back and click on just the one data point again to select only the one.]

The default is to have this label be a value to the right of the data point. To change that, select the data label (currently a number value) by clicking on it **twice**, right click, then select Format Data Label (note the singular). The Format Data Label window opens to the side. On it, on the Label Position tab (the columns icon), under Label Options, select Series Name and de-select value. Make sure “Show leader lines” is unchecked. Under Label Position, choose Left. (See example below). Exit the Format Data Labels window.

With that data label still selected, on the Home tab, change the data label font to Corbel size 10.5 and change the font color to burnt orange (that color should now show up on the color options bar as recently selected, or see RGB code in the part above on formatting the benchmark line’s color).

**Add a value label to the last point on your benchmark line.** Click once on the benchmark line (all points will be selected), then click on just the right-most point. Now just this point will be selected. Right click, choose Add Data Label, then again Add Data Label. To change the position of the label, select the data label by clicking on it, right click, then select Format Data Label. The Format Data Label window opens to the side. On it, on the Label Position tab (the columns icon), under Label Position, choose Right. Exit the Format Data Labels window. With that data label still selected, change its font to Corbel 10.5 and its
color to burnt orange (that color should now show up on the color options bar as recently selected, or see RGB code in the part above on formatting the benchmark line’s color).

**Simplify the chart’s look so that viewers can focus on the data.** This is best practice for data visualization. Delete the following by selecting it, right clicking, and choosing delete:
- The vertical y-axis
- The major gridlines (they run horizontally at regular intervals through the plot area, see example below)
- If working in Excel 2013: the chart title. Because of a quirk of Excel 2013, chart titles cannot be resized, so we insert a text box instead. To do so, click on the chart plot area, go to the Insert tab at the top of your screen, and select text box. Format the box so it has no border line and no fill color. Add a descriptive title (see next section).

![Chart Image]

**Add a one-sentence title** that describes what the data is saying. For more on this, see [http://stephanieevergreen.com/how-to-rock-the-text-in-your-data-visualization/](http://stephanieevergreen.com/how-to-rock-the-text-in-your-data-visualization/). In Excel 2013, title boxes cannot be resized or moved. Use this workaround: delete the title box and insert a text box (Select Text Box on the Insert tab). Format the title: Corbel size 12, bold, dark gray color.

**Format the x-axis.** Click on the horizontal axis of years. Change font to Corbel 10 and the color to dark gray.

**Resize the plot area.** Depending on your chart, you may need to resize the plot area so that all the elements fit and are aligned with other charts on your dashboard. To do so, click on the chart’s plot area so that a box appears outlining its shape. Drag one of the handles (bubbles in the middle of each line) down, up, or sideways to resize. You'll need to keep the plot area consistent across charts: the benchmarks should all start at about the same position on the page, and the maximum vertical axis value should also be consistent.
In the example below, the plot area is outlined. It has been resized: we pulled the top handle down so that the title fit, and pulled the left side handle to the right so that the label State Average fits.

In 2013, our percent of youth current drinkers fell below the state average again.

If needed, change the placement of data labels so they can be clearly seen. Sometimes, the benchmark line is right on top of the local data label. To move it slightly up or down, double click on the data label and drag it a few millimeters to a new place.

Copy the chart and paste it to the dashboard or another document. Right click on the chart, making sure the whole chart is selected, and select copy. Go to the Dashboard tab and paste it to your desired location (right click, paste). Make sure any added chart elements have been copied, especially shapes, like the arrow used in the sources of alcohol for youth chart; you may need to copy and paste these separately. For a clean look on your Dashboard tab, remove the border from the chart by selecting the chart, right click, and select Format Chart Area. On the paint bucket tab of the Format Chart Area window, under Border, select No Line.
About the Data Sources

About the Youth Risk Behavior Survey (YRBS)

The YRBS survey is used to produce statistics in a variety of areas related to young people's health, including, for example:

- depression
- suicidal ideation
- alcohol, tobacco and other drug use
- sexual behavior
- homelessness and housing instability
- bullying and harassment
- experiencing violence
- sleep
- exercise
- nutrition
- social connectedness

These risk behaviors result in the most significant causes of both mortality and morbidity during youth and adulthood.

Advocating for YRBS

Do your community's middle and high schools implement the YRBS? If not, advocate for its use both online (Wisconsin Online YRBS, for both middle and high schools) and, if selected by the Centers for Disease Control and Prevention (CDC), as a sample high school for the state (official paper-based Wisconsin YRBS, high school only). The Wisconsin Department of Instruction (WI DPI, http://dpi.wi.gov/sspw/yrbs) has a template letter of support to send to a school principal in the event your high school is selected for the state sample (WI YRBS).

