What Do the Numbers and Text Really Mean:
Using Data to End Health Disparities and Strengthen Communities

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Acknowledgements

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Understanding Health Disparities and Health Equity

When we look across the country, it's clear that certain groups have more health problems than others. Sometimes, it looks like they're more serious and severe. Why does this happen to some groups of people and not to others? Some of it has to do with differences in social experiences and economic conditions, which can cause some people to have different access to resources and opportunities. These differences are the health disparities we see and read about. Everyone, regardless of their social, economic, or any other characteristics, should have the right to the resources and opportunities that can positively affect their health. When they do, health equity becomes possible.

Low-income families; racial and ethnic minorities; lesbian, gay, bisexual, and transgender (LGBT) people; people with disabilities; elderly people, and people who live in rural or geographically isolated places — these groups often experience social and economic disadvantages. For example, low-income working families frequently cannot have regular preventive check-ups because they don't have health insurance. People with disabilities and LGBT people sometimes face discrimination when they visit the doctor; the same happens with racial and ethnic minorities. Rural residents may live in areas that don't have the infrastructure for ensuring clean water. There are many reasons why disparities occur and many populations that experience disparities. In this guide, we will use examples related to racial and ethnic minorities; the tips provided can be applied to any population.

How Data Can Be Used to Tell Different Stories About Health Disparities

Data or "facts" can be a powerful tool for communities that are fighting for fairness in health and mobilizing around other key issues that matter to residents. By harnessing the power of data, community groups and residents can more effectively "fight back" against policies and practices that create health disparities, and advocate and push for new ways of doing business in our communities.

> ***Data*** = plural of datum. Data refer to the text or numerical information collected and organized into a format suitable for analysis in order to make a point, tell a story, inform decisions, or shed light on a situation. Data have the power to divide communities or unite them.

But many of us don't have the tools or background to be able to crack the "data code" — the sometimes complex universe of understanding, accessing, analyzing, interpreting, and using all of the text, numbers, and statistics that make up the world of data. The concern with data is that they can seem, at first glance to be "neutral" — just groups of numbers or words or a bunch of statistics that can only really tell one story. **Even more important, all of the data can**

be collected, "spun" or used in many different ways to create very different stories — to divide various groups in communities or potentially to unite them; to make the case for doing more of something or less; and to argue for some groups getting "this," while other groups get "that." The headlines of these stories then appear in the news on TV, in the newspaper, and on the Internet, and more frequently than not, people don't have the time or ability to question the interpretation and use of the data that support the stories or put another way, to understand who's telling the story and how are they telling it. We will ask you to look more deeply and to think critically about how data can give many different "messages" depending on how the data are analyzed, interpreted, and presented.

For example, take a look at the following excerpt from an on-line article:

> *The wave of incoming Asians pushed the total number of Asian-Americans to a record 18.2 million, or 5.8 percent of the total U.S. population, according to census data. By comparison, non-Hispanic Whites (197.5 million) account for 63.3 percent of the U.S. population, while Hispanics (52 million) and non-Hispanic Blacks (38.3 million) account for 16.7 percent and 12.3 percent, respectively. The influx of Asians reflects a slowdown in illegal immigration while American employers increase their demand for high-skilled workers.*

What is the above story saying?

The trends, based on census data, are facts. It is the last sentence — an interpretation of the data — that leaves the impression that all Hispanics might be "illegal" and all Asians might be "high-skilled workers." It could create the perception that one group is "good," and the other is "bad." Yet, there is nothing in the data presented that suggests this. An interpretation like this can affect — in a negative way — how people think about Hispanics and Asians, as well as how policymakers deal with immigration.

Here is another example, consider this possible headline in a local newspaper:

> *The unemployment rate in City X has dropped from 8.7% to 8.1%; the city's aggressive economic plan, which includes the expansion of green technology, is showing promise.*

What is the above headline saying?

At first glance, it's great news! But this sort of presentation of the data can mask all sorts of things, from the many factors that could have contributed to the decrease in employment rate to other forms of disparities that may be worsening. For example, you may ask — Over what period of time did this drop take place and did the drop start before the expansion of green technology? Is the employment situation getting better for everyone, or only certain groups of people?

How This Guide Can Help You

The goal of this guide is to help you harness the power of data to create effective "data-driven" strategies and put you on the path to becoming data experts who can access, analyze, interpret, and use data to build community and create strong strategies to help everyone in your community become healthier. To make this happen, you'll be encouraged to become not just good data collectors and analysts, but strong critical thinkers about the data you uncover, how it can be interpreted, and how it can be used to create positive outcomes for the many groups that make up your community, rather than a source for division, perpetuation of stereotypes and myths, and unequal distribution of resources.

Social Determinants of Health: Why Are They So Important?

There are several determinants of health that can have a great impact on a population group and how it is affected by a disease or issue. The determinants of health, as described in the *National Stakeholder Strategy for Achieving Health Equity* published by the Office of Minority Health in 2011, include:

- Social determinants (e.g., income and assets; employment; educational attainment; access to healthy food; housing quality, and the health-care system);
- Behavioral determinants (e.g., physical activity; alcohol use; smoking);
- Environmental determinants (e.g., workplace environment, air and water quality); and
- Biological and genetic determinants.

This guide focuses on the social determinants of health, which are those conditions that influence people's health, even long before they become sick. These conditions affect people in their homes, neighborhoods, schools, jobs, and other places that they visit every day. Some people, because of when and where they were born, grew up, or age, are more or less affected by these conditions than others. So, they experience health disparities.

For example, lower income and racial and ethnic minority communities are less likely to be able to find a grocery store near where they live that sells lots of different and affordable fresh fruits and vegetables. Not having access to fresh and nutritious food is a social determinant of health that can have a negative effect on a child's life as he/she becomes an adult. This is a condition that can be changed. You can do something about it.

Two great resources for understanding more about social determinants of health: Centers for Disease Control and Prevention's (CDC) *Promoting Health Equity: A Resource to Help Communities Address Social Determinants of Health* and Robert Wood Johnson Foundation's *A New Way to Talk About Social Determinants of Health*.

Section 2: How to Use This Guide

The goal of this guide is to provide you with a set of tools that you can use to develop or improve strategies to address any health disparity in your community by tackling the social determinants of health that contribute to the disparity, in addition to asking some key questions and finding and using data to answer those questions. There are four elements that should be part of any strategy you develop or improve, depending on your resources and capacity — **strengthening sense of community, coalition building, advocacy, and creating new or strengthening existing programs.** These elements are critical in addressing social determinants of health.[1,2,3]

While we provide you with information and guidance on where to find data, you WON'T find actual data about health disparities here; we will use dummy data to illustrate our points. And if your focus is to change policy, you may want to know up front that while having data for back up is always useful, policymakers may also want to hear — and may be more persuaded by — a simple story or anecdote that comes from your community.

This guide works like a "road map" to get you from your starting point through to your end goal — to develop strategies in order to tackle a health disparity issue, problem, or opportunity in a way that builds community strength and power. To make this data-to-action journey successful, you'll need a toolbox with the right equipment. The one essential tool you'll need in your toolbox is a set of six key questions to ask; in other words, questions to get you started on an issue; uncover what all of the information available means; determine what facts you need to gather; "read," or interpret the information the right way; and then use it to create real equity for EVERYONE in your community. We are going to use two examples of common situations to guide you through the journey; however, the questions and other tools that we provide you can be used in any situation and with any issue or opportunity you want to address.

Caution! It's Not Always a Straight Line! The steps you take to answer questions 1 through 6 do not occur in a direct or straight-away fashion. In fact, it is usually more of a process where you might find yourself asking more questions after you have studied the data and having to go find more data to answer those questions. Sometimes, you might not find the data you need and may have to collect your own data. At each stage, we will be giving you questions and tools to dig more deeply into the data (not assuming that the interpretation and presentation of data are neutral or objective) in order to get a complete picture of the situation.

That's it. Any issue, any time.

The Question Road Map

For any issue or opportunity you want to tackle, here are the questions to help you at each stage of the process to: 1) understand the situation and the data that exist, and 2) use the data for strategy development and improvement:

1. **What's the starting point?** You can start by looking at the data for a specific population (e.g., African American, low-income women, Latino immigrants, etc.), a particular health issue (e.g., diabetes, suicide, lead poisoning, etc.), a specific time frame (e.g., last decade, last year, last month), a specific place (e.g., state, county, or city), or all of the above. At this stage, you begin to form a simple research question. Don't worry about getting it perfect. You will have a chance to refine it later.

2. **What's the disparity and compared to which other populations?** It is important to know what is the disparity and compared to which groups.

3. **What are the social determinants of health that result in the disparity?** It is important to know this so that you can address the causes, which will yield long-term improvements for everyone. At this stage, you will stop to refine your research question.

4. **Where are the data gaps and what do you do to fill the gaps?**

5. **What is the story you can tell to describe the situation?** You will need to be able to combine the numerical and text information to tell an accurate story about the disparities in your community — the story that you can tell with the data you collect.

6. **How can you use the data to build a healthier community?** Decisions about next steps have to be made with serious consideration for what the data tell you.

📄 **NOTE**: Data about certain populations, including rural residents and communities, LGBT people, and people with disabilities are usually harder to get for many reasons; this is one of the challenges we face in health and human services. Consequently, data-driven strategies to improve the health of these populations are more difficult to develop. Further research and evaluation of programs targeted at these groups of people are necessary for knowledge development and knowledge transfer. This also means that you may have to collect your own data if you are interested in these populations, which can be costly and labor-intensive, but sometimes necessary.

How This Guide Is Organized

First, a few things about the language and symbols we use:

- When the term "we" is used, it refers to the authors of this guide. When "you" is used, it refers to you — the reader or user of this guide.
- The symbol ✿ shows up every time we define a term. Throughout the guide, we will provide you with many definitions. At the end of the guide in the last appendix (Appendix C), we combine all these terms and if you want, you can tear out or print the last page to have it handy as a reference you can carry around or share with others.
- We use the symbol ☑ to summarize our tips into a simple list.
- The symbol 📄 **Note** refers to an important point that you should be aware of.
- We will review the key "takeaways" at the end of some sections where we've shared a lot of information.

In the next section (Section 3), we provide some important background pieces and tools for your data toolbox that will get you grounded in thinking about how to understand data.

- How data can be a friend or foe;
- Framing the right research question;
- Common terms and concepts in how data are analyzed and presented that you should be familiar with;
- Focusing on community needs and assets; and
- Useful resources for data.

Next, we provide two common "scenarios" or real-life examples of issues or situations that you might encounter in Sections 4 and 5. How do you use data to help you understand these issues or situations and determine what you need to know?

- **Scenario 1:** This is a scenario where we help you look at a specific population and health issue. You are a community leader in the Latino community and you find out about the growing problem of diabetes among the Latinos who live in your community.

- **Scenario 2:** This is a scenario where we help you scan lots of data about different health conditions and decide how to focus your efforts. You are one of the leaders in your community who have come together to prioritize the health disparities you all need to address.

Each scenario that we present as examples will be organized by the questions in the Question Road Map (p.6).

While the sample scenarios we use may not be exactly the ones that are happening in your community, you will still be able to use this guide with any "real-life" situation or issue you

and your community partners are trying or wanting to work on back home.   Remember that what's most important isn't the actual information or data you collect — it's how you understand and use it to develop or strengthen strategies to help EVERYONE become healthier.   By using this series of questions, you'll get where you want to go.

Section 3: Some Important Background Pieces and Tools for Your Data

A Few Thoughts About How Data Can Be Friend or Foe

Data — text or numerical information — can be a powerful tool for effecting change through action and advocacy. When you are armed with "the facts," what you say can have much greater weight and power. While you may feel that true and heartfelt stories from our communities should outweigh numerical information, you also know that others don't often see it that way. People may infer that the stories you hear from the community are just anecdotes with no "scientific" backing, but even stories can be collected through a rigorous data collection and analysis process such as the one used in *focus groups*. Put them together and you have a strong tool for getting increased funding, new programs, and the power for real change and collaboration with others in our communities.

But there's a potential hidden trap when you're working with data that you have to watch out for and understand. While data can be used for good, data can also be used to divide our communities in a number of subtle and not-so-subtle ways because of the way data are interpreted and presented. At one time or another, you've probably all read some data or "fact" about a group you belong to — ethnic, racial, gender, or another form of social identity— that didn't quite sit right. Maybe it made you feel that you were being "labeled" or measured against another group unfairly. Maybe you felt like saying, "That is not my community!" or "It makes it sound like that group is better than mine!" Remember, just because data are presented as "facts," that doesn't mean there isn't a deeper story. Here are some of the negative things data can be used to do, depending on how the information is gathered, packaged, and presented:

- Use *statistics* to "label" certain groups as problems because they have higher rates of mental health issues, unemployment, or substance abuse, thereby perpetuating stereotypes, without fully explaining the story behind the high rates;
- Fail to look across the causes of inequality for some groups by looking only at the symptoms of the health condition and not what's really the source of the problem;
- Assume a *causal relationship* between the problem and the result when the situation is more complex than that; and

> ✿ *Focus groups* are discussions led by a trained person and used to learn more about opinions regarding a topic. A focus group typically has 12 people or fewer.
>
> ✿ A *statistic* is a number that describes a variable or a set of data. For example, the average height of a group of 100 girls is a statistic.
>
> ✿ A *causal relationship* between two variables — A and B — means that A preceded B, and A led to B, even after considering all the factors that might have affected the relationship.

- Group people in such a way that what's presented does not reflect what's real "on the ground" in your communities.

Just remember: When working with data, be critical. Understand that the interpretation can be very subjective or one-sided and don't assume that the person interpreting the data for you is not "taking sides"!

Framing the Right Research Question

A good research question can focus your data collection and analysis. A bad research question can cause your data collection and analysis to be "all over the place" and a waste of time! A research question should be empirically answerable — meaning it can be answered by data — and not by opinion or philosophy. The question should be specific; it should not be phrased to anticipate an outcome or result, but it should be stated in neutral terms. It should not assume a bias before you answer it. The following are examples of bad and good research questions.

Example Research Question 1

Why do African Americans experience more health disparities than Whites?

> *This is a bad research question because it is too vague. Is it __all__ African Americans and __all__ types of health disparities? Way too general. It also assumes that there are no circumstances under which some Whites may have experienced worse health disparities than African Americans.*

A better question is:

What are the factors that contribute to higher rates of high blood pressure among African Americans who live in rural communities compared to Whites who live in the same communities?

> *This question is more specific and compares two groups of people living in similar circumstances.*

> ☑ **TIPS**
>
> In short, a good research question is:
> - ✓ Clear
> - ✓ Focused and specific
> - ✓ Concise
> - ✓ Able to be answered with data
> - ✓ Not biased

Example Research Question 2

Why don't Latinos exercise and as a result, become diabetic?

> *This is a bad question because it is biased; it assumes that all Latinos don't exercise. It also assumes a causal relationship (remember the definition earlier?) between exercise and diabetes, and it doesn't recognize that there are different subgroups within the larger Latino community.*

A better question is:

Are there certain Latino groups at higher risk for diabetes, and if yes, what are the factors that affect their different risk levels?

> *This question is more specific, doesn't assume any causal relationships, and doesn't stereotype Latinos.*

Common Terms and Concepts You Should Be Familiar With

Like most things, the world of data has its own "lexicon" or language. Getting some terms and concepts under your belt from the beginning can help you move more quickly toward creating good strategies. It will also help you when you have to work with researchers. You've already seen some of terms before this; you will continue to see them pop up throughout the guide! A full glossary is included in the last appendix, as mentioned before.

Focusing on Community Needs and Assets

It is sometimes easy to focus on the problems in your community and forget about the strengths and positive things that are there. This is sometimes called looking at the "needs" versus the "assets." More often than not, a researcher will come into your community to conduct a needs assessment and not ask questions about the community's strengths or assets. It is important that attention be given to your community's assets because you can build on things that are going well. You also have to guard the positive traditions and norms of the people in your community. One method for identifying community assets is *Appreciative Inquiry* (AI). AI is an approach that begins by asking such questions as, "What is working well here?" and "Why is this working well?" It uses positive words, stories, and images to describe existing conditions and changes that the community would like to create.[4] You can also ask questions such as "Where do you go for help on ___?" and "Why do you go there?" to uncover the resources in the community, including informal leaders and natural support groups.

Extremely Useful Resources for Data that You Should Be Familiar With

Today, the Internet allows you to access all kind of **secondary data**, especially those collected and published by public agencies. The choices can be overwhelming.

> ✿ **Secondary data** are information collected by researchers but are available and accessible for use by other people.

You will find secondary data sources that present data in different forms:

- A drop down menu of demographic characteristics or disease categories that you can choose to build your own table — for example, you can build a table with information on race/ethnicity by county in any state;
- Links to profiles that include summary tables by subject area — for example, you can find a summary of minority-owned and women-owned businesses in business reports; and
- Fact sheets and reports that provide a narrative description of data issued by the agency collecting the data.

Some of the most useful data sources that contain information that are relevant, representative, and reliable include:

- American FactFinder, factfinder2.census.gov and http://www.census.gov/aboutus/surveys.html
- CDC Wonder, http://wonder.cdc.gov/
- Community Commons, http://www.communitycommons.org/
- County Health Rankings, http://www.countyhealthrankings.org/
- Food Environment Atlas, http://www.ers.usda.gov/FoodAtlas/
- Health Indicators Warehouse, http://www.healthindicators.gov/
- Kids Count Data Center, http://datacenter.kidscount.org/
- U.S. Bureau of Labor Statistics, http://www.bls.gov/data/
- Bureau of Justice Statistics, http://bjs.ojp.usdoj.gov/
- National Center for Health Statistics, http://nces.ed.gov/fastfacts/#
- Substance Abuse and Mental Health Services Administration, http://www.samhsa.gov/data/
- Behavioral Risk Factor and Surveillance System, Prevalence and Trends Data, http://apps.nccd.cdc.gov/brfss/

A more detailed description of these national data sources is included in Appendix A. There are also more data sources listed in The Access Project's *Using Data: A Guide for Community Health Activists*, downloadable from http://www.accessproject.com.

While the national sources are really great, they have two limitations:

- The data usually lag a couple of years behind; for instance, the data collected in 2009 are usually not available to the public until 2011, two years later; and
- Public data usually cannot be broken down to geographic areas smaller than the state, county, and city. So, if you are looking for data for your neighborhood, rural area, or a regional area that includes parts of several counties, you will want to explore state and other data sources, as well as apply to the sponsoring agency to access restricted data that sometimes are available by ZIP code.

