

# Using a conceptual model to guide secondary data analysis–Gelberg-Andersen’s behavioral model and access to care

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## Summary

In this exercise, students learn to organize data into a coherent story by applying Gelberg-Andersen’s behavioral model to investigate health disparities in accessing to care from two different geographic locations in the United States. The Gelberg-Andersen’s behavioral model will be introduced to the students first. Students will then select an aggregate population from each of two geographic locations to compare their access to care by looking into the impact of relevant factors described in Andersen’s behavioral model. To complete the assignment, students will need to create a diagram with the identified variables listed and present the results.

## Learning Goals

By completing this module, students will be able to:

- Extract key socio-economic and demographic information from the American Community Survey
- Use theory to guide data collection and analysis
- Examine health disparities in the U.S. by using real data
- Test hypotheses using quantitative data from the Center for Disease Control (CDC) and the American Community Survey
- Interlink summary report from two nationally representative datasets

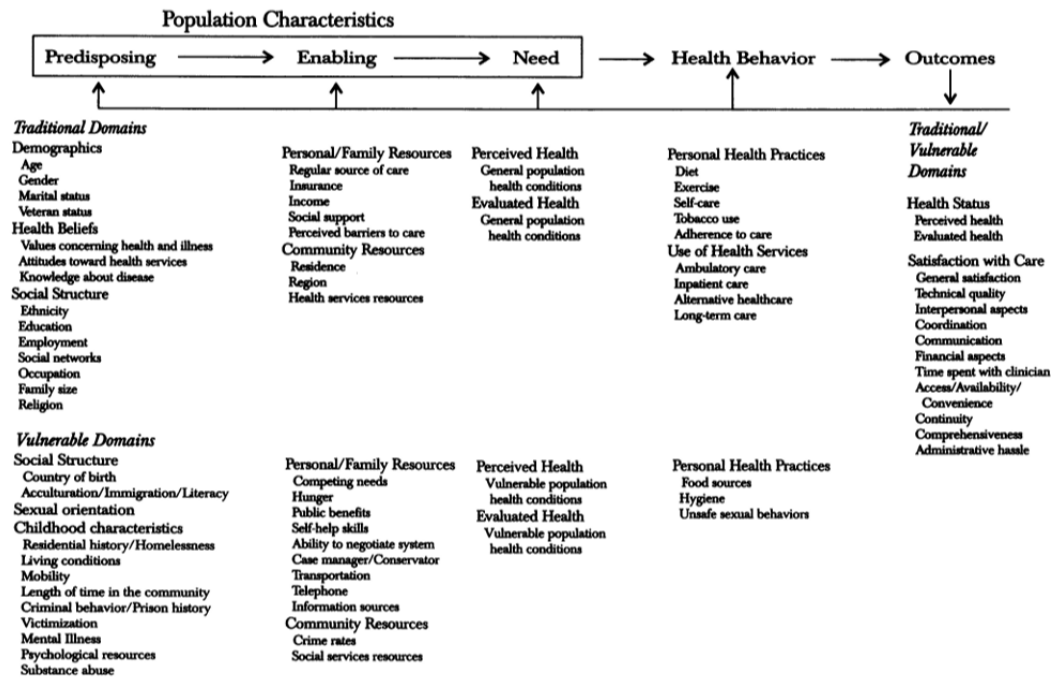
## Context for Use

This exercise is aimed for higher college levels and beyond. Students should have a fundamental understanding of the nature of dependent, independent, and control variables. Students majoring in health related and social science disciplines can benefit from this assignment. The results of the study can be tailored as a policy informing report.

## Description and Teaching Materials

### Step 1: Introducing Andersen’s Behavioral Model

Figure 1: The Behavioral Model for Vulnerable Populations



Gelberg, L., Andersen, R. M., & Leake, B. D. (2000). The Behavioral Model for Vulnerable Populations: application to medical care use and outcomes for homeless people. *Health services research*, 34(6), 1273.