To advocate for either the online YRBS or the official paper-based WI YRBS, talk to school administrators about the importance of this data to your coalition's efforts. YRBS data can help guide the assessment and prioritization of needs, the choice of appropriate interventions, the evaluation of efforts, and the securing of funding and community support. Collect stories from others: how does YRBS data help other community efforts? If possible, show school administrators publications in which YRBS data is used (consider the health department’s community health assessment and community health improvement plan, the hospital’s community health needs assessment, and coalition documents and websites). Finally, stress that the YRBS is the only free survey of youth risk behavior that provides the
opportunity for comparing local data to state and national figures. However, use caution when comparing local data to state and national rates: note that the survey methodologies are different when comparing local Online YRBS data to state and national figures that use official paper-based YRBS surveys in a representative sample of high schools selected.

The Online YRBS: for Local Data

Looking for a way to assess your students' safety and health behavior? A free service for Wisconsin school districts and their community partners.

Wisconsin school districts, private schools, tribes, CESAs, and county agencies (i.e., public health, human services, 51.42 boards) can use the Wisconsin Online Youth Risk Behavior Survey (OYRBS) system to gather local student self-reported data on health behaviors, attitudes and perceptions, and protective factors. These data can help raise awareness of important health issues, influence societal norms and perceptions, show the need for funding, and capture the need for, and monitor the impact of, prevention programs for school-aged youth.

- Wisconsin Department of Instruction website

Each school can choose the questions asked on their Online YRBS. Your coalition may want to advocate for the state's current standard set of alcohol-related questions so local data can be compared at the state and national levels (most of the alcohol-related questions asked in the official state survey mirror those asked on the official national survey).

Your coalition may also need to take steps to have access to data at the school and/or county level. Many schools are not comfortable with sharing their school-specific YRBS data with an outside agency, but are open to having their data aggregated with that of other schools in the county that implement the Online YRBS. WI DPI or your local CESA office may be able to help advocate for the YRBS and/or assist with data aggregation. If you are working with schools individually to advocate for the sharing of countywide Online YRBS data, offer to sign a written MOU about how data will be shared (e.g., only countywide data will be shared with coalition members and the public; school-specific data will not be shared).

Frequency: Schools can choose to implement the Online YRBS at intervals of their choosing. Some Wisconsin schools conduct the survey every year, and some every other year. You may want to advocate for timing the online survey as close as possible to the official Wisconsin paper-based YRBS sample (see section below) to achieve more comparable results.

Geographic Levels: School-level. School district and aggregated county data may be available locally. See above for tips on how to advocate.

Demographic Categories: Grade level, age, gender, race/ethnicity, and other factors.
Strengths: YRBS data can be broken down by grade level, gender, race/ethnicity, and other factors.

Limitations: Data may not be weighted at the school or county level. (State and national data are weighted.) The Online YRBS is a school-based survey, so students who have dropped out of school are not represented. It is also subject to bias due to self-report, non-coverage (refusal by schools to participate), and non-response (refusal/no answer). Estimates for some subgroups may have relatively low precision (i.e., large confidence intervals).

**The Official Paper-Based YRBS: for State and National data**

The Wisconsin Youth Risk Behavior Survey (WI YRBS) is a paper-based survey conducted by the WI DPI as part of a national effort by the CDC. The WI YRBS is conducted every two years (in odd-numbered years) in a random sample of public high schools chosen by the CDC. This survey provides official statewide statistics, not local-level data. Results from the Online YRBS, used for local level data, are not aggregated at the state level. Because of the different survey methodologies used at the local and state/national levels, proceed with caution when making comparisons.

Source of Wisconsin YRBS data: download Summary Table at [http://dpi.wi.gov/sspwyhrs](http://dpi.wi.gov/sspwyhrs).

Source of National YRBS data: [http://www.cdc.gov/healthyyouth/data/yrbs/index.htm](http://www.cdc.gov/healthyyouth/data/yrbs/index.htm)

Frequency: Biennial, however, weighted data is not always achieved at state level.

Geographic Levels: National & State. (School district and aggregated county data may be available locally for the Online YRBS—see section above.)

Demographic Categories: Grade level, age, gender, race/ethnicity, and other factors.

Strengths: YRBS data can be broken down by grade level, gender, race/ethnicity, and other factors.