Therefore, you might want to look at state, county, city, and other data sources. To tap into what data are available from these sources, you can contact:

- Your state office of minority health or state liaison responsible for minority health;
- County or city government staff person responsible for minority health;
- Local foundation that has supported health initiatives and programs;
- The public health department or any other health-related program at a local university or college;
- Any local research company or think tank;
- Trade associations (e.g., local and professional associations of educators, health professionals, etc.);
- A center of excellence for the study of health disparities; and
- Local nonprofits, including local community clinics.

One very useful guide is the Data Set Directory of Social Determinants of Health at the Local Level that's published by the CDC and the US Department of Health and Human Services. You can access it through http://www.cdc.gov/dhdsp/docs/data_set_directory.pdf. Finally, a list of states, counties, cities, and communities that produce a health disparity or equity score card, report card, assessment report, or index is included in Appendix B.

Depending on your knowledge, skills, and resources, you might consider partnering with an expert or an organization with the expertise to collect new data — also known as ***primary data collection***. Primary data collection is labor-, resource-, and time-intensive.

> ✿ ***Primary data collection*** and analysis refers to any original data you collect and analyze.

You should do the latter only as a last resort; nevertheless, it may sometimes be necessary. One option for assisting you with primary data collection and analysis is a partnership with a local university.

So, as we said in the beginning of this guide, the one essential tool you'll need in your toolbox is the set of key questions to ask and potential resources to tap into. We are going to use two examples of a common situation to ground the questions and resources; but remember, the questions and tools that we provide you can be used in any situation and with any issue or opportunity you want to address.

Key Takeaways From This Section:

- **Differences in health conditions exist across different groups of people. When these differences are due in part to social and economic disadvantages that certain groups have, they are called disparities.**
- **The social and economic factors that put some groups at a disadvantage and hence experience disparities are called social determinants of health.**
- **Data can be interpreted, packaged, and used in a way that can build community or divide people.**
- **There are three types of data sources — national, state, and local — that you can tap into to get a complete picture of the problem you want to address.**
- **Focus on both your community's needs <u>and</u> assets to help with your solution.**

Now, let's get started!

"I'm a community leader in the Latino community. I know a lot of people with diabetes and I've heard it is a big problem for Latinos. My friend who directs the community clinic says it is a big problem at her clinic. I think we should do something about it, but what?"

Question 1: What's the starting point?

You need to understand more about the situation. Just starting somewhere is the first step even though you find yourself asking lots of questions, such as:

- Is this unique to my friend's clinic only?
- Is it a problem that has always been there, but not diagnosed? If not, why not?
- Has the clinic or any other organization in my community collected any information from Latino families about their diet and other factors that contribute to diabetes?
- Has the number of Latino adults with diabetes during the past year and perhaps even the past several years increased or decreased? How high is it compared to other groups?

☑ **TIPS**

- ✓ Start with the population, health issue, place, and/or time period of interest.
- ✓ Form an initial research question.
- ✓ Find out about the rates of the health condition across different populations, including the one of interest, in a particular place, and during a particular time period.

It would be overwhelming to research and answer all these questions. Here's a way to start the process:

- Begin with an initial research question that you can continue to refine as you gather more and more information.
- Think in terms of time (period of interest), place (state, county, city, neighborhood), and person (race/ethnicity, age, gender, sexual orientation, and gender identity, etc.).

Here's a research question you can start with:

What percentage of Latino adults in my community has diabetes compared to other groups during the past year?

Data you find that shed some light on the initial question will help sharpen your research question.

You've just..
- Identified population or health issue of interest
- Formed initial research question

Now on to Question 2

Question 2: What is the disparity and compared to which other groups?

Now, you want to get a broader picture of how what you're finding out about diabetes in the Latino community looks in relation to time, geography, and other groups.

This includes knowing more about how the *prevalence* of diabetes among Latino adults in your county is similar to the rates at the state level. If possible, see if you can find data organized by census tract or street to get the rates for Latinos in your community. If not, the county data will get you close to what the *trends* might look like in your community.

You also want to look at data for the past several years to see if Latinos have always had higher rates of diabetes. How far back you want to go will somewhat depend on the data available. Sometimes, the data for the health condition you are interested in are collected every year;

☑ **TIPS**

- ✓ Compare the rates for the health condition of interest across three to five years or at least three data points.
- ✓ Compare your local results to state or national results for the same population, to another racial/ethnic group, or to the group with the best rates.

✿ *Prevalence* means the number (or frequency) of existing cases of disease in the population at any given time.

✿ *Trend* refers to the direction of the variable over a certain period of time.

sometimes, every four years. What is important here is that you have at least three data points to understand the trend. Examine Exhibit 1.
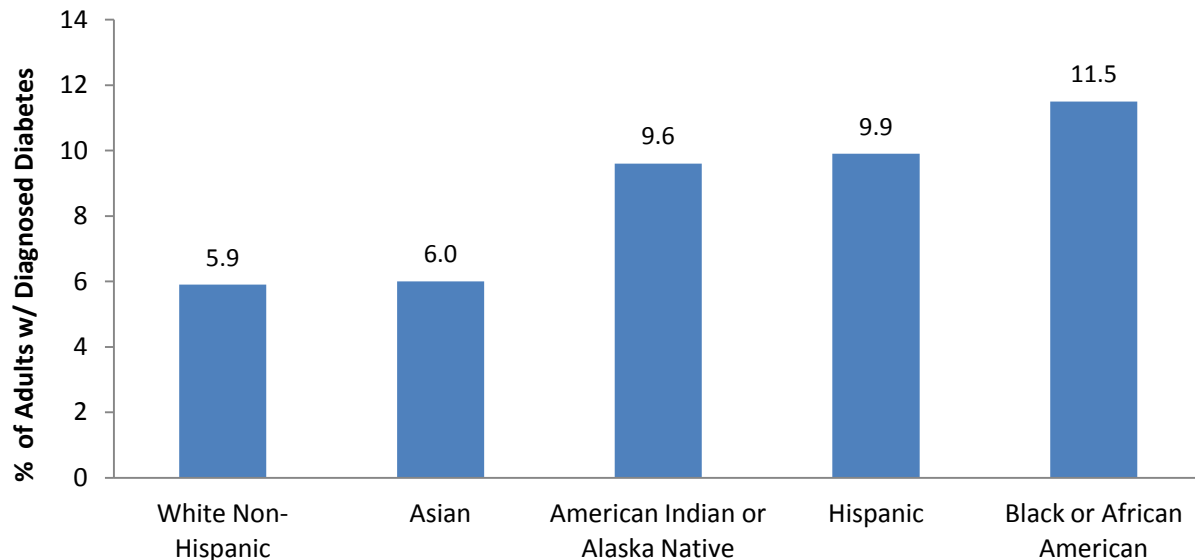
Exhibit 1. Prevalence of Diagnosed Diabetes Among Adults, 18-65 Years Old, by Race/Ethnicity in State A, 2010

> 🖹 **NOTE**: Most datasets use the label "Hispanic" which is the same as Latino. As part of the Affordable Care Act, national health surveys by the U.S. Department of Health and Human Services will add more categories to distinguish the different subgroups in the Hispanic population.

Exhibit 1 is what you will typically see; prevalence rates tend to be relatively easy to find. This exhibit tells you the *prevalence* of diabetes in 2010 among the Hispanic population in State A is 9.9 percent, about 1.7 times higher than that for White non-Hispanics, but lower than Black or African American. To obtain the ratio that the diabetes rate is 1.7 times higher among Hispanics compared to White non-Hispanics, you divide the percentage for your population of interest by the percentage of the comparison population (9.9/5.9=1.7).

Exhibit 1 raises the following questions:

- Has it always been like this even in previous years, or did something happen that caused the rate to increase or decrease in 2010?
- If this is the case for the state, what does it look like for the county and your community?

Now, examine the following chart. What does Exhibit 2 show?

Exhibit 2. Prevalence of Diagnosed Diabetes Among Adults, 18-65 Years Old, by Race/Ethnicity in State A and County X, 2010
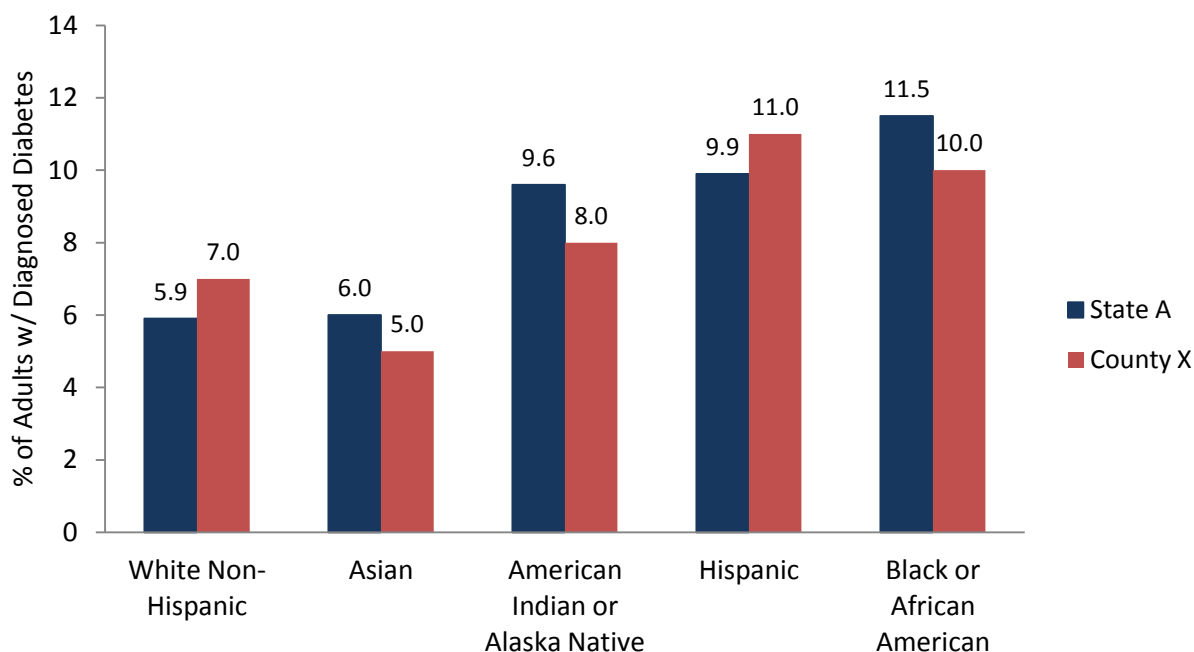
Exhibit 2 shows that in the county you live, the rates for Hispanics and non-Hispanic Whites are 11 percent and 7 percent, respectively — higher than the rates for the state and still a relatively large difference (4 percent) between the two populations. Let's say that after examining this data over the past three years, you also find out that the trend has been this way for the past three years.

Exhibit 2 raises the following questions:

- What is it about the Latino community that contributes (remember to avoid using the word "cause"!) to the higher rates of diabetes?
- What are the differences (social, economic, environmental, behavioral conditions) among the five groups that may contribute to the pattern you see?

Time to refine the research question and dig more deeply!

You started with:

What percentage of Latino adults in my community has diabetes compared to other groups during the past year?

Now that you know the rates are higher for Latino adults compared to two other groups, you can refine the question:

During the past three to five years, what are the social determinants of health that contribute to higher rates of diabetes among Latino adults living in my community (or community X)?

• Identified population or health issue of interest • Formed initial research question	→	You've just… • Identified disparity and comparison group(s)	→	*Now on to Question 3*

Question 3: What are the social determinants of health that impact the group or issue?

Remember we introduced the social determinants of health earlier and why they are so important to understand? You want to look more closely at them.

You want to consider other factors besides the diabetes prevalence rates that distinguish the Latino community from the other groups in your comparisons. Spend some time learning more about diabetes and what contributes to this condition. You can consult with your friend at the clinic, other experts you may know, CDC, or the American Diabetes Association. It's especially important to understand the social determinants of health that contribute to diabetes. You'll learn that the greatest risk factor is obesity which is related to inactivity and nutrition. You'll also learn that the common social determinants of health associated with obesity and diabetes are:

☑ **TIPS**

✓ Visit the Healthy People 2020 website (www.healthypeople2020.gov).
✓ Visit the Centers for Disease Control and Prevention (CDC) website (www.cdc.gov).
✓ Review the information provided in the National Stakeholder Strategy for Achieving Health Equity (http://minorityhealth.hhs.gov/npa/).
✓ Find out if there is a Center of Excellence near you and contact an expert there.
✓ Find out who the State Office of Minority Health director or liaison is and contact that person.
✓ Check to see if your state or county has a health equity report card, score card, or assessment report. Usually these documents already contain data that might be relevant to you.

- Income, which affects health coverage and access to regular visits to the doctor's office for check-ups;
- Living in a place with the presence of unhealthy food or little access to affordable healthy food (e.g., farmers markets);
- Lack of safe places to exercise (e.g., parks, gyms);
- Racism and segregation (which limits access to resources); and
- Poor quality or culturally and linguistically incompetent health care.

When you're looking for information on social determinants of health, here are the kinds of data you might find.

Exhibit 3. Percent of Families in County X Below Poverty Level, by Race and Ethnicity, 2011
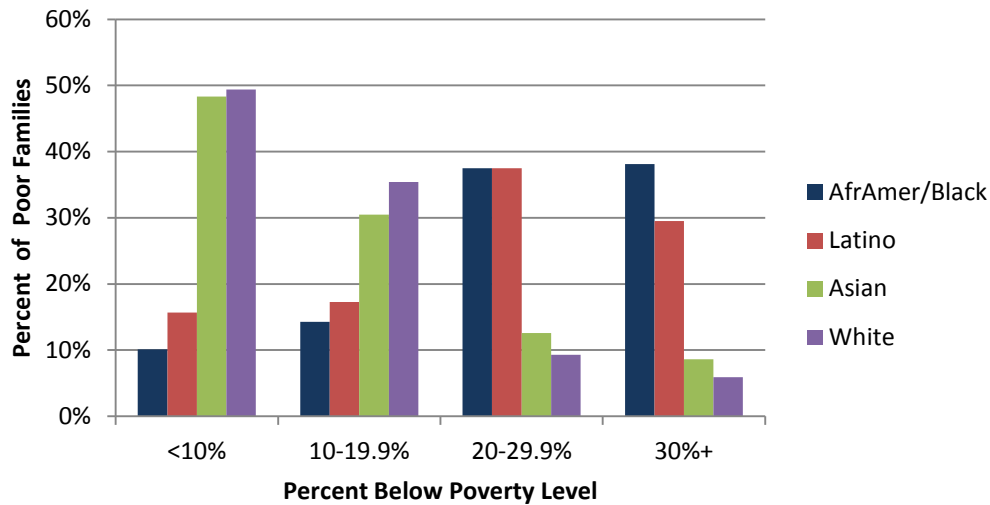

Exhibit 3 shows that there are more Latino families in higher rates of poverty than Whites and Asians.

Exhibit 3 raises the following question:
- Do people have adequate health coverage and resources for regular care?

Now study the following table.

Exhibit 4. Segregation Index for Metro Areas in State A, 2000

Geography	Segregation Index
Your Metro Area	0.400
Metro Area 1	0.290
Metro Area 2	0.385
Metro Area 3	0.250

Another strong determinant of health is segregation or the degree to which racial and ethnic communities live in separate areas, which could contribute to social isolation (because resources and opportunities are disproportionately distributed). One way to calculate the segregation index is the measure of dissimilarity, which refers to the proportion of the community that has to move in order for each of the previously separated communities to have the same percentages of each racial and ethnic group. The score is between 0.0 (equal percentages of every group or complete integration) and 1.0 (only one group lives there or

complete segregation). You can get the latest data for states and metropolitan areas from www.censusscope.org.

The exhibit shows that segregation in your metro area is highest compared to other neighboring metro areas. You can find out similar information for the metropolitan area you live in; if you know your community and the surrounding area well, the data may not surprise you, but now you have data to support what you know. An alternative way to communicate these data is to create a map that shows the racial and ethnic breakdown of the county you live in and combine this with qualitative data and photos of your community.

Now examine the following map. What does this map represent? If the diabetes and poverty rates are high among Latinos compared to the White population and if neighborhoods are segregated, what else is going on in your community in terms of the environment (e.g., safe places to walk or exercise, parks)?

Exhibit 5. Map of Census Tracks by Predominant Race/Ethnicity and Walk Scores for 2 Neighborhoods
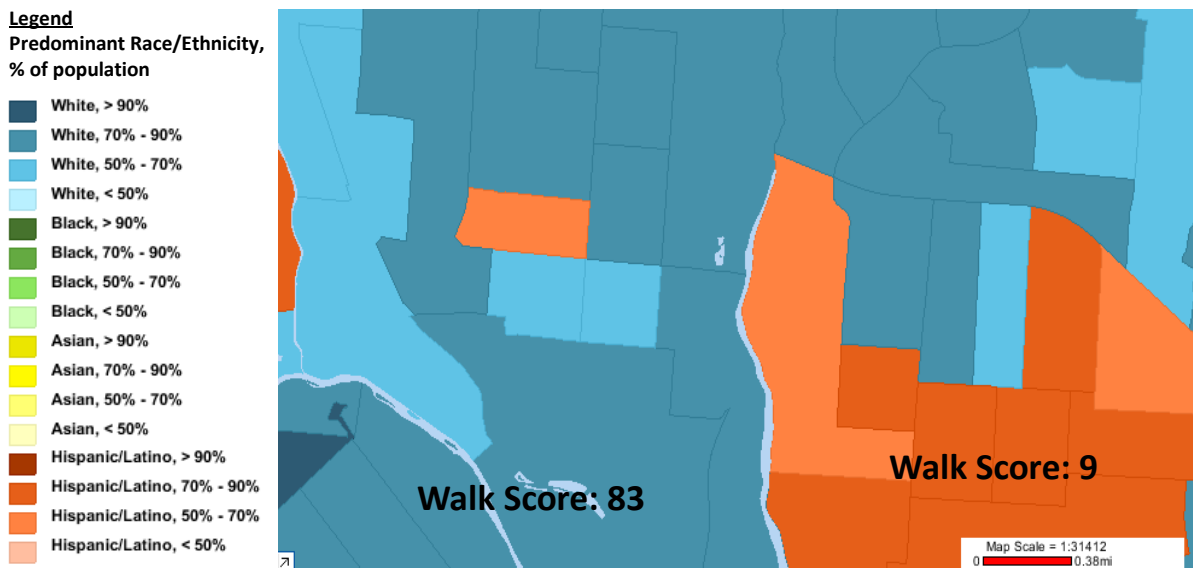
Exhibit 5 is a map that shows how "walkable" a community is. The data are available from www.walkscore.com and the map can be created through www.communitycommons.org. A Walk Score is a number between 0 and 100 that measures the walkability of any address, neighborhood, or community. The score is calculated based on walking distances from an address to a diverse set of nearby services and facilities such as parks, stores, etc. Walk Score uses a variety of data sources such as Open Street Map, local business listings, and public data sources such as parks and schools. Scores of 90-100 are classified as "Walker's Paradise" where daily errands do not require a car; scores of 70-89 or "Very Walkable" means that most errands can be accomplished on foot; 50-69 or "Somewhat Walkable" means that some services and

facilities are within walking distance; 25-49 or "Car-Dependent" means that a few services and facilities are within walking distance; and 0-24, also labeled, "Car-Dependent" means almost all errands require a car. People in walkable neighborhoods have healthier weights; also, shorter commutes reduce stress and increase community involvement. Exhibit 5 shows that the community with a walkable score of 9 is made up primarily of Hispanic/Latino residents.