### Step 2: Accessing COVID-19 related data from CDC

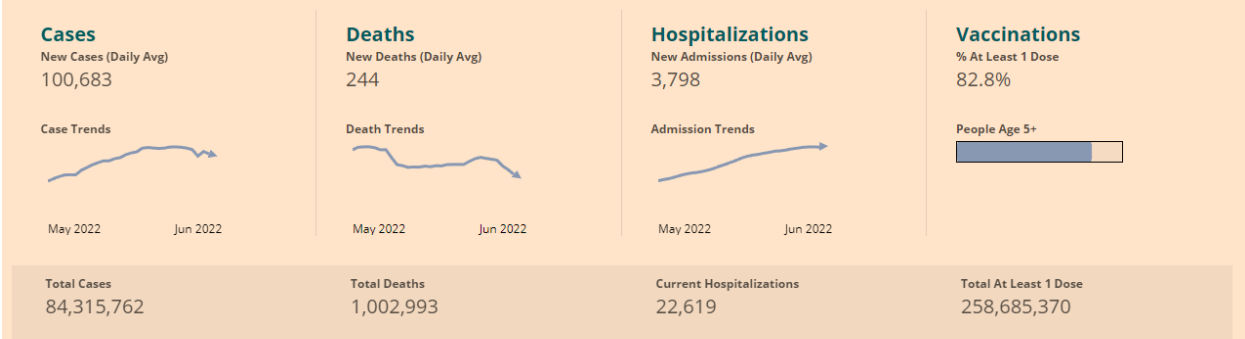
Start from: <https://covid.cdc.gov/covid-data-tracker/#datatracker-home>

On the front page of COVID Data Tracker you will see four groups of data: Cases, Deaths, Hospitalizations, and Vaccinations.

**Question 1:** Which one of the above numbers is the most appropriate one in examining the concept of health care access? Please explain why.

You can then specify a county or state for more COVID related information:

## Daily Update for the United States



CDC | Data as of: June 2, 2022 5:44 PM ET. Posted: June 2, 2022 6:34 PM ET

The 'COVID in Your Community' section features a search bar with the text 'Enter a county or state' and a right-pointing arrow. A black arrow points from the search bar towards the 'Weekly Review' section. The 'Weekly Review' section includes the text 'A weekly interpretive summary of COVID data' and a link labeled 'Current Weekly Review >'.

**Question 2:** When looking at the vaccinations data, to compare with another location, should you use the actual numbers or percentages? Please explain what you would use and why.

Now, pick two locations you want to compare. To make the comparison more “comparable”, make sure to compare either state to state or county to county.

**Step 3:** Accessing the socio-demographic information using the American Community Survey (ACS) data.

There are several approaches to accessing the data collected by the ACS. The U.S Census site provides some easy-to-use tools: <https://www.census.gov/programs-surveys/sis/resources/data-tools.html>

If you chose to compare state by state, the American Community Survey (ACS) Interactive Data Wheel is simple and straightforward, which gives you the side-by-side comparisons of the following parameters with the United States as a whole: total population, median age, median home value, median household income, below poverty, foreign-born, high school graduate or higher, without health insurance, households with a broadband internet subscription.



## American Community Survey (ACS) Interactive Data Wheel

The ACS data wheel is a cool interactive tool that provides demographic information about your state, Congressional District and Metropolitan Statistical Area.



The QuickFact is another more comprehensive tool. It provides many more parameters than the Data Wheel and you can also specify the county.



**QuickFacts**  
 Nassau County, New York; United States

QuickFacts provides statistics for all states and counties, and for cities and towns with a *population of 5,000 or more*.

Q Enter state, county, city, town, or zip code    -- Select a fact --

CLEAR    TABLE    MAP    CHART

**Table**

All Topics	Nassau County, New York	United States
Population Estimates, July 1 2021, (V2021)	1,390,907	331,893,745
<b>PEOPLE</b>		
<b>Population</b>		
Population Estimates, July 1 2021, (V2021)	1,390,907	331,893,745
Population estimates base, April 1, 2020, (V2021)	1,395,774	331,449,281
Population, percent change - April 1, 2020 (estimates base) to July 1, 2021, (V2021)	-0.3%	0.1%
Population, Census, April 1, 2020	1,395,774	331,449,281
Population, Census, April 1, 2010	1,339,532	308,745,538
<b>Age and Sex</b>		

**Step 4:** After you complete step 1 to 3 you are ready to put everything together and write a summary of your findings.

**Question 3:** Create a comparison table for your data. The following table is an example. You can change the variables accordingly.

	Location 1	Location 2
Vaccination Rate		
Median age		
Median household income		
Foreign-born %		
High school graduate or higher %		
Without health insurance %		

**Question 4:** Summarize your findings by using the table you created for Question 3.

First, state why you picked the two areas to do the comparison. Second, describe the disparities you found in step 2 and briefly describe your theory of possible factors associated with the disparities you found by incorporating Gelberg-Andersen's behavioral model. Third, describe your findings in step 3 and extract the ones that you think might be relevant to the disparities and elaborate.