CDRT Instruction Guide

Community Disaster Risk Tool (CDRT) Overview

The Healthcare Ready Community Disaster Risk Tool is made up of four different tabs, each highlighting specific information by county:

1. **Chronic Condition Prevalence** highlights the prevalence of 21 chronic conditions within a county if they are greater than the National Prevalence Rate.
2. **Healthcare Infrastructure** communicates recent COVID-19 data including the number of active COVID cases and vaccination rates, as well as information and a map for exploration of healthcare infrastructure per county.
3. **Population Information** communicates information on the population of a county by age and demographic, as well as a breakdown of Federal Disaster Declarations by county.
4. **Natural Hazards** displays information on the percent of the county which is at elevated risk for either earthquakes, flood, or wildfires.

To switch between these tabs, **click** on the requested tab along the top of the workbook. This will take you to the requested visualization.

Each tab includes a map on the left side of the visualization and additional information on the right. Additionally, each map will display a **tooltip** when hovering over, or clicking on an individual county. The tooltip is a pop-up display that appears over the map, and contains statistics at the county level relating to the tab within the tool the user has active. These range from natural hazard potential, to healthcare infrastructure statistics to population demographic breakdowns.

Searching for a county: In all tabs, you would like to search for a county, hover over the main map anywhere, and a magnifying glass icon will be displayed in the upper right corner of the map. From here, a search bar will appear in the top right corner of the map. Type the name of the requested county into the bar, then hit enter to zoom the map into that county.

- To zoom out, utilize the scroll function of your mouse to obtain a more complete view of the selected county and its neighbors.

Chronic Condition Prevalence

The Chronic Condition Prevalence map highlights chronic conditions prevalent in a county. The prevalence data in this map reflects only the population of patients utilizing Medicare or Medicaid. Because of this limitation, we are unable to display prevalence in terms of number of individuals in a county with each condition. Instead, we calculated a ratio of the county chronic condition prevalence to the national chronic condition prevalence. A value greater than 1.00 signifies that the county chronic condition prevalence rate is greater than the national chronic condition prevalence rate.

Additionally, chronic conditions data is cross-referenced with county natural hazard data, to present issues arising from the intersectionality between chronic conditions and natural hazards.

- The legend of this map communicates the number of chronic conditions for which the county prevalence rate is greater than the national chronic condition prevalence rate. Out of a maximum of 21, the deeper red a county is colored, the greater the number of chronic conditions prevalent in the county.
- To see which chronic conditions are most prevalent within a county, **hover** or **click** on a county within the map. This will display the tooltip, which shows the county condition prevalence to national condition prevalence ratios. *A condition will only appear in the tooltip if its prevalence ratio is greater than or equal to 1.00 for the selected county*
    - The county specific information will remain on the map as long as the mouse cursor is **hovered** over the selected county or the text pop up displayed.
    - Interpreting the chronic condition ratio: A value greater than 1.00 ratio indicates a higher prevalence for the condition within that county compared to the rest of the US. For example, a value of 1.50 would signify that this county has 150% of the national prevalence for that chronic condition. Ratio values with a value less than 1.00 are not included in the tool visualization.

- To see the overlap between natural hazard exposure tracked by the CDRT (flooding, earthquakes, and wildfires) and chronic conditions, click on a county within the map. This action will populate the text box on the right side of the visualization, which contains information on the factors natural hazards could exacerbate in regards to the chronic conditions most prevalent within the county.
- The name of the last selected county will be displayed on the top right side of the visualization. Both this and the text box on the right side will continue displaying information regarding the last selected county on the map. To refresh these boxes, click another county.
- To repopulate all of the counties in the country, **click** on the map outside a county boundary. We recommend clicking above, or below the continental US.
- To be taken to additional resources regarding Chronic Conditions and Natural Hazards, **click** on the yellow button I the bottom right corner of the large map which says "Further Information on Chronic Conditions and Hazards" in blue text.
    - This will open a new webpage within your web browser.

Healthcare Infrastructure
The Healthcare Infrastructure Tab displays information on four types of healthcare facilities in each county: hospitals, pharmacies, federally qualified health centers (FQHCs) and dialysis centers. The tooltip also displays information on the total population within a county, active COVID-19 case counts, and number of individuals who have received a full COVID-19 vaccination. Finally, the tooltip displays the county average Health Professional Shortage Area (HPSA) score, a score that communicates how understaffed hospitals within the county are – the higher the score, the more understaffed hospitals in the county are.

HPSA information is displayed in two ways:
1. **HPSA score**: The HPSA score is calculated as an average score from hospitals within the county. This score has a possible value from a minimum of 0 to a maximum of 26, with a higher score signifying priority for placement of healthcare professionals.

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2. **HPSA average shortage score**: The second score, the HPSA average shortage score, shows the number of full-time equivalent healthcare practitioners needed to reach the appropriate population to practitioner ratio. Please be aware that HPSA scores are calculated using specific location scores, which are only applicable to hospitals. Therefore, a score of zero will be displayed if there are no hospitals within a specific county.