Here's another map that is useful.

Exhibit 6. Map of Food Options

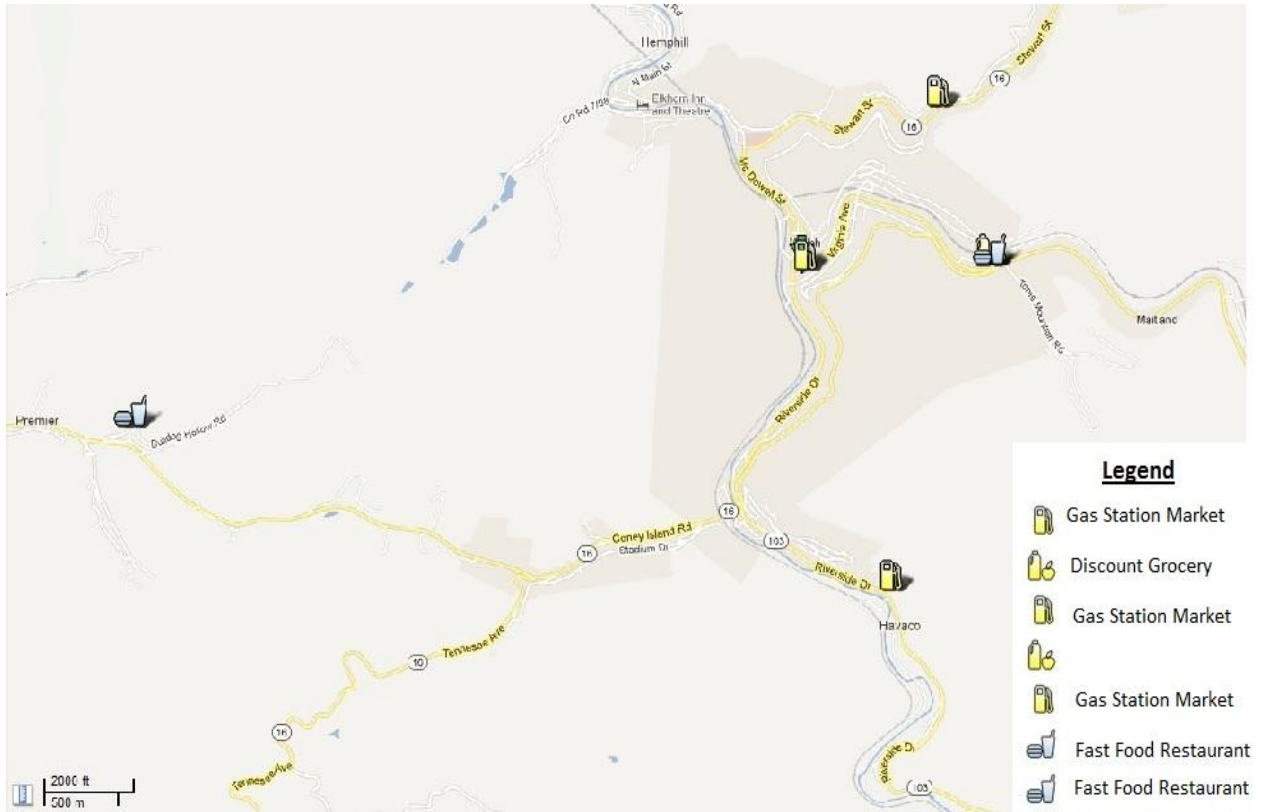Exhibit 6 shows the distribution of food options in a particular community. As you can see, there aren't many healthy food options in the area. Such a display can be generated from GoogleMaps; the data come from the U.S. Census Bureau (http://www.census.gov), U.S. Geological Survey (http://www.usgs.gov), Gap Analysis Program (http://gapanalysis.usgs.gov), and USDA Forest Service (http://www.fs.fed.us).

Key Takeaways From This Section:

- **There are usually several social determinants of health that contribute to a particular health condition.**
- **You will have to use different sources to find out about the trends for a particular social determinant of health in your community. The data you get about the different social determinants of health in your community are parts of the puzzle that you will eventually need to combine to tell the whole story.**

<table>
<tr>
<td>

Identified population or health issue of interest
Formed initial research question

</td>
<td>

Identified disparity and comparison group(s)

</td>
<td>
You've just…

Learned more about the health issue
Identified social determinants of health

</td>
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Now on to Question 4
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Question4: Where are the data gaps and what do you do to fill the gaps?

Remember your research question:

During the past three to five years, what are the social determinants of health that contribute to higher rates of diabetes among Latino adults living in my community (or community X)?

Exhibits 1 to 6 provided the following (incomplete) story: Latinos have the highest rate of diabetes in County X and even higher than the rate for the state. More Latinos live in poverty compared to other groups. Segregation in the metro area that is part of County X is fairly high compared to other areas. Also, residents cannot easily walk to different places — which limits their opportunity for exercise — and it is not easy for them to get healthy and fresh food.

What part of the story is still missing? If you remember from your research earlier, there are five social determinants of health that contribute to high diabetes rates: income; living in a place with little access to affordable healthy food and safe places to exercise; racism and segregation; and poor quality or lack of culturally and linguistically competent health care. You have very little data about:

- Where Latino residents get their food; what is the quality of the food?

☑ **TIPS**

- ✓ Check to see if you have all the data you need to understand the complete and accurate story about the health disparity of interest. Two ways to check:
  - ✓ Can you answer the research question with the data you have?
  - ✓ Could you tell someone else the full story and answer his/her questions?
- ✓ Determine if there are any additional data you might need and how best to get the data. You can identify a **proxy measure** or partner with an institution or individual with the capacity to do primary data collection.
- ✓ For an accurate picture of the data, both **qualitative** and **quantitative** data are important. Numbers only tell half the story, especially when comparing social groups.
- ✓ There are three levels of data that can be used — national, state, and local, which could be county, city, and/or a smaller geographic area. Local data are usually harder to get, depending on where you live or the place you want to change. The data sources and limitations of national data were discussed in Section 3 under *Extremely Useful Resources for Data You Should Be Familiar With*.
- ✓ Don't just focus on the risk factors, challenges, and negative aspects of a community. Also, identify and build on existing community assets (e.g., community pride, healthy traditions, social networks) and engage the community to determine how to use these assets to overcome a health challenge.

- Where do they go for health services, and what are their experiences with the services?
- What efforts have there been to improve the quality of health and living conditions among Latinos?
- Most important, what are the strengths and assets in the Latino community that you can build on to help address the high rate of diabetes?

> ✪ A *proxy measure* is the next best way to measure the behavior or concept that you are interested in studying because it is too difficult to measure that behavior or concept directly or the data for the behavior or concept you are interested in studying do not exist and it is not possible to collect new data.
>
> ✪ *Qualitative data* are data that deal with descriptions in the form of words, pictures, and objects.
>
> ✪ *Quantitative data* are data that deal with numbers and amounts.

This is when you may have to contact universities, foundations, and nonprofit organizations to see where and how to get data or apply for restricted-use datasets to answer the above questions.

Once you get hold of the data, remember that, as with all data there are many differences even within a particular group. For instance, variations in socioeconomic status among different groups within the Latino community could account for the disparities observed about Latinos.

> 📄 **NOTE**: Data for areas that are part of a county or city are the hardest data to come by. Some state data can be broken down by census tract, which could allow you to pull out and analyze the data for the smaller geographic area you want to focus on. Local universities, colleges, nonprofits, and foundations frequently collect their own data — and usually for specific communities — that you might be able to use. Contact university and college departments of health or health-related studies, sociology, psychology, economics, education, schools of medicine and nursing, as well as the nonprofits' researchers or health advocates or program coordinators. Local data tend to be difficult to get. Two useful data sources for local data include:
> - National Neighborhood Indicators Partnership's Data Inventory, which reviews the types of local data available from the 29 local partners (www.neighborhoodindicators.org).
> - Community Indicators Consortium's Indicator Projects, which provides links to different projects around the country that collect local data (www.communityindicators.net).

Now, you need to consider the gaps in information (or what you still need to tell a more complete story). Consider what can you do to collect data about where Latinos go for health services and their experiences with the services, where they go for healthy and fresh food, what programs and initiatives are there to improve their quality of health and living conditions, and what the strengths and assets are in the Latino community that can be used as part of the solution. Check to see if a local foundation, nonprofit agency, college, or university already has collected some of the data you need. Follow the tip we gave you about contacting people from these places.

If you end up having to collect new data, consider whom you should engage in your data gathering work.

Think about using this opportunity for partnerships with others: academic or research institutions, health agencies, and others that care about this issue or are serving the populations you're focusing on in your data gathering. This is an important opportunity to involve and connect to the people who are actually experiencing the disparities and issues. Remember, their stories and lives are equally part of the data puzzle.

Here are some data collection methods you can use:
- **Surveys**, **interviews**, or focus groups with a small group of Latino community members;
- Surveys, interviews, or focus groups with health-care providers and other service providers; and
- **Key stakeholder interviews** with people from different sectors (they involve business; interfaith communities; and public and private agencies and organizations who interact with or serve the population of interest).

If you have to partner with an institution or individual to collect new data, we have now given you some basic terms, concepts, and ways of thinking about data that will be useful. Nevertheless, there are a few things you must be aware of and pay close attention to:

- How can you ensure that you develop and sign a partnership agreement that establishes a set of guidelines and responsibilities for each and all members of the partnership?
- Who owns the data once the data are collected? Will you allow the person or institution to publish the data and identify your community in the publication?

✿ A **survey** is a process for systematically collecting information; a questionnaire is usually used to collect the information.

✿ An **interview** is a conversation between two people – the interviewer and the interviewee – where the interviewer asks the interviewee questions using a questionnaire or an interview guide.

✿ **Key stakeholder interviews** are interviews with people who have specific expertise, knowledge, or information sought by the interviewer.

- If a reporter finds out about the data and wants to know about the results, whom should he/her contact? Identify a couple of spokespersons in your community who have the skills to speak to reporters or respond to questions from the media.
- How are the survey, interview, or focus group questions phrased so that Latinos with a range of cultural backgrounds and literacy skills can understand the questions and respond?
- Were the survey questions professionally translated from English into Spanish to ensure linguistically competent materials? If translation and interpretation is necessary, make sure that you require the data collector to use a professional translator and interpreter.
- How should the analysis be framed so that the findings do not portray the Latino community in a negative light or carry a "blame the victim" message? How will the data be interpreted? Ask the data partner to set aside time and prepare the data so that you and other community members could help interpret what the results mean. Most likely, you know the community better than this person and can bring a different perspective that will enrich the interpretation.
- How are you going to assure the privacy and confidentiality of the participants? How are you going to protect their rights and welfare? How are you going to make sure they understand what their participation entails? How are you going to obtain their consent to participate? How are you going to store data?
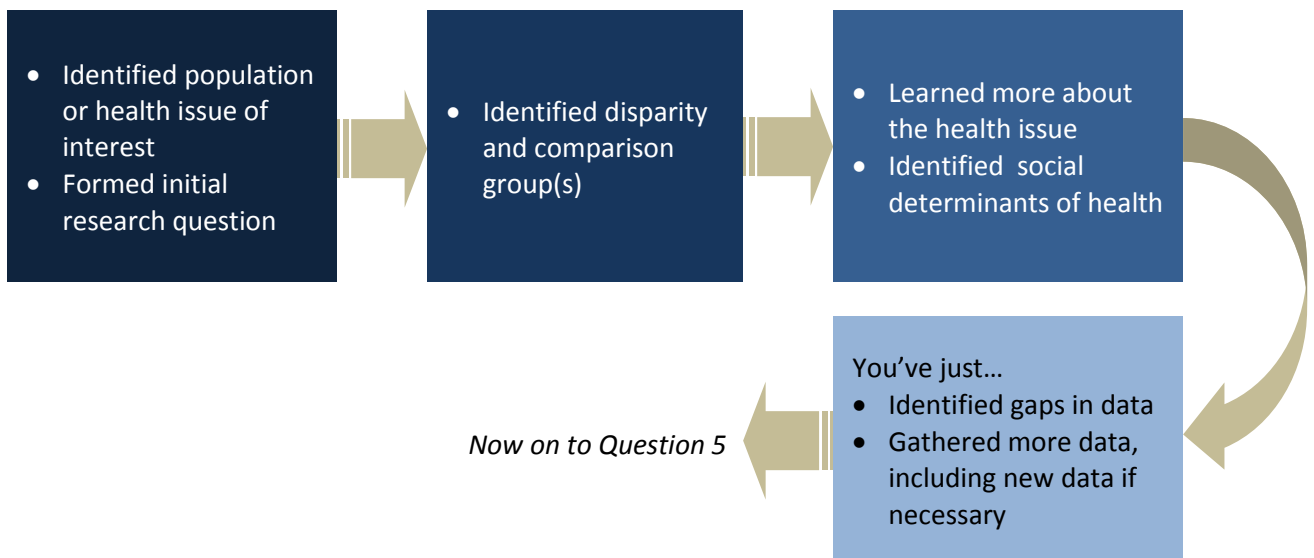
☑ **TIPS**

- ✓ Be clear about who owns the data and who can use the data.
- ✓ Prepare a few spokespersons in the community to respond to questions from the media.
- ✓ Ensure that questionnaires and questions are culturally and linguistically appropriate.
- ✓ Request that you participate in decisions about data analysis and interpretation.
- ✓ If necessary, set up a Community Institutional Review Board (IRB) or ask to see the data collector's application to the local university's IRB.

Institutional Review Boards (IRBs) are entities set up to protect the rights and welfare of people who participate in research. Any project financially supported by a public health agency that involves data collection and puts participants at any type of risk requires IRB review and approval. Universities tend to have their own IRBs and faculty or students must submit an application to the IRB for approval. American Indian/Alaska Native communities usually have their own IRBs to protect their members from being harmed by research. A very useful resource for partnerships with universities is the Community-Campus Partnerships for Health at www.ccph.info. This group's goal is to use the knowledge, wisdom, and experience that lie in both communities and academic institutions to address health and other issues; ensure that communities play a central role in driving the research and community change process; and build the capacity of communities and academic institutions to work with each other as equal partners. On the website, under Programs, click on "Community-base participatory research and research ethics;" you will find lots of information about IRBs and ethics.

Key Takeaways From This Section:

- There are three levels of secondary data that can be helpful — national, state, and local (local could be county, city, and/or a smaller geographic area).
- Once you have this data, check to see if you have all the data you need to understand the complete and accurate story about the health disparity of interest. If there are gaps, think about what you can do to collect this data and whom you should engage in your data-gathering work.
- For an accurate picture of the data, both *qualitative* and *quantitative* data are important.
- Think about using this opportunity for partnerships with others and remember to think about key issues such as who owns the data, the cultural appropriateness of materials, and the process for community decision making.
- Identify the assets of a community and consider ways to use the assets to address the health challenge.

- Identified population or health issue of interest
- Formed initial research question

→

- Identified disparity and comparison group(s)

→

- Learned more about the health issue
- Identified social determinants of health

You've just…
- Identified gaps in data
- Gathered more data, including new data if necessary

Now on to Question 5

Question 5: What is the story you want to tell?

Remember, the story should describe both the challenges **and** assets of the Latino community in your county and the social determinants of health that affect their health. So, you want to look for two things:

- Patterns between the diabetes rates and the data for the social determinants of health and any other community conditions you found; and
- Reliability of the data and comparison of the data to what you know about the community.

> ⚙A *variable* is the quality or quantity of a characteristic of a person, behavior, or topic of interest that can increase or decrease over time.

Some Notes on Thinking Critically About the Data You Are Uncovering…

When you are looking at the patterns and trends that the data show, ask yourself:

- If the major risk factor for diabetes is obesity, and if the conditions that contribute to obesity are physical inactivity and poor nutrition, what are the causes of these conditions?
- Do the data show that the opportunity for walking and exercising is limited for the Latino community? What about the environment that the Latino community lives in that limits the opportunity?
- How does having low income affect Latino community members' lives? Why do they have low income? Was there a sudden change in businesses and jobs (e.g., closing of factories, opening of a new industry that requires certain skills that these members don't have)?
- Do the maps show that there aren't stores nearby that sell healthy and fresh food? What do the qualitative data suggest about where the Latino families purchase their food?
- Where do Latino residents get their health care, and is the care provided in Spanish if they have limited English proficiency?

While looking at the patterns and trends, you also want to be critical about the data by asking some hard questions about not just what you're seeing, but also what's behind what you're seeing. Here are the important things to understand:

- Where did the data come from? You want to know if the data came from a national, state, or local study in order to figure out how real the data is in relation to your

community. You always want to cite the source of your data to give it weight and credibility.

- Who is included in the data? How were some of the important variables, especially those pertaining to social groups (e.g., racial and ethnic groups, sexual orientation and gender groups) defined? Also, was the research participant "assigned" to a particular group or self-identified? If the former, there could be a bias, especially if the person was not asked the appropriate question to make the determination.

- Most national studies tend to combine and report data on racial and ethnic groups as individual, broad categories — "Hispanic;" "Hispanic, non-White;" or "Hispanic, non-Black." Sometimes, data by specific Hispanic/Latino group (e.g., Mexican Americans, Puerto Ricans, or Salvadorans) are available, but have not been reported that way. It is worth contacting the data source to find this out or request an analysis that suits your needs.