Limitations: Weighted representative samples are not available for all states. (For example, Wisconsin did not achieve weighted data in 2015 because too many schools selected by the CDC for the state sample refused to participate.) YRBS is a school-based survey, so students who have dropped out of school are not represented. It is also subject to bias due to self-report, non-coverage (refusal by selected schools to participate), and non-response (refusal/no answer). Estimates for some subgroups may have relatively low precision (i.e., large confidence intervals).

**About the Behavioral Risk Factor Surveillance System (BRFSS)**

The Behavioral Risk Factor Surveillance System (BRFSS) is the nation's premier system of health-related telephone surveys that collect state data about U.S. adult residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. For larger geographical areas, data can be stratified by age (starting with the range of 18-24), gender, employment status, education,
race/ethnicity, and other factors. BRFSS data are weighted to represent the state's non-institutionalized adult population ages 18 and older.

Starting with 2011, BRFSS began including both landline and cell phone interviews, obtained from separate samples and later combined and weighted by the U.S. Centers for Disease Control and Prevention (CDC). Prior to 2011, only landline telephone numbers were sampled. Estimates using combined landline and cell phone BRFSS data from 2011 and forward should not be directly compared to estimates from earlier years, when only landlines were used.

Binge drinking data at the levels of state, county, and City of Milwaukee are available by WISH (Wisconsin Interactive Statistics on Health) query: https://www.dhs.wisconsin.gov/wish/brfs/form.htm. Use the Trend Module (this module includes only topics that have appeared in the survey since 2000).

Instructions for using the Trend Module to get binge drinking data:

- Step 1: Choose a topic: binge drinking.
- Step 2: Choose age-adjusted results (for a more accurate comparison of your data with other geographic regions).
- Step 3: Choose Geographic Areas as a column variable.
- Step 4: Choose Survey Years. IMPORTANT: For results on smaller counties, you must select multiple years of data (hold down the control key and select the desired years). All counties in Wisconsin are represented in query results when 3 years -- e.g., 2014, 2013 and 2012-- are all selected. For larger counties, data may be available annually or in two-year periods. Experiment to get the best data for your area. The BRFSS tab has 9 columns available for entering local data (Columns F through N, with most of these hidden; see the section Enter Your Data for instructions for unhiding columns).
- Step 5: Choose a Geographic Area.
  - For local data, select "County" and then choose one or more counties. (Or select "Milwaukee" and then choose city and/or surrounding area.)
  - Select "Statewide" for the Wisconsin average.

Source of National BRFSS data: by query at http://www.cdc.gov/brfss/brfssprevalence/. You must formulate the US average (click on cell Q4 to see formula).

County Health Rankings and Roadmaps provides a concise synopsis of the strengths and limitations of BRFSS data (http://www.countyhealthrankings.org/measure/excessive-drinking):
A study evaluating the reliability and validity of the self-reported BRFSS measures found the reliability (repeatability) of the BRFSS alcohol consumption data to be high. Validity (accurate representation) was found to be moderate but sufficient given the difficulty in assessing the validity of people’s reports of their own alcohol use. Using self-reported survey data to assess excessive drinking has limitations: First, excessive drinking is often underreported in surveys because of recall bias, social desirability response bias, and non-response bias. Second, BRFSS changed the definition of excessive drinking for women in 2006; this means that there will be a higher prevalence in recent years compared to prior years for women. Third, the measure does not include youth drinking prevalence. Some US states and counties administer a Youth Behavioral Risk Surveillance Survey, but there is not adequate coverage or consistent enough methodology to aggregate the results to represent all counties across the country. Binge drinking accounts for 90% of alcohol consumption for youth ages 12-17. Having a measure that includes youth binge drinking would be beneficial for understanding youth drinking patterns in different counties.

**About the Epi Report (Wisconsin Epidemiological Profile on Alcohol and Other Drug Use):** used on the Arrests Epi Report tab: OWI and Liquor Law Arrests; and the Hospitalizations Epi Report tab: Alcohol-Related Hospitalizations

The Wisconsin Epidemiological Profile on Alcohol and Other Drugs is a compilation of alcohol and other drug use data from various sources. From each data source, it presents the most recent available year of data, as well as trend information for previous years and U.S. comparisons when available. County-level data tables are included to assist in developing local needs assessments and evaluations.