- The map legend for the main visualization displays a heat map of the hospitals per 100,000 people per county, and can be found in the lower left corner of the visualization.
- The Healthcare Facilities map legend can be found in the bottom right side of the visualization. This legend shows that each type of healthcare facility is a separate color dot on the Healthcare Facilities map – hospitals are grey, pharmacies are purple, and dialysis centers are green. FQHCs are not mapped on the minimap.
    - To view only one of the three possible healthcare facilities in the mini map at a time, **click** the desired healthcare facility (Hospital, Pharmacy, or Dialysis Center) within the legend near the bottom right side of the visualization.
        - This will filter the selection within the Healthcare Facilities Location map to only this type of facility.
- Hover over a county to see county-specific information.
    - The county-specific information will remain on the map as long as the mouse cursor is **hovered** over the selected county or the text pop up displayed.
- To visualize the location of healthcare facilities within a specific county, **click** on a county on the main map – the Healthcare Facilities map on the right of the visualization will re-populate for the selected county, showing hospital, pharmacy, and dialysis center locations.
    - The name of the last county selected on the healthcare map, as well as the name of the county displayed within the Healthcare Facilities map is displayed in the top right corner of the visualization. This will refresh once a new county is selected from the map on the left side of the visualization by **clicking** on it.
    - This map can be explored further to see the locations of specific healthcare facilities by hovering over the mini map in the top right corner. Facility names and addresses can be seen by hovering over the colored dots on the mini map.
- There is a table halfway down the right side of the visualization, displaying overall statistics on the number of hospitals, pharmacies, dialysis centers, and FQHCs within the county displayed on the Healthcare Facilities map.
    - This table will be updated to the corresponding state once a new county is selected from the map on the left side of the visualization, performed by **clicking** on the requested county.
- To repopulate all of the counties in the country, **click** on the map outside a county boundary. We recommend clicking above or below the continental US.
- To be taken to additional resources regarding Healthcare Infrastructure, **click** on the yellow button I the bottom right corner of the large map which says "Further Information on Healthcare Infrastructure" in blue text.
    - This will open a new webpage within your web browser.

Population Information

The Population Information map communicates background information to assist users in understanding the population within their county to help inform the needs of their constituents. This information is specific to each county, and includes total population and population demographics. The tooltip also includes the number of FEMA Disaster Declarations per county in the last 5 years, the number of FEMA Disaster Declarations per county in the last 10 years, and the date and incident type of the most recent disaster declaration for a selected county.

- For more specific information regarding socioeconomic information potential per county, **hover** or **click** over a county.
  - The county specific information will remain on the map as long as the mouse cursor is hovered over the selected county or the text pop up displayed.
- The pie chart in the top right of the visualization initially displays the population of the US as separated by demographic. This pie chart will be automatically updated to the specific population of a county **once the county has been clicked on.**
  - From here, **hovering** over individual slices of the population pie chart will communicate the underlying statistics on demographic population per county.
  - Once the chosen county has been unselected from the overall map, the population pie chart will revert to showing the demographic breakdown of the US in total.
- The table on the right side of the visualization communicates demographic information specific to the state and the county, based on the **last selected county.**
  - This table will **not** revert to previous data once no counties are selected.
  - To update this table, select a new county on the large map on the left side of the visualization.
- To repopulate all of the counties in the country, **click** on the map outside a county boundary. We recommend clicking above, or below the continental US.
- To be taken to additional resources regarding Population Information, **click** on the yellow button at the bottom right corner of the large map which says "Further Information on Population Information" in blue text.
  - This will open a new webpage within your web browser.

Natural Hazards

The Hazards tab of the CDRT shows heat maps relating to the potential for major natural disasters per county in the US. These are calculated as the percentage of the county that has a significant risk for the mapped natural hazards – wildfires, floods, and long-term seismic activity. More in depth statistics relating to these hazards can be found by hovering or clicking on a specific county.

To utilize this map,
- Select the hazard you wish to view from the dropdown menu at the top of the table – either Flood Hazard, Seismic Hazard, or Wildfire Hazard.
  - The legend for each of the hazard maps is labeled, and found on the right side of the visualization.
  - Filters for specific natural hazards can also be found on the right side of the visualization, labeled per natural hazard selection made from the drop-down menu.
    - Note: Two of the three legends and filters will be inoperable at any given time, as each of these is tied to a specific map chosen from the drop-down menu.

Should those hazard maps not be chosen, these filters will display a "NULL" value.

- o To filter counties by hazard potential, drag the slider under the legend for the displayed hazard on the right side of the visualization. This will show only counties that fall in the selected hazard potential range.
- o For more specific information regarding the natural hazard potential per county, hover over the county for which the information is requested.
    - ▪ This information can be kept on the visualization by continuing to **hover** over the selected county, or the pop-up text window

- To repopulate all of the counties in the country, simply **click** on the map outside a county boundary. We recommend clicking above, or below the continental US.
- To be taken to additional resources regarding Natural Hazards, **click** on the yellow button I the bottom right corner of the large map which says "Further Information on Tracked Natural Hazards" in blue text.
    - o This will open a new webpage within your web browser.