- Sometimes there are not enough data for a particular population, so that population has to be combined into a broader category to be able to apply the ***statistical significance test***. If the sample is too small and such a test is applied, the results are not reliable.

Also, if the sample is very small, the confidentiality of the research or study participants can be violated; if this is the situation, the data should be combined with data from another similar population to create a larger sample.

> ✿ A ***statistically significant finding*** means that the result is probably true and not due to chance. When the results are described as statistically significant (p>0.05), it means that the result has a 95 percent chance of being true. A statistically significant finding at a *p* value of 0.01 is stronger because it has a 99% chance of being true.
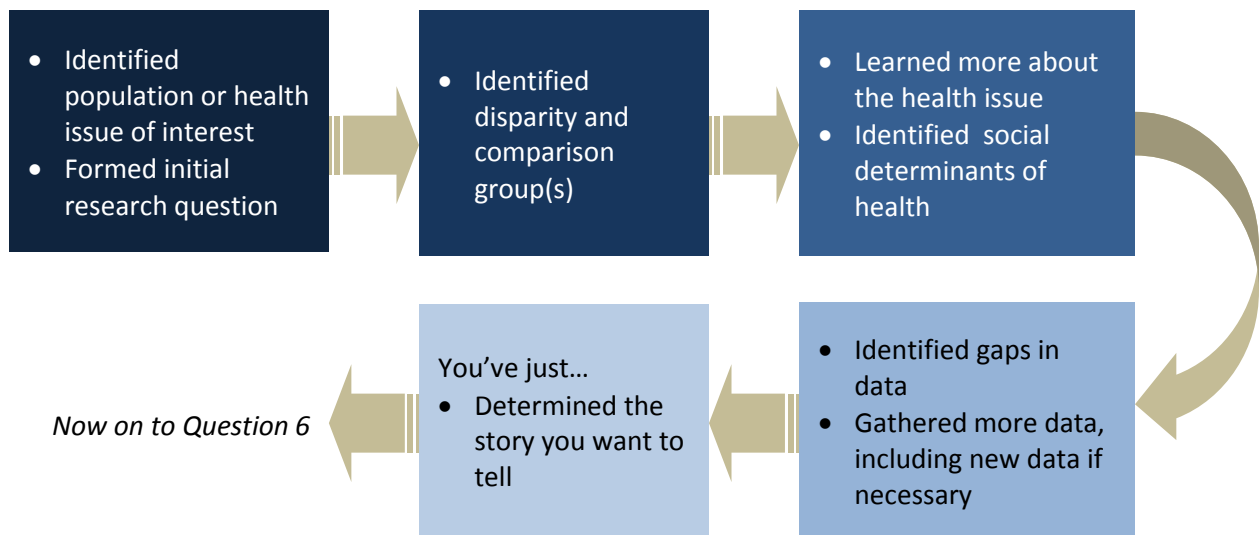
- What were the circumstances when the data was being collected? Circumstances surrounding the time when the data were collected are important to understand because they affect the responses. For example, rates of a health condition may appear to "spike" during a particular time period. The spike could suggest an actual increase in the health condition or perhaps just an increase in the reporting of the condition due to a change in health policy or research practice. It is therefore important to ask if there were any major policy changes, demographic shifts, or major events that affected the data collection during the time when the data were collected.

- Always make sure to keep a very careful record of the data sources. Keep detailed notes about where the data came from for your graphs and tables or keep your data websites stored under 'favorites' for easy access.

- Is there sufficient data about the strengths and assets of the community of interest? Make sure you identify and gather information about existing resources in the community, programs that have worked, relationships and networks that can be leveraged, and traditions and norms that support the desired changes.

Key Takeaways From This Section:

- **Look for patterns between the rates for the health condition and the data for the social determinants of health that you identified. While looking at the patterns, you also want to be critical about the data by asking some hard questions about not just what you're seeing, but also what's behind what you're seeing.**
- **To think critically about the data, be aware of where the data came from, who is included in it, how groups were defined, and the size of the data sample to ensure accuracy.**
- **Consider in your story the challenges and assets of the target population and community.**

- Identified population or health issue of interest
- Formed initial research question

→

- Identified disparity and comparison group(s)

→

- Learned more about the health issue
- Identified social determinants of health

↓

- Identified gaps in data
- Gathered more data, including new data if necessary

←

You've just…
- Determined the story you want to tell

←

Now on to Question 6

Question 6: How can you use the data to build a healthier community?

You started with a research question, then you gathered all the data you needed to tell the story, and now, you work toward a *strategy* to deal with the issues told in the story. You can think of it as a strategy that will enable you to write the sequel — a healthier community.

> ✿A *strategy* is a method or plan to achieve the desired goal. A strategy brings together activities, resources, and all the other pieces of what you have to do into a plan.

Developing a Strategy

To think about the strategy, consider which social determinants of health, based on your story, should you tackle first? To help you select the best one to begin your work, consider:
- What is the change you want to see in the social determinants of health that contribute to the high rates of diabetes among Latinos?
- What capacity do you and your organization have to bring about this change?
- What existing assets and resources can you build on?
- How "ready" are the leaders and community residents for the change you want to see?
- What "quick wins" can you have to build community trust and show that something can actually be done to address a health condition that may seem very big and hard to change?
- What past lessons have there been that you can learn from?

The data point to three main issues: environmental challenges that make it hard for Latinos to eat healthy food and exercise; high rate of poverty which may affect their ability to get access to health care (because they are unemployed or not eligible for Medicaid), to go to grocery stores that sell healthy food (because they are further away), as well as to buy gym membership or exercise equipment; and not enough culturally competent places where Latinos can get help to manage their diabetes.

Looking at the data and considering the questions above, a strategy for addressing the high rates of diabetes among Latinos in your community could be to increase their access to preventive care.

Key Elements of a Strategy

You may decide to take on more than one strategy, depending on your capacity. Within each strategy, you want to focus on one or more of the following:

1. Strengthening the sense of community;
2. Building coalitions;
3. Advocating for policy and other changes; and
4. Strengthening or developing new programs.

Whichever elements you choose, focus on trying to create a "whole" strategy that builds community connection and a sense of belonging and power, while keeping in mind the ultimate goal of: increasing access to preventive care. Strengthening the sense of community, building coalitions and advocating for policy change all increase the potential for long-term sustainability for change and a mobilized community and leadership (both formal and informal) with increased awareness and connectedness to your issue. Coalitions bring new partners to the table. Advocacy can create a new friendlier playing field in terms of laws and policies and a more unified and aware community provides a greater chance of success for programs.

Strengthening Sense of Community

If you want to use data to strengthen the sense of community among Latino residents and with other leaders and groups in order to increase access to preventive care, think about:

- A campaign to raise the awareness of community and civic leaders, elected and appointed leaders, residents, youth, business owners, and faith leaders about the importance of healthy diet, exercise, and regular physical check-ups. Connect these issues to the physical environment and the inadequate services that don't support these practices. Think about how the data should be presented to different groups (e.g., fact sheets, newspaper article or op-ed, guest speaker on a community radio program).
- A process for engaging residents in discussions about what they can do to begin to change the physical environment and the way preventive services are delivered. As part of the process, get them to think about small steps — or quick wins — that show actual results, like making a vacant lot into a community vegetable garden where you can grow fresh produce for community use, getting streetlights fixed so that streets are walkable in the evening, or organizing a "community night-out walk" or small health fair.
- A symbol or symbols for a healthy community and use it to "brand" activities and programs that promote healthy living. For example, restaurants that change their menu to serve healthy food display the symbol on their menu or storefront.
- Awards for leaders who take action, no matter how small, to promote healthy eating and physical activity.
- Cultural practices that promote healthy eating and physical activity.
- Sharing examples from other communities that have successfully dealt with the same issues to inspire the leaders and residents in your community.

Building Coalition

It's important to remember that while you and your organization may have the capacity to implement the strategy, bringing others into your work will be a "force multiplier" in terms of resources and building community strength and power. Think broadly about other people or groups that might be both impacted by and invested in what you have discovered through your research and work to build these partnerships and engage these stakeholders. Consider

targeting groups that have a "self interest" in working on similar determinants or may have already been working on similar issues. One option could be a multi-sector coalition where leaders and representatives from health, housing, education, transportation, and civic sectors come together to solve the health problem. Another possibility is a multi-racial and ethnic coalition. For example, if diabetes rates are high among the Latinos and African Americans/Blacks in your community, you might want to reach out to leaders in the African American/Black community to learn about what they are doing and how the two communities could work together.

To use the data for coalition building in order to increase access to preventive care in your community, think about:

- How to bring together leaders from different racial and ethnic populations — Latino and African American/Black — most affected by diabetes, as demonstrated by the data, to consider joint projects and solutions. An example of a joint project is a community garden that grows vegetables and herbs used in the traditional foods of these two groups and an ongoing exchange about how to use the vegetables and herbs to make healthy meals.
- How to engage leaders from the following sectors — education, transportation, recreation, and health — to create joint projects and comprehensive solutions. An example of a joint project is the development of a vacant lot into a clean and safe space where health clinics could hold exercise classes to accommodate more people.
- How can you create some "quick wins" with a coalition to build momentum and mobilize others in the community to do something about the health problems they are experiencing? A small and monthly health fair on the school grounds where health providers do tests for blood glucose levels and give out information in English and Spanish is a quick win!

There are many wonderful examples of how data have been used to strengthen communities and build successful partnerships and coalitions to tackle health disparities in the publication *Stories: Using Information in Community Building and Local Policy*. It can be downloaded from http://www.urban.org/uploadedpdf/412033_stories_using_information.pdf.

Advocating for Change

Whether through a coalition or on your own, you may want to use the data to focus on advocacy for your community — to change policies and practices to increase the residents' access to fresh foods, make the community more walkable, fund translation and interpreting services, or require adherence to the National Cultural and Linguistic Appropriate Services (CLAS) standards. Effective advocacy rests on being clear and sharp about what you are asking for and having both the data to back up your demands as well as having a mobilized community behind you. If you are interested in advocacy to increase access to prevention care, think about:

- What are the current local policies that need to be changed to address the social determinants of health that affect diabetes?
- Which policymakers or decisionmakers do you need to engage and educate to raise their awareness about the data you found?
- What are some existing county or city initiatives that you can connect your research and advocacy goals to?
- How can you best frame the issues to create a clear message that everyone can relate to?
- What other advocacy groups or networks are working on the same issue or with a similar agenda and how can you build an alliance with them?

Developing and Improving Programs

Finally, you may want to use the data to develop or improve programs in order to increase access to preventive care. There may already be programs in the community that are doing this.

Don't reinvent the wheel! This is a perfect place to create partnerships with others and work with them to adjust their programs to support your strategy to increase access to preventive care. For example, there is a diabetes prevention class once a week sponsored by the hospital. You or another community or coalition leader could approach the hospital and discuss how it could work with the adult education center to teach a similar class at the center and therefore, reach people who don't have the resources to join the gym. You could also engage a clinic that helps diabetic patients manage their condition to add a prevention component to its programs.

By working with existing programs to expand or add a component to increase access to preventive care, you are "aligning" them to work toward a common result.

If you want to create new programs, you might first consider what successful programs you can adopt and adapt from other places. You want to make sure, however, that the program you are considering adopting is culturally appropriate. Sometimes, the program's success is based on the results of another group of people who experience very different conditions than your target group. If you cannot find a program to adopt and adapt, it is important for you to get advice from the people who will be affected by the new program and involve them in the design and implementation of the program.
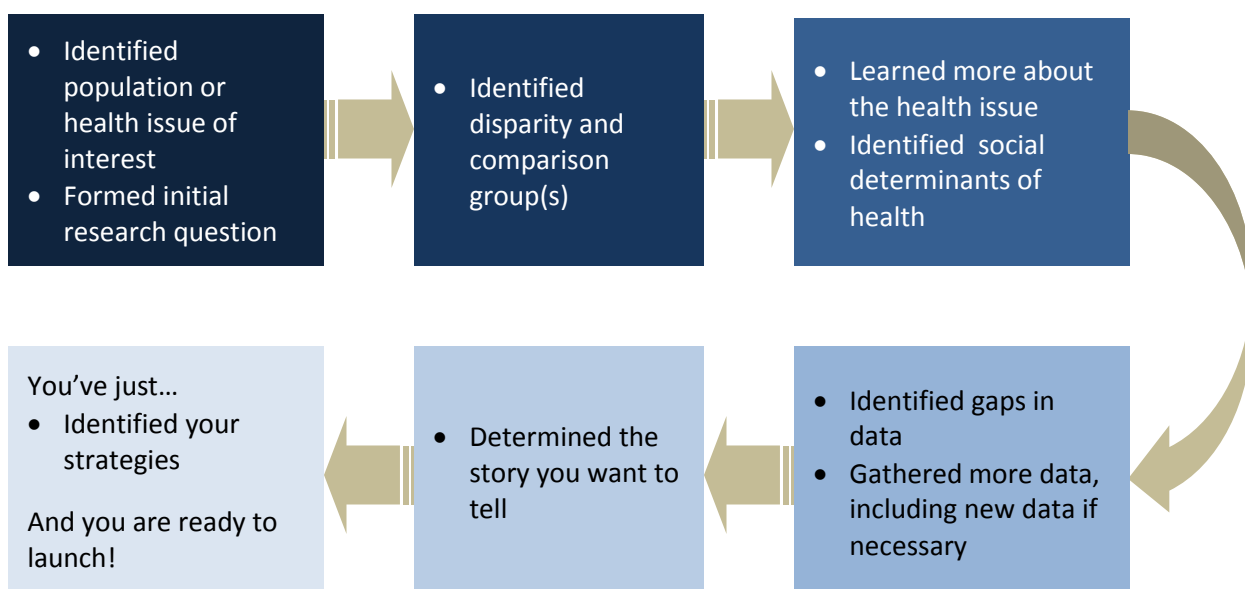
☑ **TIPS**

Program development will be most successful when you follow these four "Cs":
- ✓ Do you have the **capacity** to make it happen?
- ✓ Are you being **concrete** (or specific) about what you want to address?
- ✓ Are you being **creative** about what will work?
- ✓ Is the program **culturally** appropriate for the population you are targeting?

Key Takeaways From This Section:

- **To create effective strategies, focus on which social determinants of health, based on your story you should tackle; make sure there are the capacity, community will, and readiness to take it on.**
- **Effective strategies should focus on one or more of the following: strengthening sense of community, building coalitions, advocating for policy and other changes and developing or improving programs. The most effective strategies incorporate more than one of these approaches. This increases the chance for sustainable change.**

• Identified population or health issue of interest • Formed initial research question	• Identified disparity and comparison group(s)	• Learned more about the health issue • Identified social determinants of health

You've just… • Identified your strategies And you are ready to launch!	• Determined the story you want to tell	• Identified gaps in data • Gathered more data, including new data if necessary

Section 5: Scenario 2 - Prioritizing Which Health Disparities to Address in Your Community

"You (i.e., a racially and ethnically diverse group of leader in the community) have met to discuss your concerns about the health disparities that affect your community. You know they exist; you know they are extensive. Some leaders feel that obesity is a problem, while others claim that asthma is becoming increasingly common. You feel overwhelmed. Where do you start?"

Question 1: What's the Starting Point?

You (the leaders) probably have a good guess, from having lived in County X for so long, that there are racial and ethnic disparities in the community. You believe that the situation in your community is worse than in some other neighboring counties, but you're not sure. One starting point is to look at the current characteristics of the people who live there by race and ethnicity, the leading causes of death (e.g., heart disease, cancer, stroke, etc.), and the top chronic diseases (e.g., heart disease, cancer, depression, obesity, substance abuse, etc.) among them.

☑ **TIPS**

✓ Start with looking at the characteristics of people who live in your community.
✓ Examine health data to find out leading health problems and causes of death in your community.

Consider a simple research question all the leaders can agree to ask to get you started:

> What health problems and causes of death are common among which racial and ethnic groups in the community during the past five to ten years?

Remember, this is just an initial question to get you started and it is a general one. You will refine it as you get more information.

You've just…
- Formed initial research question

Now on to Question 2

Question 2: What's the disparity and compared to which other population?

Consider what the data might say about some of the following questions (Remember — think critically! What might be going on "behind" the numbers?):

- How common are the leading causes of death and chronic diseases among the racial and ethnic groups in your community compared to neighboring counties and the state?
- Where are the largest disparities? Are there health issues or diseases where the disparities have been rapidly growing larger (that is, you want to assess if a certain health disparity is getting worse than another over the last five years)?

STOP! There are two more critical questions here that you need to ask that you didn't have to ask in Scenario 1 because you are trying to zero in on what issue or aspect of health disparities you'll target.

- What has been done already to address these disparities? What worked and didn't work?
- Where do public and private funds go? Do they go to particular efforts that deal with any of the disparities you learned about?

These two questions are important to ask and answer because the overall problem of "health disparities" in your community may be too big and broad to tackle effectively. You'll need to start narrowing down your target or focus. Depending on the answers to the above question, you may decide to focus on a health issue or disease that is already getting some attention and support and attempt to enhance the support. Or you may decide to focus on a health issue or disease that is not getting enough attention and quickly worsening. While you want to see the "big picture" and have enough information to decide which disparity you want to focus on, you also don't want to waste your time doing research on everything.

As we've stated before — you don't want to re-invent the wheel. There are probably some programs and people out there who are working on health disparity issues that may have something to offer. You will want to maximize your resources and both partner with others as well as create programs and strategies that you know have the parts that have shown success.

Now that you have agreed on a research question, you can start collecting data. Much of the information needed is available from public sources—remember the list in Section 3, under *Extremely Useful Resources for Data that You Should Be Familiar With* (p. 9 – 10). The more you can use state, county, and other local data sources, the more likely the data will reflect what is really going on in your community. As the last resort, you may have to collect your own data; if so, the tips we shared earlier about collaborating with others to collect new data will help!

The following exhibit illustrates initial demographic data about the groups in your community that you will typically find.

County X's 2010 population of 138,917 is becoming increasingly diverse. Exhibit 7 shows that 28 percent of the overall population identifies themselves as Hispanic or Latino compared to 25 percent three years ago, and 15 percent identifies as African American or Black, compared to 7.6 percent three years ago.