– Executive Summary, 2016

The Epi report has been published every two years since 2008 and is available at: [https://www.dhs.wisconsin.gov/stats/aoda.htm](https://www.dhs.wisconsin.gov/stats/aoda.htm). These reports are prepared by the Division of Care and Treatment Services, University of Wisconsin Population Health Institute, and the Division of Public Health, with funding provided by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA).

**Arrests Epi Report tab**

**OWI and Liquor Law Arrests: Rate per 100,000 population**

Operating a Motor Vehicle While Intoxicated (OWI) is defined as having a Blood Alcohol Concentration (BAC) of .08 or greater. ... Wisconsin is the only state where the first OWI offense is a traffic violation. The first OWI offense is only criminalized if the driver is convicted of causing injury or death while operating while intoxicated or if a person under age 16 is present in the vehicle. Nevertheless, Wisconsin has 1.2 times the national rate of OWI arrests, and 2.9 times the national rate of other liquor law violations. ...
According to the Wisconsin Department of Justice, liquor law violations are “violations of state or local laws or ordinances prohibiting the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages, not including driving under the influence and drunkenness.”

- Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2016, p. 30-31.


- For county and state rates, see Table: Operating a motor vehicle while intoxicated (OWI) and liquor law arrests, rate per 100,000 population, Wisconsin by county.

More recent data may be available from local law enforcement agencies and/or Arrests in Wisconsin, an annual report by the Wisconsin Department of Justice:
https://wilenet.org/html/justice-programs/programs/justice-stats/library.htm with population data from Wisconsin Interactive Statistics on Health (WISH) population module:

It is important to talk to local law enforcement leaders about how to interpret changes in arrest rates. A lower arrest rate could be caused by less problem behavior or less enforcement, for example.

- For national rates, see Figure 10. Arrests (adult and juvenile) for operating a motor vehicle while intoxicated (OWI), rate per 100,000 population, Wisconsin and the U.S. and Figure 11. Liquor law arrests (adult and juvenile), rate per 100,000 population, Wisconsin and the U.S.

Data source for the 2016 Epi Report: Wisconsin Uniform Crime Reporting (UCR) Data Dashboard Center, Bureau of Justice Information and Analysis (BJIA), Wisconsin Department of Justice. Note: Wisconsin Department of Natural Resources and Division of State Patrol crime data are included in the statewide total, and are not included in specific counties.

Data source for previous Epi Reports: Arrests in Wisconsin, 2005 to 2012. Statewide rate calculations include arrests not identified by county. Arrests in Wisconsin, an annual report by the Wisconsin Department of Justice, provides numbers of arrests among adults and juveniles at the state and county levels (https://wilenet.org/html/justice-programs/programs/justice-stats/library.htm). According to the Epi Report (2016), 18% of all liquor law arrests in Wisconsin were of juveniles in 2014.

Note: More recent local data may be available from local law enforcement agencies, and again, it is critical to talk to local law enforcement leaders about how to interpret changes in arrest rates.

**Hospitalizations Epi Report tab**
Estimated Rate of Alcohol-Related Hospitalizations: Rate per 100,000 population


For this estimate of alcohol-related hospitalizations, the Epi Report uses 1) Wisconsin hospital inpatient discharge database, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services, and 2) the Alcohol-Related Disease Impact (ARDI) specifications from the CDC (see https://nccd.cdc.gov/DPH_ARDl/default/default.aspx). The ARDI specifications define 54 conditions or groups of conditions and associate each with a distinct fraction of cases attributable to alcohol. Staff from the Office of Health Informatics used the ARDI specifications to identify hospitalizations for these conditions with the ICD-9-CM codes specifying the principal diagnosis and the first eight other reported diagnoses. Total alcohol-attributable hospitalizations were then estimated by multiplying the number for each condition by the associated alcohol-attributable fraction and summing over conditions. [ICD-9 is the 9th revision of the International Classification of Diseases system defined by the World Health Organization. The clinical modification (CM) or ICD-9, or ICD-9-CM, for use in hospitalization diagnosis coding, is defined by the US Centers for Medicaid Services and updated annually.]


Hospitalization numbers and rates are based on patient's county of residence.