**Exhibit 7. Racial Composition of County X in 2008 and 2010**
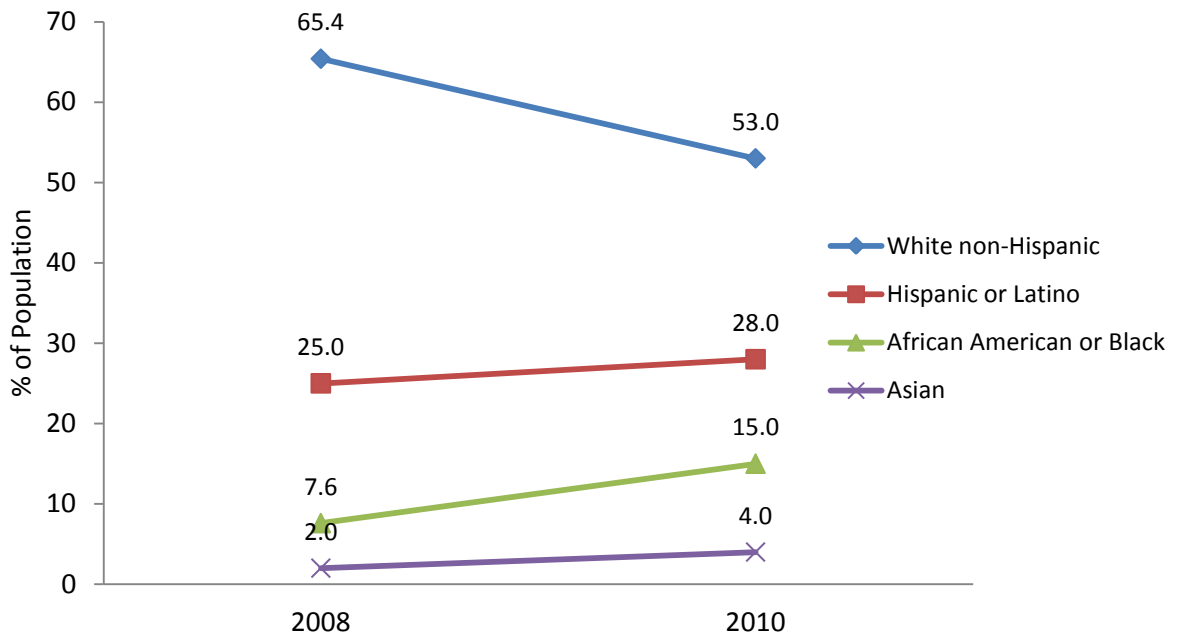
Exhibit 8. Percent of Foreign-Born Children in State A and Six Counties, 2010
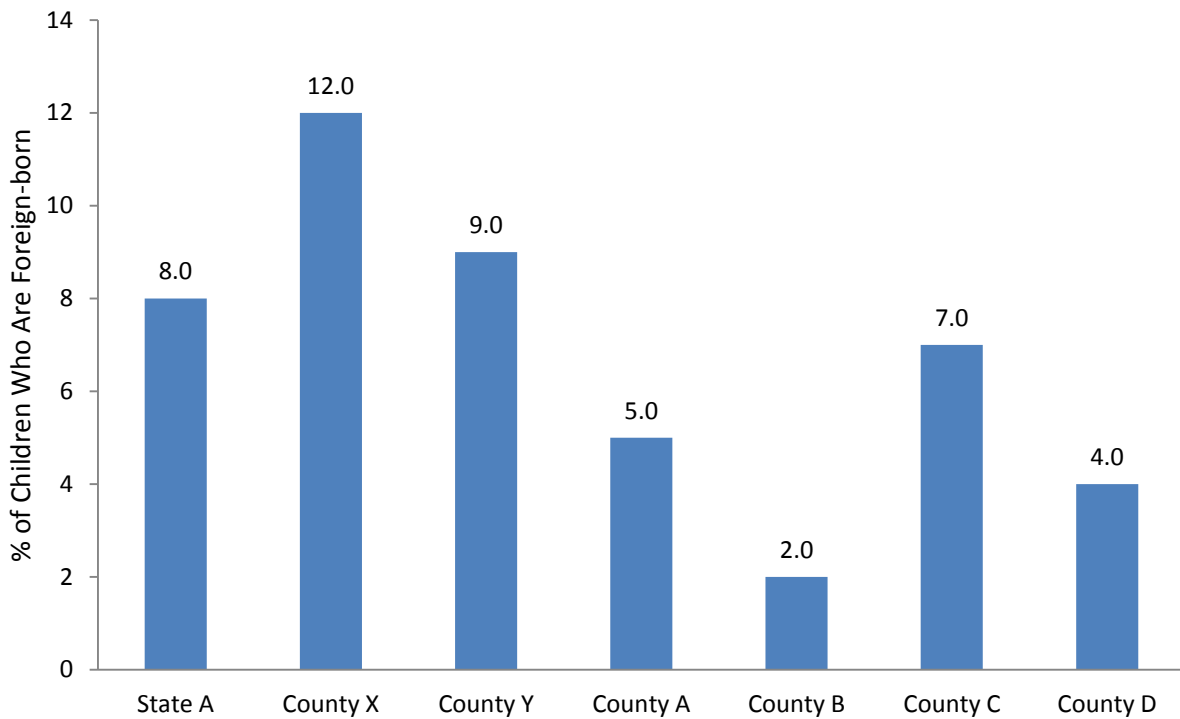
Also, County X and its neighboring county, County Y, have the largest concentrations of foreign-born children ages 5-17, at 12 percent compared to 8 percent in the state, as shown in Exhibit 8. Further, you find out that the foreign-born population in your county has grown by 25 percent in the past three years. These data are available from The Annie E. Casey Foundation Kids County Data Center, http://datacenter.kidscount.org/data/bystate/. The Pew Hispanic Center has excellent data on Hispanic immigrants. The state data can be accessed through http://www.pewhispanic.org/states/. The U.S. Department of Homeland Security also has good data on immigration, which can be accessed through http://www.dhs.gov/immigration-statistics.

**Exhibit 9. Median Family Income of State A and Six Counties, 2010**
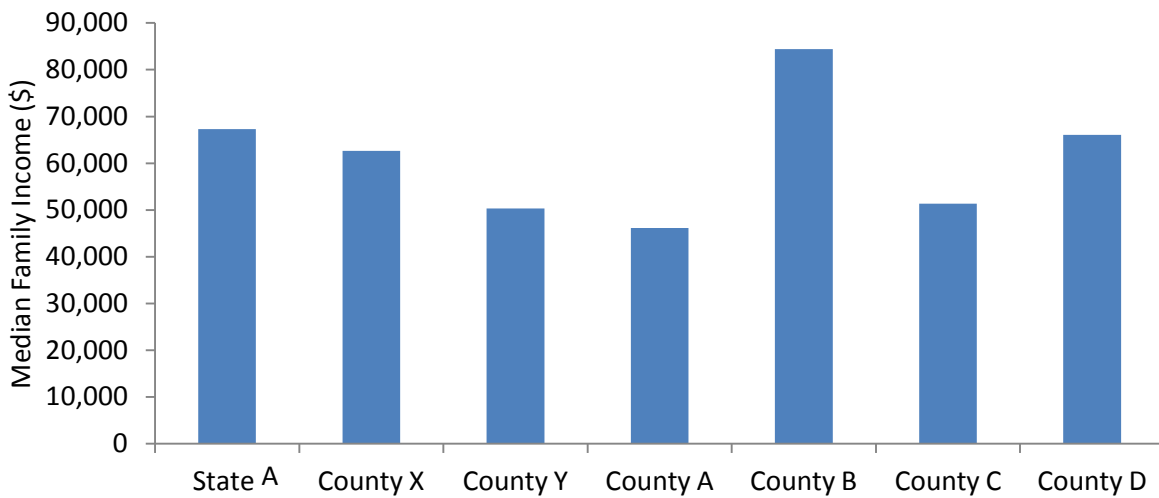
Exhibit 10. Median Family Income by Race for State A and County X (2010)
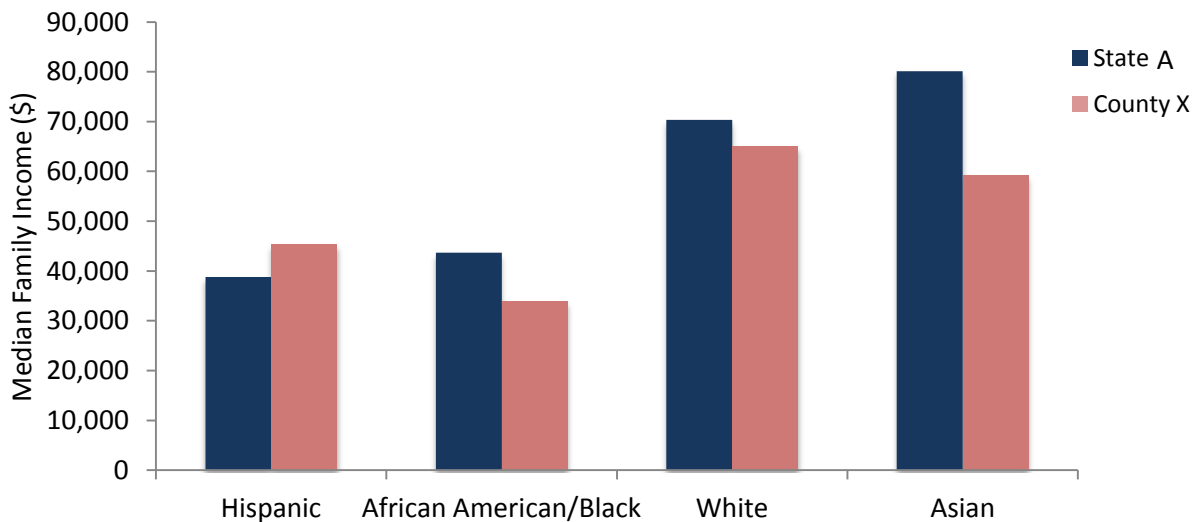
By having lived in the county for a long time, you know that a large percentage of people are low-income. Exhibits 9 and 10 show typical information you can find about income levels. The exhibits confirm what you know. Another type of useful information that can tell you a little more about the socioeconomic status of families is the percentage of children enrolled in free and reduced-price lunch programs. Exhibit 10 compares the percentage of such children in your county compared to the state, once again supporting what you know about the impoverished conditions in which most families in your county live.

Exhibit 11. Percent of Children Enrolled in Free and Reduced-Price Lunch Program, 2008-2010
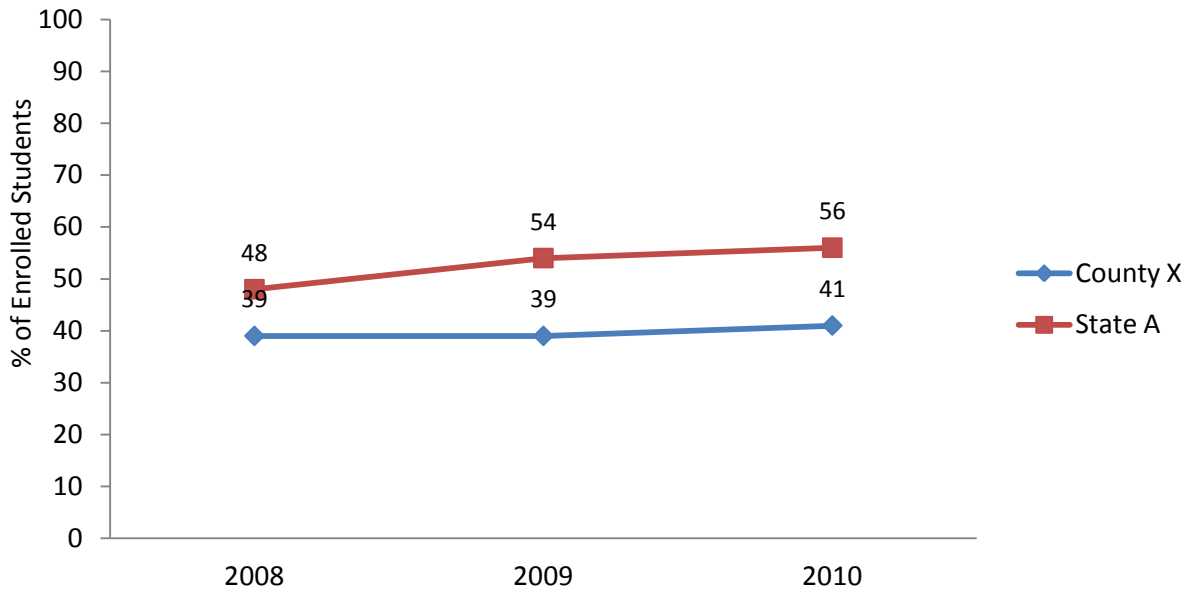
Finally, the local newspaper recently announced that the unemployment rate in the county was estimated at 9 percent in August 2012. This was a slight increase from the year before, which was estimated at 8.5percent. The current unemployment rate has tripled from 3.2 percent in 2007.

What do the above data tell you? The data you've collected tell you a lot about your county. The racial and ethnic minority population in your community is growing. At the same time, the poverty rate is increasing. In fact, the increasing unemployment rate is probably making the situation worse. The circumstances in your county seem to be more severe than in other neighboring counties or even in the state in general. Also, you notice that the African American/Black community has grown substantially (almost double) in the last three years and so has the foreign-born population. You suspect that a growing African refugee population in your county may have contributed to this trend. New immigrants often have a different health profile and screening needs compared to residents who have been living in the U.S. Demographic data from the U.S. Census usually do not differentiate between African immigrants or refugees and African Americans who have lived in the United States for generations.

You need to keep this insight in mind because it is likely that you won't be able to find a lot of data about this refugee population. You would want to reach out to any leader or organization that works with African refugees in your area and engage them in your effort to address health disparities.

Next, look at the health data; start by checking if your state's department of health has published any type of report this past year. These publications come in different formats; some are called report cards, some score cards, and others are simply reports. Their purpose is the same — to provide information about the status of certain health conditions and, sometimes, the quality of health services. If it's a score card or report card, a grade (A-D or F) may be provided about where the state stands on a particular health condition or health service. A list of states that have such publications is included in Appendix B. Exhibit 12 provides examples of snapshots of two different types of report cards.

Exhibit 12. Examples of Snapshots of Two Report Cards on Health Disparities

Race/Ethnicity	Grade for State Health System Effectiveness	2008-2010 Rate (per 100,000)	Disparity Ratio
African American/Black	D	51.2	2.5
Hispanic, non-White	C	48.1	2.4
Native American/Alaska Native	Not Enough Data for An Accurate Grade		
Asian	A	20.3	1.1
White	Reference Group	19.4	1.0

Indicator	County of Interest	Neighboring County 1	Neighboring County 2
Percent of children (1-8 years old) who live near a playground or other safe places to play	43.1	50.2	80.4
Acres of green space or recreation areas per 1,000 population	2.4	4. 7	60.2

You (all the leaders) sit down to review the report card. The report card you obtained from your health department shows that depression and asthma rates are highest among Latinos
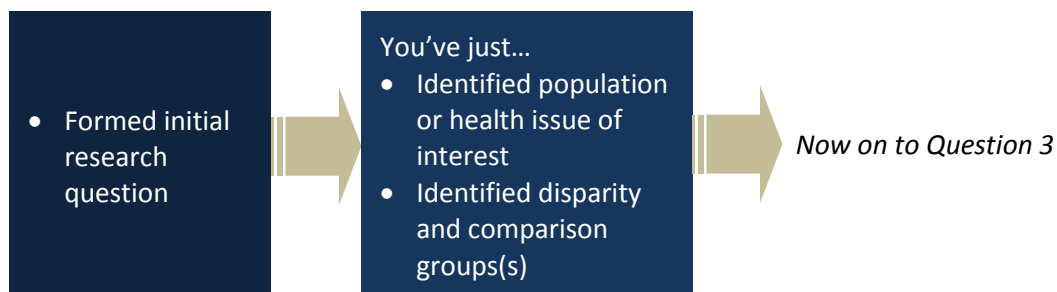
and African Americans/Blacks and lowest among Whites and Asian Americans in the state. The report card also shows that cervical cancer rates are highest among Asian Americans.

Before you go further, you decide that it would be helpful to see if the trends are similar in the county, which also may be available through reports published by local health departments or community organizations. The list of local places that have publications about the health in their communities is included in Appendix B. Furthermore, it is a good idea, even if there is such a publication for your county, city, or community, to contact the local health department and learn more about what the representative thinks is going on in the community in terms of health conditions and health care services. Let's say that when you contacted the health department representative, he/she showed you data that emergency visits are higher this year than previous years, especially for African Americans/Blacks. Based on the data gathered, you may raise questions about why there are higher rates of depression, asthma, cervical cancer, and emergency visits in the three racial and ethnic groups in your community and what factors may contribute to these higher rates.

> **NOTE**: If such a publication is not available from your state health department, check to see if your county or city health department has one. If not, make an appointment with your state office of minority health, another representative from the state health department, or a representative from the county or city health department. Ask them what they know and if there are any data or reports they can share with you.

You are now ready to refine your research question to:

> What social determinants of health contribute to the high rates of depression and asthma among Hispanics and African Americans/Blacks and cervical cancer among Asian Americans over the past five years in County X, as well as the higher rates of emergency room visits?

| Formed initial research question | → | You've just…
• Identified population or health issue of interest
• Identified disparity and comparison groups(s) | → | *Now on to Question 3* |

Question 3: What are the social determinants of health that impact the group or issue?

If you recall, we suggested in Scenario 1 under Question 3 that you begin to research this by going to CDC, Healthy People 2020, and OMH websites, as well as perhaps having more discussions with your state or county office of minority health to understand these health conditions and situations. After your research, you will find out that the following social determinants of health affect these health conditions of interest:

- Access to health care;
- Housing conditions; and
- Air quality (e.g., poor air quality due to air pollution from motor vehicles, industrial smoke stacks).

You (all the leaders) meet again to discuss what you learn; it might be a good idea to also invite an expert in any of the social determinants of interest to present and participate in your discussions.

Next you want to find out:

- Where do the Hispanic, African American/Black, and Asian residents live in the county and in what type of neighborhood conditions?
- What kinds of prevention or treatment health-care services are these populations able or not able to get? What are the barriers to accessing those services?
- What has been done already to address these disparities? What worked and didn't work?
- Are there any existing public- and foundation-funded efforts targeted at these issues and these racial and ethnic groups?

To get the data you need, you can use the same sources cited before. You may have to contact the county department of housing to get data about where people live and the type of housing in the areas where they live. Exhibits 13, 14, and 16 may be the kind of data you find about housing conditions. Also, you could visit the Environmental Protection Agency (EPA)'s website for air quality data (see Exhibit 15 for example). While you are searching, you may find a survey conducted two years ago about residents' satisfaction with health services; the results showed that residents with limited English proficiency were dissatisfied with the services. Examine the following charts.

Exhibit 13. Location of Publically Subsidized Housing in Areas with Large Numbers of Households with Income Below $25,000

Exhibit 13 shows that the majority of publically subsidized housing is located in the poorest neighborhoods; very few units or properties are located in census tracts with fewer than 56 households that have an income lower than $25,000. Such a map can be created using online mapping tools provided by www.communitycommons.org, which uses data collected by the U.S. Department of Housing and Urban Development (HUD) and the U.S. Census Bureau.

HUD's Real Estate Assessment Center conducts physical property inspections of properties that are owned, insured, or subsidized by HUD, including public housing and multifamily assisted housing. About 20,000 such inspections are conducted each year to ensure that assisted families have housing that is decent, safe, sanitary and in good repair. The assessment is *weighted*:

> ✿ *Weighted* means multiplying a variable by a certain amount to make it comparable to other variables.

15 percent – site; 15 percent – building exterior; 20 percent – building systems; 15 percent – common areas; and 35 percent – dwelling units. Exhibit 14 shows the physical property inspection scores for County X and State A. Housing Authorities scoring below 60 in physical inspections are classified as "troubled." Consequently, the field office has to approve or disapprove decisions and plans until the physical state of the units improves. Housing

Authorities units that score in between 60 and 70 require an "improvement plan." These Housing Authorities must identify an improvement strategy, and the units are assessed every year. Data for physical inspection scores are available from HUD at this website: http://www.huduser.org/portal/datasets/pis.html

Exhibit 14. Public Housing Conditions in County X and State A

Geography	Physical Inspection Scores		
	Average Score	Mode	Range
County X Public Housing	75.05	80	19-100
State	72.15	82	19-100

Exhibit 15 shows the location of sites in a particular area in County X that release toxic chemicals and are involved in other waste management activities. Such data are publically available and collected by the EPA. Maps can be created through http://www.esri.com/industries/health/geomedicine/map.html using EPA data.

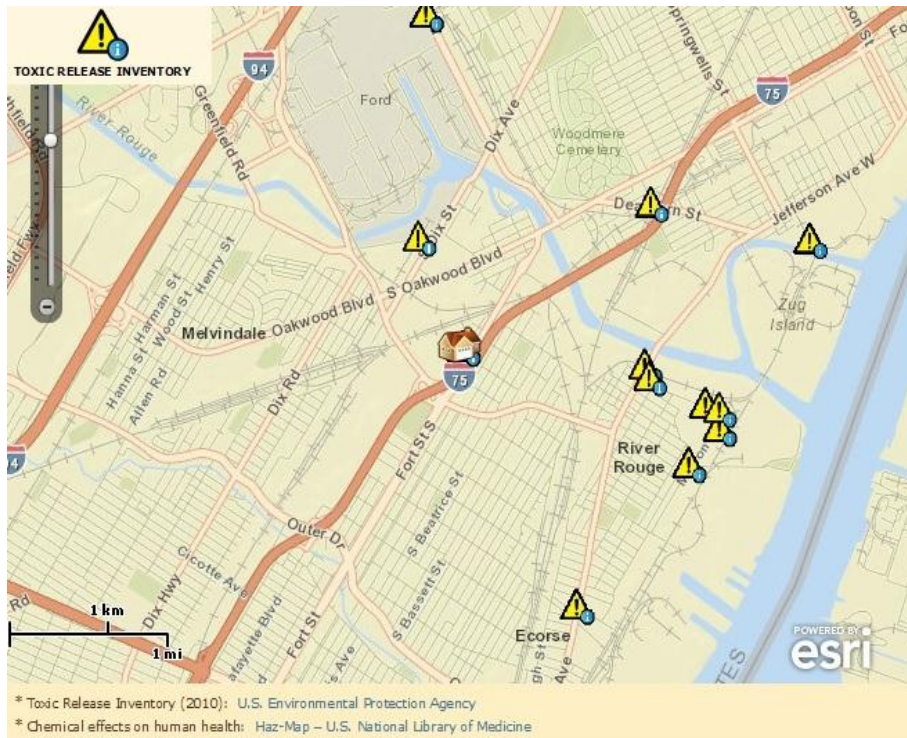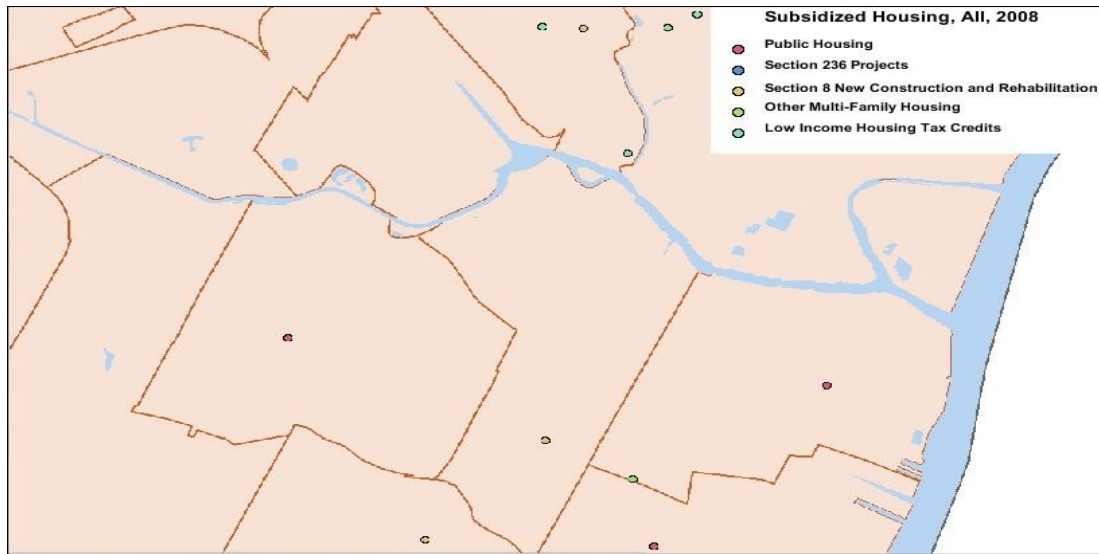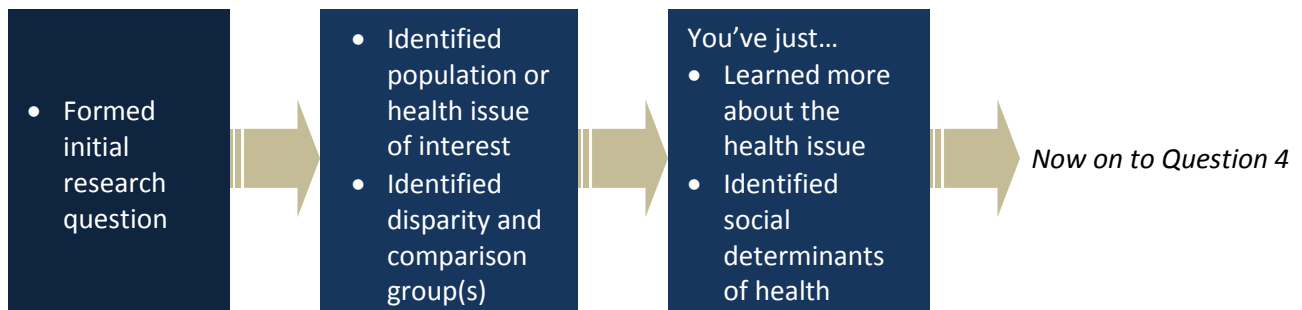**Exhibit 15. Toxic Release Inventory for an Area in County X**

Exhibit 16 shows the distribution of publically subsidized housing in an area of County X; this is the same area included in Exhibit 15. This sort of map can be created at www.communitycommons.org using HUD data.

Exhibit 16. Publically Subsidized Housing Locations in an Area in County X

While not the same map, Exhibits 15 and 16 show the same geographic location. By comparing the two maps, you can see that many of the public housing units are located in close proximity to the sites that release toxic chemicals such as manufacturing plants, radioactive sites, industrial plants, and sewage or refuge operations. The chemicals released have a number of health consequences on air quality and aggravating asthma or other acute, short-term, and chronic long-term health effects such as headaches and cancer, respectively. The proximity between the toxic sites and the public housing is not unusual because property is more affordable in the areas where public housing tends be located and the people who occupy public housing tend to not have the political clout or capital to prevent toxic sites (industrial workplaces) from being placed near their homes.

- Formed initial research question

- Identified population or health issue of interest
- Identified disparity and comparison group(s)

You've just…
- Learned more about the health issue
- Identified social determinants of health

Now on to Question 4

Question 4: Where are the data gaps and what do you do to fill the gaps?

You now have the data about who lives in your community, what health conditions are most common among them, and the social determinants of health that contribute to the conditions (i.e., housing, income). But you still may not know why Hispanics as well as African American/Black residents are not able to access the services they need to prevent them from becoming so sick that they have to go to the emergency room. And you don't know how satisfied these residents, along with Asian residents, are with the health services they get. So, you have to assess your resources and connections to find more data to fill these information gaps.

It may be harder to find out about the kinds of services that Hispanic and African American/Black residents seek, the health coverage they have (though you suspect many don't have any if they get it through their jobs because of the unemployment rate), and the quality of those services for these groups as well as for Asians. You also may not know enough about how common asthma and depression are among the African population and the factors that contribute to these problems because the data sources don't distinguish this group of people from the African American/Black residents who may have lived in County X for generations. You may have to collect some new data to better understand what is going on in the African refugee community and how similar or different their experiences are from African Americans/Blacks.
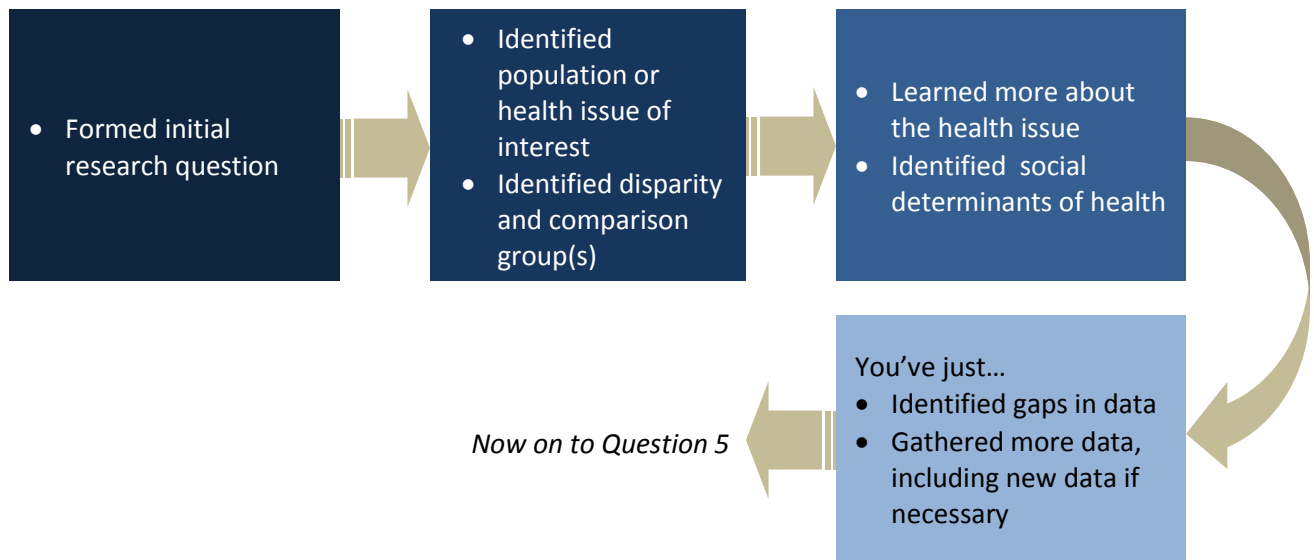
This is where you (all the leaders) can use your connections to engage additional leaders from these racial and ethnic communities as partners in some powerful and important ways. Perhaps most important, now is the time to begin to bring these diverse leaders together into a coalition that will work on the strategies that emerge to tackle these disparities. Bringing the leaders of the affected communities together at this stage in the process enables everyone to feel invested and involved in data collection and strategy development, which will only increase everyone's investment in the outcomes of any work you do. These new partners can bring many critical things to the table, including information, deep connections to those most impacted by the issues you want to address, and a wealth of experience and resources.

On the data front, you can find out the following from your new partners:

- Ask them if they are aware of any other data collected from their community members, or if they know about other data sources. You might also ask if a particular nonprofit or foundation might have collected such data before. **If not, this is where you might have to do some new data collection.** You could conduct a survey or focus groups with residents; it might be easier to administer the survey or conduct the focus groups at places where they naturally gather and are comfortable (e.g., church, barber shop, English-as-a-Second-Language classes, ethnic grocery store). You also want to know about what programs, initiatives, or efforts have been implemented before.

A very important step before you declare your data collection and analysis more or less complete — find out about the assets of the groups and community that are affected by health disparities. This is important to ensure a strength-based approach.

And finally, trust what you know. Look hard at whether the data you are finding matches what you know about the community, what you are hearing through your day-to-day contact with people in the community, and what you observe personally. If there's a real disconnect, then you need to dig more deeply into the data to find out where there may be biases or other factors that are swaying the data.

• Formed initial research question	• Identified population or health issue of interest • Identified disparity and comparison group(s)	• Learned more about the health issue • Identified social determinants of health

Now on to Question 5

You've just…
• Identified gaps in data
• Gathered more data, including new data if necessary

Question 5: What is the story you can tell to describe the situation?

Once you are satisfied with the amount of data you have, you are ready to tell the story to describe the situation. But before you do that, think about your research question again and use it to guide your story. In order to tell the story effectively, you need to:

- Identify the audience for the story.
- Consider what you want the audience to do with the story; for instance, to become aware or motivated to take action. This will help you decide the best format for your story.
- Decide the best format for telling the story. Depending on your resources, the formats could include a newspaper article, a report, a factsheet, a theater production or play, a documentary, a town hall or community meeting, or a presentation.

You started your research with the following question:

> What health problems and causes of death are common among which groups of people in the community during the past five to ten years?

You then refined it to ask:

> What social determinants of health contribute to the high rates of depression and asthma among Hispanics and African Americans/Blacks and the high rate of cervical cancer among Asians over the past several years in County X?

☑ **TIPS**

- ✓ Look for a pattern such as when one rate increases for a ***variable***, so does another, or if the reverse is true.
- ✓ Use qualitative data to support the quantitative data you find, and vice versa.
- ✓ Check the reliability of the data and also compare the data to what you know about the community.
- ✓ Identify your audience for the story.
- ✓ Decide the best format for your story for that audience.
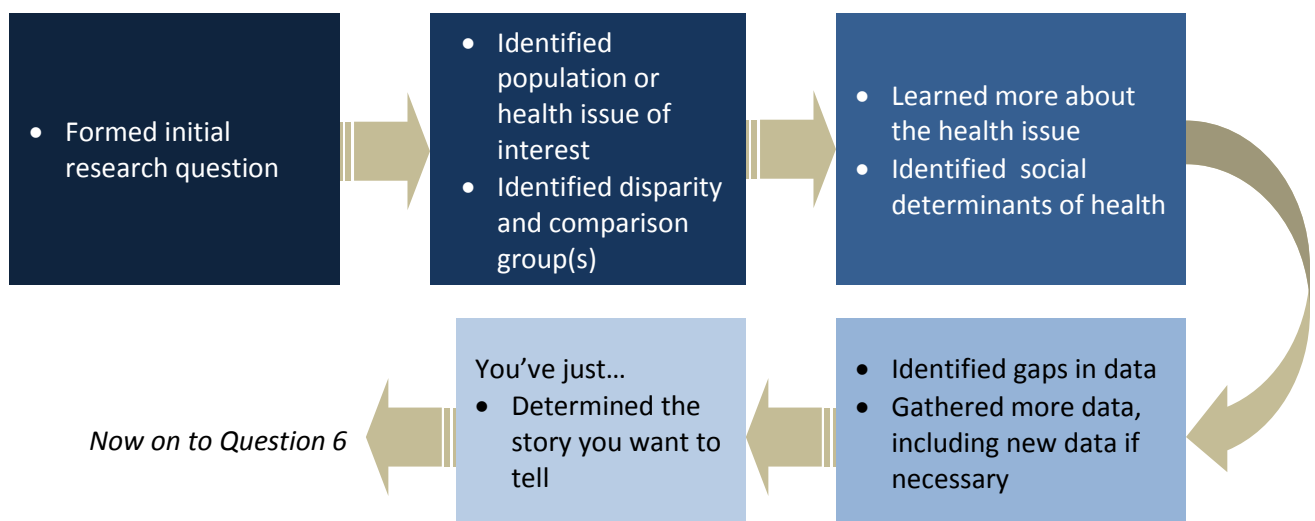
☑ **TIPS**

When presenting the results, consider:
- ✓ Who the audience is
- ✓ Balancing text with visual information
- ✓ Describing differences and disparities in ways that do not "pit" one group against another
- ✓ Providing information about both the challenges and the assets of each population or group.

You can now add a sub-question to the research question above:

> What strategies could be helpful in mobilizing the community to improve the quality of health care services and community conditions that contribute to higher rates of asthma, depression, and cervical cancer in County X?

When presenting your data, avoid using every piece of data you found. Think about the point you want to get across to answer your research question, and carefully choose the information you want to include. Too much information is overwhelming and boring. Use comparisons that allow you to highlight both commonalities and differences in the health, social, and economic conditions experienced by various groups or by your community as a whole. Use graphs for visual impact; for example, a graph showing the asthma trend in your community compared to state trends may demonstrate that your county's rates have increased more steeply than in the state (the health disparity gap is widening). Make sure to include a caption, labels, and footnotes to communicate the main points you want to get across. Anybody looking at the graph should immediately understand the problem.