Note that Wisconsin Public Health Profiles (https://www.dhs.wisconsin.gov/stats/pubhealth-profiles.htm) reports on alcohol-related hospitalizations using ONLY data from the Wisconsin hospital inpatient discharge database (Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services). Alcohol-related hospitalizations on the Public Health Profiles are broken down by age group (18-44; 45-64); average length of stay and cost are also provided. However, in the Wisconsin Public Health Profiles, diagnostic definitions used for the categories are based on the principal diagnosis. That is, an alcohol-related diagnosis (Alcohol psychoses, Alcohol dependence syndrome, Alcohol abuse, Alcoholic polyneuropathy, Alcoholic cardiomyopathy, Alcoholic gastritis, Chronic liver disease and cirrhosis, or Excessive blood level of alcohol) must be the principal diagnosis for the hospitalization to be categorized as alcohol-related. The Public Health Profiles do not provide estimates for alcohol-attributable hospitalizations that do not have an alcohol-related principal diagnosis. For example, a hospitalization due to a fall injury would likely have a primary diagnosis of injury, and not be categorized as alcohol-related, even if alcohol was involved. The Alcohol-Related Disease Impact (ARDI) specifications from the CDC estimate that 32% of all fall deaths are attributable to alcohol.
Outlet Density tab

Municipal clerks annually report the number of alcohol licenses to the Wisconsin Department of Revenue (DOR). The Outlet Density tab uses three main data sources: DOR data as reported in county-specific 2012 Density Reports; compilations of local DOR 2015-6 licensing data maintained by Julia Sherman of the Wisconsin Alcohol Policy Project; and local population estimates from the Wisconsin Department of Administration, Demographic Services Center. Due to differences in how DOR data was compiled, there may be discrepancies between the 2012 Density Reports and more recent data.

For 2007-2012 data: Wisconsin County Alcohol Outlet Density Reports, Alcohol License Overview for ### County, 2012. Here called “Density Reports,” these were a joint project of the Wisconsin Department of Health Services and the Wisconsin Alcohol Policy Project. Each county report lists alcohol outlet density by municipality using Department of Revenue data. Strategies for addressing outlet density are also suggested. As of March, 2017, there are no plans to publish reports in this format in 2017. The 2012 reports are available at: https://www.dhs.wisconsin.gov/aoda/alcdensity.htm.

For 2015-16 licensing data: Department of Revenue data compiled by municipality and county by Julia Sherman, coordinator of the Wisconsin Alcohol Policy Project: 608-262-0370 or julia.sherman@wisc.edu. For 2015-16 population data: The Wisconsin Department of Administration, Demographic Services Center annually produces population estimates for Wisconsin counties and municipalities, available at http://www.doa.wi.gov/divisions/intergovernmental-relations/demographic-services-center/estimates.

For state and national figures on People per License and Licenses per 500 People in Columns V, W, AC, and AD: The Fact Book 2013 (The Beverage Information Group), pages 12-13 reports on total number of licenses. More recent state and national data may be available. The Fact Book is an annual publication, but the 2016 edition costs $525 to purchase: https://beverage-handbook-store.myshopify.com/products/2016-fact-book?variant=12903981700. State and national population estimates are from the U.S. Census. Since every state licenses alcohol differently, national figures and comparisons across states can be problematic.

Alcohol outlet density is just one measure of the retail availability of alcohol. For on-premises locations (class B), the occupancy of each establishment is another important factor. For off-premises, shelf space devoted to alcohol is another indicator.

Unlike other data source tabs on the dashboard, no sample objectives are offered on the Outlet Density tab, as each coalition will need to determine the municipality/ies on which to focus licensing efforts and an appropriate objective, depending on local conditions.
DFC or STOP Act tab
Drug-Free Communities Support Program (DFC) Alcohol-Related Core Measures (2016)

The 2016 DFC and STOP Act Core Measures provided on this tab are for informational purposes only. If awarded a DFC or STOP Act grant, you'll be required to track the measures specified by the grant at that time and submit your indicators and survey questions to the DFC evaluator for approval.

The Drug-Free Communities Support Program (DFC) is a Federal grant program that provides funding to community-based coalitions that organize to prevent youth substance use. Current or former DFC grantee communities can also apply for a Sober Truth on Preventing Underage Drinking Act (STOP Act) grant. The purpose of the STOP Act grant program is to prevent and reduce alcohol use among youth ages 12-20.

Note that only one measure, Youth 30 Day Use, correlates to data provided by one of the sources used on the Dashboard. Cells in Row 4, including in hidden Columns I through N, pull data from the YRBS tab. Note that headers are not pulled from the YRBS tab and may need to be adjusted.

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For feedback and questions on the CHIA Sample Dashboard, please contact Sara Jesse, CHIA Project Manager, at sara.jesse@badgerbay.co or 608-432-3042; or contact WALHDAB at WALHDAB@badgerbay.co or 920-560-5635.

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