Also, be cautious when presenting disparities data, which are usually presented in the form of comparisons across groups. The differences between or among groups represent one piece of data. In addition to not telling you very much, the presentation of these differences can sometimes "pit" groups against one another, suggesting that one social group is doing better than another and, therefore, is more desirable than another. Instead, work to develop a deeper understanding about why the differences in groups occur and how to engage all the various groups to address the differences in order make your community healthier for EVERYONE. To understand the underlying causes of the differences, it is helpful to question both the disadvantages experienced by the groups experiencing more disparities AND the advantages experienced by the groups experiencing the best health among the groups. Make sure to focus your presentation in a way that shows not just the differences but the very real reasons why these differences occur.

- Formed initial research question →
- Identified population or health issue of interest
- Identified disparity and comparison group(s) →
- Learned more about the health issue
- Identified social determinants of health →
- Identified gaps in data
- Gathered more data, including new data if necessary →

You've just…
- Determined the story you want to tell →

Now on to Question 6

Question 6: How can you use the data to build a healthier community?

At this stage, you (all the leaders) will have to decide what the priorities are and how to focus your efforts, based on the story you are able to tell with the data. CDC's publication *Promoting Health Equity* (www.cdc.gov/nccdphp/dach/chhep/pdf/sdohworkbook.pdf, pg. 50) provides a set of questions to help you prioritize:

- Which determinants affect the largest number of people in your community?
- Which determinants are most important to your community?
- Why are these determinants important to your community?
- Which determinants have the greatest positive or negative impact on the health of the community?
- Which determinants are easiest to change?
- Which determinants are your partners most willing to work to change?
- What is the expertise of your partners?
- What are the barriers to addressing these determinants?
- What resources are available to address these determinants?
- What assets and strengths can you build on to address these determinants?

Continue to look at whether there are common causes for several types of health problems within one group and most important, across groups in the community! This should be your baseline for looking to build partnerships and connection, rather than divisions that highlight difference. Remember to have a critical eye on "groupings" and how a group is defined. Once you have your priorities, you can begin to formulate a strategy!

Develop a Strategy

Your goal is to reduce the health disparities you researched by tackling the social determinants of health that contributed to the disparities. Depending on your resources, knowledge, skills, and networks, there are several strategies that you can develop and implement to achieve this goal:

- Increase Latino, African American/Black, and Asian residents' access to preventive healthcare;
- Reduce the release of toxic chemicals and other waste in the locations where low-income Latinos and African Americans/Blacks live; and/or
- Improve the housing conditions that low-income Latinos and African Americans/Blacks live in.

Using this strategy, you can align your work with other ongoing efforts in the community in addition to strengthening a sense of community among groups of people affected by the problem, building coalitions across racial and ethnic groups as well as across sectors (e.g.,

housing and environmental protection), advocating for systems change (e.g., enforcement of home safety codes or industrial waste), and improving or developing new programs to support the strategy.

Strengthening Sense of Community

A sense of community among the racial and ethnic populations can be developed and strengthened by mobilizing the different groups to work towards a common goal that they're not likely to achieve by themselves — that is, to make their community healthier for their children. When you're looking at the data and considering how to use the data to strengthen the sense of community, think about:

- How can the data be used to break down stereotypes that people might have about each other?
  - One of the lessons from the data collection and analysis is the way groups are "lumped" together, such as African refugees and African Americans under the broad label African Americans/Blacks. This is an opportunity to make community and elected leaders and community residents understand that there are differences between the two groups and that those differences have implications on program design and delivery and as much as possible, the data should be disaggregated to provide a more accurate picture of the experiences of each of these two groups of people.
- How can the data be used to bring attention to the assets of each population and the community as a whole?
  - It is important to not just focus on the problems of a population or a community, but also on their assets. These assets can be leveraged to expand programs and, reach new people, as well as to strengthen the sense of community.

Building Coalitions

The data you gathered show that similar issues affect Latinos, African Americans/Blacks, and Asians. While you and other leaders from any one of these populations can surely try to tackle health disparities and inequities on your own, joining the leaders from all these populations who are affected by the same disparities and underlying causes can create a powerful "force multiplier" in achieving equity and change. You can also create a similar powerful "force multiplier" by convening and building a coalition of leaders from different sectors that affect toxic dumping and poor housing conditions (e.g., leaders from health, environmental protection, and housing). In reality, the issues underlying the health disparities in communities are so deep and broad, one group or part of the community alone cannot really address them successfully. Building coalitions and partnerships that share the risks, responsibilities, and rewards provides you with powerful allies, builds community strength, and creates a ripple effect in forming unity that goes far beyond the actual work at hand.

As mentioned before, you (all the leaders) can begin to build a coalition by engaging additional leaders from the various racial and ethnic communities to inform the data gathering process and to help fill any data gaps.

A step-by-step guide to creating a strong and inclusive partnership to address health disparities is provided in CDC's publication, *Promoting Health Equity*.
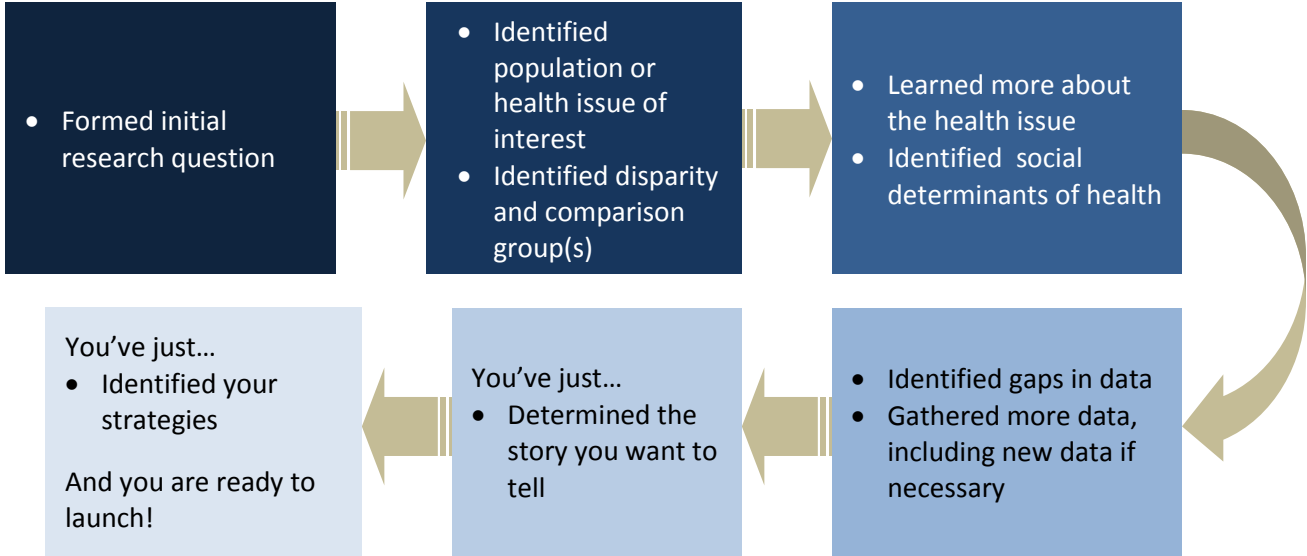
Advocating for Change

A long-lasting solution to the issues your community is facing requires you to advocate for changes in policies and practices.

- How can the data be used to hold the responsible parties, such as elected officials and agency directors, accountable to the desired changes?
  - The results of your data gathering provide baseline data for the health disparities and social determinants of health experienced by low-income Hispanics, African Americans/Blacks, and Asians in your county. You could update the information a year or two years later and summarize the results — like a mini report card — to hold elected officials, agency directors, and even service providers accountable for ensuring that the disparities get smaller and not wider. This work can also be used for future community planning such as building new housing units, promoting community health workers, etc.

Developing and Improving Programs

As previously discussed, there's a good chance that someone, somewhere in your community, county, or state may have tried to tackle the health issue you care about, is working on issues that you now have identified, or has targeted other important contributors to health disparities, such as better wages or access to healthy food for low-income communities. Before you decide to use the powerful new information you have gathered through your data collection and research to create something new, find out whether there are programs you can build on or even replicate.

A word about replication! The history and context of a community or place and the experiences of the people who live there are critical factors in program design. If you find an existing program that you think can be useful, it is essential that you review it very carefully to see if it is culturally appropriate for the population you are targeting. The findings generated by research and the evaluations of such programs don't explain what made those programs work (or not work) and the circumstances surrounding their success — at least not enough for effective replication. Also, most programs are implemented without much thought to replication; so, evaluation about whether they actually can be replicated successfully doesn't occur until the end of the effort.

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┌─────────────────┐      ┌─────────────────────┐      ┌──────────────────────┐
│ • Formed initial│  ──▶ │ • Identified        │  ──▶ │ • Learned more about │
│   research      │      │   population or     │      │   the health issue   │
│   question      │      │   health issue of   │      │ • Identified  social │
│                 │      │   interest          │      │   determinants of    │
│                 │      │ • Identified        │      │   health             │
│                 │      │   disparity         │      │                      │
│                 │      │   and comparison    │      │                      │
│                 │      │   group(s)          │      │                      │
└─────────────────┘      └─────────────────────┘      └──────────────────────┘
                                                                  │
                                                                  ▼
┌─────────────────┐      ┌─────────────────────┐      ┌──────────────────────┐
│ You've just…    │  ◀── │ You've just…        │  ◀── │ • Identified gaps in │
│ • Identified    │      │ • Determined the    │      │   data               │
│   your          │      │   story you want to │      │ • Gathered more data,│
│   strategies    │      │   tell              │      │   including new data │
│                 │      │                     │      │   if necessary       │
│ And you are     │      │                     │      │                      │
│ ready to        │      │                     │      │                      │
│ launch!         │      │                     │      │                      │
└─────────────────┘      └─────────────────────┘      └──────────────────────┘
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Section 6: Moving Forward

We've covered a lot of ground, and hopefully, you now feel like you can better tackle health disparity issues in your community through finding, analyzing, and using data as a key part of your tactical approach. As you move forward in your work in finding data that will help to support community realities, talking to community members about their experiences, and joining with others to forge new coalitions for health justice, remember:

Be a "Critical Data Thinker" — Always understand what's behind the data you find, and think deeply about how it can be used for community building, not community division.

Combine Data with Your Own Knowledge — Data are critical for understanding a situation; so is your knowledge as a community leader or member. Combining both and digging more deeply into discrepancies will allow you to get to a more accurate picture of what is happening in your community.

Look for Common Ground — Search for opportunities to build alliances for reducing health disparities in your community through partnerships and coalitions.

Use a Strength-based Approach — Don't focus only on the problems your community is experiencing; focus also on the assets in your community and how you can build on them to create the change you envision.

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Appendix A

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
American FactFinder (US Census Bureau)	The American FactFinder is an online data tool that provides information on social, economic, and housing characteristics, as well as the most recent demographic estimates. The American FactFinder includes data from: - **Decennial Census** (collected every 10 yrs for the United States, Puerto Rico, and the Island Areas) - **The American Community Survey** (ACS; collected annually on collected every year) - **The Puerto Rico Community Survey** (PRCS; ACS equivalent that is collected annually in Puerto Rico) - **The Economic Census** (collected every 5 yrs) - **Annual Survey of Manufactures** (collected annually) - **County Business Patterns** (collected annually) - **Nonemployer Statistics** (collected annually) - **The Population Estimates** (published annually)	Users have access to: - **General demographics** (e.g., age, race, sex, age, race, income, place of birth, household size, veteran status) - **Social and economic factors** (e.g., median household income, population age 16 and over in labor force, home value, business activities, employment) - **Built environment** (e.g., mean travel time to work, public transportation, vacant housing units)	Data are available by state, county, ZIP code, city/town, combined statistical area, congressional district, public use microdata sample, and county subdivisions (cities, towns, villages, etc). Select indicators are available by race, ethnic, and ancestry groups at the county level. Use of estimates: - **Single-year estimates** from the American Community Survey are available for areas with a population of 65,000 or more. This includes the nation, all states and the District of Columbia, all congressional districts, approximately 800 counties, and 500 metropolitan and micropolitan statistical areas, among others. - **3-year estimates** are available for geographic areas with a population of 20,000 or more, including the nation, all states and the District of Columbia, all congressional districts, approximately 1,800 counties, and 900 metropolitan and micropolitan statistical areas,	factfinder2.census.gov A comprehensive list of surveys conducted by the U.S. Census Bureau is available at http://www.census.gov/aboutus/surveys.html.

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
			among others. - **5-year estimates** are available for smaller areas.	
CDC Wonder	Wide-ranging Online Data for Epidemiologic Research (WONDER) is an easy-to-use, menu-driven system that makes the information resources of the Centers for Disease Control and Prevention (CDC) available to public health professionals and the public at large. The system allows users to access statistical research data published by CDC, as well as reference materials, reports and guidelines on health-related topics.	Public-use data sets about mortality (deaths), cancer incidence, HIV and AIDS, tuberculosis, vaccinations, natality (births), census data and many other topics are available for query. WONDER compiles the data from Compressed Mortality File (CMF); National Center for Health Statistics (NCHS); AIDS Public Information Data Set (APIDS); Assisted Reproductive Technology Reports; Behavioral Risk Factor Surveillance System (BRFSS); Surveillance, Epidemiology, and End Results (SEER); Pregnancy Risk Assessment Monitoring System (PRAMS); National Environmental Public Health Tracking Network; Fatal Accident Reporting System; National Occupational Respiratory Mortality System (NORMS); National Agricultural Safety Database; National Occupational Exposure Survey (NOES); National Respiratory and Enteric Virus Surveillance System (NREVSS); Occupational Safety Resource Database (NIOSHTIC 2); Small Area Health Insurance Estimates (SAHIE); Online Tuberculosis Information	Data are available by state and county. Mortality and birth data can be examined by gender, age, race and ethnicity. Mortality data can also be broken out by cause of death.	http://wonder.cdc.gov/

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
		System (OTIS); Vaccine Adverse Event Reporting System (VAERS); Youth Risk Behavior Surveillance System (YRBSS).		
Community Commons	Community Commons (an initiative of Advancing the Movement) is an interactive mapping, networking, and learning utility for the broad-based healthy, sustainable, and livable communities' movement, Registered user have FREE access to **a GIS mapping tool** that utilizes over 7,000 GIS data layers at state, county, zip code, block group, tract, and point-levels. The website also provides **peer learning forums** to help users interact with colleagues exploring similar interests and challenges.	**GIS data layers of public data** (e.g., children and youth; civic engagement; community resources; crime; culture and recreation; demographics; economic/income; education; emergency management; environment; food environment; health; housing; neighborhood characteristics; poverty; rural-urban designation; transportation) from the Center for Applied Research and Environmental Systems (CARES)- **Profiles of place-based community initiatives** (multi-sector collaboratives) working towards healthy/sustainable/ livable/equitable communities - funded by government and private philanthropy.	The data on the place-based community initiatives are incomplete. The data on the initiatives are submitted by registered users and made available after approval by Community Commons.	http://www.communitycommons.org/
Community Health Status Indicators	Developed by the Health Resources and Services Administration (HRSA), provides over 200 health indicators at the county level.	Summary tables showing demographics, summary measures of health, leading causes of death, measures of birth and death, relative health importance, vulnerable populations, environmental health, preventive services use, risk factors	Data are available by county. CHSI allows users to select a county and view a range of data published by different federal agencies. The site also suggests 'peer counties' that have similar demographic	http://www.communityhealth.hhs.gov/homepage.aspx?j=1

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
		for premature death, and access to care. Infant mortality data are available for race/ethnic groups and leading causes of death data are available for race/ethnic groups and by age.	characteristics.	
County Health Rankings	The *County Health Rankings* provides a snapshot of a community's health and a starting point for investigating and discussing ways to improve health. The web site provides access to 50 state reports, ranking each county within the 50 states according to its health outcomes and the multiple health factors that determine a county's health.	Each county receives a summary rank for its health outcomes and health factors and also for the four different types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment. Users can drill down to see specific county-level data (as well as state benchmarks) for the measures upon which the rankings are based. Data sources included in this system include: Behavioral Risk Factor Surveillance System (BRFSS); National Center for Health Statistics (NCHS); National Center for Chronic Disease Prevention and Health Promotion (Division of Diabetes Translation); National Center for Hepatitis, HIV, STD, and TB Prevention; CDC Environmental Protection Agency (EPA) Collaboration; Health Resources and Services Administration (Area Resource File); American Community Survey; Small Area Health Insurance	Confidence interval and margins of error should be taken into consideration when interpreting the rankings. For example, if a measure is above (or below) the state average AND the state average is beyond the error margin for the county, then further investigation is recommended because the measure is considered significantly different than the average and a case can be made that the county is doing better or worse than the state as a whole on this measure.	http://www.county healthrankings.org/

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
		Estimates; Small Area Income and Poverty Estimates; Census County and Zip Code Business Patterns; Federal Bureau of Investigation (Uniform Crime Reporting); Dartmouth Institute; and National Center for Education Statistics.		
Food Environment Atlas	The Food Environment Atlas (1) assembles statistics on food environment indicators to stimulate research on the determinants of food choices and diet quality; (2) provides a spatial overview of a community's ability to access healthy food and its success in doing so. Users can: • Create maps showing the variation in a single indicator across the U.S.; for example, variation in the prevalence of obesity or access to grocery stores across U.S. counties • View all of the county-level indicators for a selected county • Use the advanced query tool to identify counties sharing the same degree of multiple indicators; for example,	The Atlas assembles statistics on three broad categories of food environment factors: • **Food Choices** (access and proximity to a grocery store; number of foodstores and restaurants; expenditures on fast foods; food and nutrition assistance program participation; quantities of foods eaten; food prices; food taxes; and availability of local foods) • **Health and Well-Being** (food insecurity; diabetes and obesity rates; and physical activity levels) • **Community Characteristics** (demographic composition; income and poverty; population loss; metro-nonmetro status; natural amenities; and recreation and fitness centers) The Atlas compiles data from the Census Bureau, USDA, Department of	Maps are user-adjustable to show different regions from country-level to zip code. Data and maps are available by state, county, FIPS code, region (Nielson) for different indicators. Racial and ethnic information is limited to county-level demographics. The Atlas currently includes 168 indicators of the food environment. The year and geographic level of the indicators vary to better accommodate data from a variety of sources. Some data are from the last Census of Population in 2000 while others are as recent as 2009. Some are at the county level while others are at the State or regional level. The most recent county-level data are used whenever possible.	http://www.ers.usda.gov/FoodAtlas/

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
	counties with both high poverty and high obesity rates	Commerce, and other federal and local agencies.		
Health Indicators Warehouse	The Health Indicators Warehouse provides access to high quality data to improve understanding of a community's health status and determinants, and to facilitate the prioritization of interventions. The purpose of the Warehouse is to: (1) provide a single, user-friendly, source for national, state, and community health indicators; (2) meet needs of multiple population health initiatives; (3) facilitate harmonization of indicators across initiatives; and (4) link indicators with evidence-based interventions.	Users can access aggregated data, tables, trend charts, and maps that are produced based on over 1,160 indicators of chronic diseases and conditions; demographics; geography; health behaviors; health care and resources; health outcomes; health risk factors; hospital referral regions; infectious disease; initiative; injury and violence; maternal and infant health; mental health and substance abuse; occupational health and safety; oral health; physical environment; population; prevention through healthcare; public health infrastructure; social determinants of health; and women's health. Data from numerous sources are included in the Warehouse, including the American Community Survey, Behavioral Risk Factor Surveillance System, Youth Risk Behavior Surveillance System, National Environmental Public Health Tracking Network, Public Health Air Surveillance Evaluation Project Team,	The warehouse does not contain any individual level data. The warehouse is designed to provide summary health indicator data at a variety of geographic levels and for different populations. Depending on the indicator, data are available by race, ethnicity, gender, school grade, age, state, county, and other characteristics. Many indicators are available for multiple years.	http://www.healthindicators.gov/

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
		Small Area Income and Poverty Estimates, and ZIP Business Patterns		
Kids Count Data Center	The Kids Count Data Center, produced by the Annie E. Casey Foundation, tracks a range of demographic, health, and economic data on children and families and ranks states on the well-being of children. Users can view data within a state by county or compare ranks and indicators across states.	Summary tables are available by county featuring children-focused data on demographics, education, economic well-being, family and community, health, safety and risk behavior, and others. The Data Center compiles data from American Community Survey, CDC National, State, and Urban Area Vaccination Levels, National Assessment of Educational Progress (NAEP), National Survey on Drug Use and Health, National Vital Statistics Reports, Program Information Report (PIR), administered by the Office of Head Start (OHS), and Multiple Causes of Death Public Use Files.	Data are available at national, state, congressional district, school district, county, and city levels. Racial and ethnic information is limited to county-level demographics.	http://datacenter.kidscount.org/
Quick Health Data Online (Office on Women's Health)	Quick Health Data Online is an interactive system that provides reliable and easily accessible health data to help assess needs, develop programs, and inform policies.	The system provides state- and county-level data for all 50 states, the District of Columbia, and US territories and possessions. Data are available by gender, race and ethnicity and come from a variety of national and state sources. The system is organized into eleven main categories: demographics; mortality; natality; reproductive health; violence;	Users are cautioned to examine the underlying components of indicators - counts and population, particularly for small geographic areas or racial/ethnic subpopulations. Users are encouraged to consider these data across time and in conjunction with other local	http://www.healthstatus2020.com/owh/

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
		prevention; and disease and mental health.	information prior to making policy or funding decisions.	

EXAMPLES OF USEFUL NATIONAL DATA SOURCES

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
SMART: BRFSS City and County Data	The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based system of health surveys. The Selected Metropolitan/Micropolitan Area Risk Trends (SMART) project uses the BRFSS to analyze the data of selected metropolitan and micropolitan statistical areas (MMSAs) with 500 or more respondents. The BRFSS is a cross-sectional telephone survey conducted by state health departments with technical and methodological assistance provided by the CDC. Every year, states conduct monthly telephone surveillance using a standardized questionnaire to determine the distribution of risk behaviors and health practices among noninstitutionalized adults. The states forward the responses to the CDC, where the monthly data are aggregated for each state. The data are returned to the states and then published on the BRFSS Web site. For many states, the BRFSS is the only available source of timely, accurate data	Data on selected metropolitan and micropolitan statistical areas (MMSAs) with 500 or more respondents on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. Users can access information on all health risk data for an MMSA by year and category. The online system also, generates reports that compare statistics to a different MMSA. Users can access charts that show state, MMSA, and county data for a limited set of health risk factors, including smoking, obesity, and diabetes.	BRFSS surveys are in English and Spanish only and are conducted over the telephone, which may preclude participation by people who speak other languages or who are deaf or hard of hearing. Also, BRFSS does not include people living in institutions or group homes or those without telephones. BRFSS City and County Data are available for selected metropolitan statistical areas, micropolitan statistical areas (MMSAs), and metropolitan divisions. In order for an MMSA to be included in SMART BRFSS there must be at least 500 respondents within the MMSA and the weighting criteria must be applicable. In order for a county to be included, the county must be within a selected MMSA and the weighting criteria must be applicable at the county level. The sample sizes are too small to allow subgroup or stratified analyses (i.e., group data by categories such as race, sex, and age).	http://apps.nccd.cdc.gov/BRFSS-SMART/SelMMSAPrevData.asp

Data Sources	Description of Data Source	Type of Data	Usage Issues	Links
	on health-related behaviors. Data are collected in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. More than 350,000 adults are interviewed each year. States use BRFSS data to identify emerging health problems, establish and track health objectives, and develop and evaluate public health policies and programs. Many states also use BRFSS data to support health-related legislative efforts.			

Appendix B

States with Health Disparities or Health Equity Reports and Scorecards

State	Year Published	Website
Alabama	2010	http://www.adph.org/minorityhealth/assets/HealthDisparities StatusReport04082011.pdf
Arizona	Data from 2004	https://docs.google.com/file/d/0B_AaPIdYPqPXNTFiMDA1 NDUtYjg2ZS00MjE1LTkwZTMtZGFiNzc4ZGU2NmE4/ed it?hl=en&pli=1 (follow up report to Healthy Arizona 2010)
Arkansas	2009	http://www.arminorityhealth.com/documents/ArkansasRacia lEthnicHealthDisparitiesStudyII-2009.pdf
California		Hospital data which includes all patients' report card information indirectly is used as a data base for all research work. This applies only to the Office of Health Equity, California Department of Public Health. No movement on the current legislation to produce state Health Equity Index.
Colorado	2009	http://www.cdphe.state.co.us/ohd/ethnicdisparitiesreport/HD %202009%20LowRes.pdf
Connecticut	2012 2009	http://www.cadh.org/health-equity/health-equity-index.html http://www.ct.gov/dph/lib/dph/hisr/pdf/2009ct_healthdisparit iesreport.pdf (health disparities report)
Delaware	2012	Delaware Office of Health Equity utilizes two tools for monitoring and identifying health equity. **Delaware Health Disparities Report Card**: Intended to examine the state's growth towards eliminating the health status gap between racial and ethnic minorities and the White population. This report establishes a baseline for Delaware's efforts to eliminate racial and ethnic disparities in various health areas. http://www.dhss.delaware.gov/dhss/dph/mh/minority.html **Strategy Map:** A visual representation of a strategic priority. It illustrates how the organization plans to achieve its mission and vision by means of a linked cause-and-effect chain of strategic objectives. Measures and initiatives are

State	Year Published	Website
		associated with each objective, which can be included in a balanced scorecard. The map is still in the developmental stages.
Georgia	2008 2008	http://health.state.ga.us/pdfs/healthaccess/minorityhealth/GAHealthEquityReport.04.2008.FINAL.pdf http://ebookbrowse.com/gdoc.php?id=195761447&url=0526fcc08aff070c3d0ea5abdc51cfba (health equity initiative)
Hawaii	2012	Part of 2012 State Department of Health Work Plan is to publish State Health Equity Report and Score Card
Idaho	2011	Indicators project: http://www.indicatorsnorthwest.org/
Indiana	2009	National Report Card on the state of emergency medicine www.emreportcard.org/uploadedfiles/states/Indiana/Indiana.pdf
Kansas	* Data from 2007	http://www.healthequityks.org/download/DisparitiesReport.pdf A report on social determinants of health
Louisiana	2008	http://new.dhh.louisiana.gov/assets/docs/GovCouncil/MinHealth/2008_HealthDisparitiesReport.pdf
Maryland	2010	2010 Report Card http://dhmh.maryland.gov/mhhd/Documents/Health_Care_Disparities_Policy_Report_Card.pdf
Massachusetts	2012	Draft Health Disparities Report - http://www.mass.gov/hdc/meetings/2012/jan/disparities-in-health-2011.pdf
Michigan	2011	http://www.michigan.gov/documents/mdch/2011_Health_Equity_Report_MDCH_final_388710_7.pdf
Missouri	2008	http://health.mo.gov/living/families/minorityhealth/pdf/DisparityReport.pdf Health disparities report
Nebraska	2012	http://dhhs.ne.gov/publichealth/Documents/Womens_Equity_Report.pdf (women's health)

State	Year Published	Website
New Mexico	2009	http://nmhealth.org/dpp/2009ReportCard.pdf
New York	2007	http://www.health.ny.gov/statistics/community/minority/docs/surveillance_report_2007.pdf Minority Health Surveillance Report
North Carolina	2010	http://www.schs.state.nc.us/SCHS/pdf/MinRptCard_WEB_062210.pdf
North Dakota	* Data from 2007-2008 2010	http://www.ndhealth.gov/HealthData/CountyHealthProfiles/American%20Indian%20Community%20Profile.pdf American Indian http://www.ndhealth.gov/chronicdisease/Publications/2010_CD_Status%20Report.pdf Chronic Disease
Oregon	2011 2011	http://nwhf.org/images/files/Oregon_State_of_Equity_Report.pdf http://cms.oregon.gov/oha/oei/docs/health-equity-brief.pdf Health Equity brief
Tennessee	2011 2006	http://healthcarequalitymatters.org/assets/2011WomensHealthReportCard.pdf Women's Health http://health.state.tn.us/dmhde/pdf/Populations_of_Color.pdf Populations of Color in TN, Health Status Report
Utah	2010	http://www.health.utah.gov/disparities/data/healthstatus.pdf Don't have one yet, but they are in the process of putting together a team to develop a health equity index for Utah (quantifying the impact of social determinants by geographic area)
Virginia	2012	http://www.vdh.state.va.us/healthpolicy/Documents/Health%20Equity%20Report%202012-%20FINAL%207-31-12.pdf
Wisconsin	2005, 2010	(1) Report Card published by the University of Wisconsin's Population Health Institute http://uwphi.pophealth.wisc.edu/programs/match/healthiest-state/report-card/2010/reportCard.pdf (2) Minority Health Report published by the Wisconsin

State	Year Published	Website
		Minority Health Program (update, including special objectives of the state health plan, Healthiest Wisconsin 2020, due to be published Dec. 2012): http://www.dhs.wisconsin.gov/health/minorityhealth/report20012005.htm

Communities with Health Disparities or Health Equity Reports and Scorecards

Community	Year Published	Website
California		
Bay Area	2008	http://www.barhii.org/press/download/barhii_report08.pdf Health Inequalities in the Bay Area
South LA	2008	http://chc-inc.org/downloads/South%20LA%20Scorecard.pdf
Richmond	2011	http://www.ci.richmond.ca.us/DocumentView.aspx?DID=8663
Alameda County	2008	http://www.acphd.org/media/53628/unnatcs2008.pdf
San Joaquin Valley	2011	http://www.naddssw.org/pages/wp-content/uploads/2012/03/Health-Inequities-in-the-San-Joaquin-Valley.pdf
-Santa Clara	2011	http://www.sccgov.org/sites/sccphd/en-us/Partners/Data/Documents/SHIP%20Report_Final.pdf Health and Social Inequality Report
Illinois		
Cook County	2012	http://www.jointcenter.org/sites/default/files/upload/research/files/Place%20Matters%20for%20Health%20in%20Cook%20County.pdf
Kentucky		
Louisville	2011	http://www.louisvilleky.gov/NR/rdonlyres/29925903-E77F-46E5-8ACF-B801520B5BD2/0/HERFINALJAN23.pdf
Maryland		
Baltimore	2010	http://www.baltimorehealth.org/info/2010_05_25_HD

Community	Year Published	Website
		R-FINAL.pdf Health disparities report card
Massachusetts		
Boston	2005	http://www.bphc.org/chesj/resources/Documents/Reports/Disparities%20Data%20Report.pdf (Data report on health equity/disparities
Michigan		
Kent County	2012	http://www.hwmuw.org/media/Health_HealthEquityMay2012.pdf
Washtenaw County	2009	http://www.ewashtenaw.org/government/departments/public_health/health-promotion/hip/pdfs/HealthEquityInWashtenawCounty2009.pdf
Oregon		
Multnomah County	2009	http://web.multco.us/sites/default/files/health/documents/hei_report_2009_0.pdf Health Equity Initiative
Tennessee		
Memphis	2011	http://healthcarequalitymatters.org/assets/2011_HMCT_Equity_Report.pdf

Appendix C

Definitions of Common Terms and Their Use

Age adjusted rate
Statistical adjustments that are made to ensure fair comparisons of mortality, hospitalization, and other health disease rates across different age groups because age is a factor that affects these rates.

The rate of hospitalization is highest among those ages 70 and older in County X, which is expected because of their age. However, the age-adjusted rate shows a different pattern. In fact, after adjusting for age, the rate of hospitalization for those between ages 25 and 40 is actually higher than those ages 70 and older. This requires further investigation to find out what is contributing to this higher rate of hospitalization (e.g., accidents, homicides).

Bias
Systematic error in the design or conduct of a study or analysis of data that result in inaccurate findings.

The results of this study are not accurate because of a bias in the sampling strategy whereby only people with higher education were surveyed.

Causal relationship
Means that one thing happens as a direct result of the other.

There is a causal relationship between HIV and AIDS, meaning AIDS cannot occur unless an individual is HIV positive.

Confidence level
A confidence level refers to the estimated amount by which you expect your results to vary, if a different sample were taken.

The confidence level for this study is 95%, meaning that we are 95% sure that the results represent the true population.

Correlation
Means that one thing (A) is related to another other thing (B). It is possible that (A) causes (B), (B) causes (A) or the two are caused by a third thing (C). *Positive* correlation means that when one thing goes up, the other goes up too. A *negative* correlation is the opposite, when one goes up, the other goes down.

There is a *positive correlation* between income and education, meaning that there is a relationship between the amount of education people have and their income; and, specifically, people with more years of education have higher income.

Data

Data refers to the text or numerical information collected and organized into a format suitable for analysis, in order to make a point, tell a story, inform decisions, or shed light on a situation.

The data can be entered into a Microsoft Excel database to make it easier to organize and analyze.

Hypothesis

An idea (even a guess) that would explain certain facts or things you see (you can then use data to prove or disprove this).

Our hypothesis for this study is that people who exercise three times a week and eat at least two servings of vegetables a day have lower cholesterol than those who exercise once a week and eat one serving of vegetables a day.

Incidence

Number of new cases of disease that develop in the population during a defined period (also called "occurrence").

The incidence of infectious disease has decreased in the United States since the institution of childhood vaccinations, meaning that the number of people who develop new cases of infectious diseases has become fewer once vaccinations for polio, tuberculosis, and measles became a widespread practice.

Interview

An interview is a conversation between two people – the interviewer and the interviewee – where the interviewer asks the interviewee questions using a questionnaire or an interview guide.

The evaluator interviewed program participants about their perceptions of the program's benefits; each interview lasted about 30 minutes.

Morbidity

The occurrence of ill health or disease in a population (frequency, rate, numbers, etc.).

The morbidity rate of cholera in Haiti increased after the earthquake, meaning that the number of people who got sick with cholera increased.

Mortality

The occurrence of death in a population (frequency, rate, numbers, etc.).

Mortality due to AIDS has decreased since antiretroviral therapy has become more widely available, meaning that the number of people in the population who died from AIDS has become fewer.

Multivariate Analysis
Methods used to examine at the same time two or more factors that contribute to the outcome you are studying and whether and how these factors are related to one another.

The multivariate analysis confirmed that adults with lower income, do not own a car, and live at least one hour from a bus stop or train station have a higher sense of isolation.

Prevalence
Number (frequency) of existing cases of disease in the population at any given time.

The prevalence of obesity has become a major health concern, meaning that the number of people who classify as overweight and obese is increasing rapidly.

Primary Data
Primary data collection and analysis refers to any original data you collect and analyze.

Primary data collection will be necessary because no data exist about the health conditions of the recently arrived refugees; as such, you will have to design and implement a survey or conduct focus groups to get the data.

Proxy measure
A proxy is the next best way to measure the behavior or concept that you are interested in studying because it is too difficult to measure that behavior or concept directly or the data for the behavior or concept you are interested in studying do not exist and it is not possible to collect new data.

Social capital is a difficult concept to measure. Some people use the number of voluntary organizations as one of the proxy measures for social capital.

Qualitative Data
Data that deal with descriptions in the form of words, pictures, and objects.

The qualitative data collected through focus groups are very helpful in understanding how people feel about their community. Words such as "pride," "unity," and "caring" were used by almost everyone in the focus group to describe their feelings about their community.

Quantitative Data
Data that deal with numbers and amounts.

You can collect quantitative data about people's satisfaction with the training by asking them to respond to a series of questions using a scale where 1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, and 5=very satisfied. This way, you can calculate the percentage of people who responded 1 (very dissatisfied), 2 (dissatisfied), etc.

Reliability
  The ability to get the same result when the test is repeated in the same conditions or context.

It is important to look at the reliability of a screening tool such as a mammogram to see if the tool produces the same result each time a test is given to an individual.

Secondary data
  Information collected by researchers but is available and accessible for use by other people.

Data from the U.S. Census are examples of secondary data, because the data have been collected by a source other than you and your organization, but are available for your use.

Statistical Significance of Level of Significance
  Indicates the probability that the result occurred by chance.

The difference in level of satisfaction between the participants in workshop A and workshop B is statistically significant ($p < 0.01$), which means that the likelihood that the difference occurred by chance is less than 1%.

Survey
  A process for systematically collecting information; a questionnaire is usually used to collect the information.

Residents in County Z were recently surveyed about their use of the recreational facilities in the county. The survey questionnaire was mailed to the residents' homes, along with a return envelope for them to mail their responses to the survey administrators.

Validity
  Accuracy of a test; the ability of a tool to measure what it is supposed to measure.

The validity of most public health tests is quite good, meaning that observations derived from these tests are in line with facts (i.e., they are accurate). One exception may be self-reported drug and alcohol use, because people tend to report that they use less alcohol and drugs than they actually use.

Reference

Vogt, W.P. (1999). *Dictionary of Statistics & Methodology: A Nontechnical Guide for the Social Sciences.* Thousand Oaks, CA: SAGE Publications.