UCLA CENTER FOR HEALTH POLICY RESEARCH

Health DATA Program
Data. Advocacy. Technical Assistance.

Trends in the Health of Older Californians Training Conference

Data from the 2001, 2003 and 2005 California Health Interview Surveys

Conference Workbook
Including:

Introduction to Health Data

with a special focus on appropriate uses
and limitations of data

Supported through a grant from
The California Wellness Foundation

UCLA Center for Health Policy Research
Health DATA Program
Trends in the Health of Older Californians
Training Conference

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A. Trends in the Health of Older Californians
Project Overview

Project Summary:

The Trends in the Health of Older Californians Project is a project of the Health DATA Program of the UCLA Center for Health Policy Research. The project is funded by a grant from The California Wellness Foundation to assist community-based organizations and advocates increase their capacity to find and use relevant health and social data.

Training for The Trends in the Health of Older Californians consists of a one day, interactive training conference that uses games, small group activities, and "localizing" data exercises to familiarize participants with data and build critical thinking skills to assess their data needs. Once the data needs are identified, relevant data can be effectively obtained and applied. Technical assistance is provided by project staff following the training conference to assist participants with their use of tools learned in the training conference.

Learning Goal and Objectives:

Goal:
The goal of the Trends in the Health of Older Californians Project is to train and provide technical assistance to staff of community-based organizations to increase their capacity to obtain and apply relevant health data to support their fund seeking, program development and policy advocacy work.

Objectives:
Upon completion of this training, you will be able to:

- Identify and define relevant and appropriate elder health data for program development and policy advocacy;
- Determine the appropriate uses and limitations of data;
- Create local estimates; and
- Effectively present data findings to professional and lay audiences.

Overview of the Training Conference:

The training conference curriculum contains four modules:

- Understanding Data
- Determining the Data You Need
- Finding Data
- Presenting Data

1. Understanding Data

This session uses a mock game show to help you use "tools" necessary to understand and evaluate data. You'll learn how to critique data based on the credibility, specificity, generalizability, reliability and timeliness of the data. Using these criteria will enable you to identify gaps in data available to you and to determine the appropriate uses and limitations of health data when applying it to policy advocacy or program development work.

2. Determining the Data You Need

This session will help you identify relevant and appropriate data needed for different audiences to advance policy or program proposals. Through exploration and discussion, you will identify stakeholders and policymakers and the data they need. These may be community residents, organizations, government agencies, businesses or others impacted by public health or public policy issues.

3. Finding Data

This interactive exercise teaches you to think critically about the process of finding data. As you collect, summarize, and interpret information relevant to specific public health problems, you will also encounter some of the real dilemmas that confront those seeking data; a lack of necessary resources, a lack of quality data and a lack of access to the data they need. Through this exercise you will learn to narrow a data search and create local estimates when the data you need is not available.

4. Presenting Data

Through this role-playing exercise, you will gain hands on experience utilizing the knowledge you have gained in a previous session on *Determining the Data You Need*. This exercise will teach you to effectively present accurate demographic, statistical, programmatic and scientific information to professional and lay audiences.

Technical Assistance:

You can receive technical assistance from the Health DATA Program following today's training conference. You can request one-on-one help with the evaluation, application and presentation of health research data to specific aspects of your organization's work.

During these consultations, you can:

- Request customized data estimates from the UCLA Center for Health Policy Research, such as information from the Current Population Surveys, the National Health Interview Surveys, or the California Health Information Survey (CHIS);
- Receive advice on effective presentation of specific data; or
- Discuss how to evaluate and apply health research data to a specific program or project.

Contact the Health DATA staff at (310) 794-0983 or email us at hdp@ucla.edu, if you need technical assistance or have questions about Health DATA technical assistance.

Background:

The **UCLA Center for Health Policy Research** conducts research on national, state, and local health policy issues. The research, service, and education programs of the Center emphasize a community-and population-based perspective to improve health outcomes.

The Center provides training and technical assistance through the **Health DATA**, Data, Advocacy, and Technical Assistance Program. The Health DATA (Data, Advocacy, and Technical Assistance) program was created in 1997 in response to community needs for data and the skills to use the data effectively. The Health DATA program builds the knowledge and skills of organizations to address community needs by enhancing their capacity to effectively applying data in their decision-making, planning, policy advocacy, and other activities.

The **California Health Interview Survey (CHIS)**, based at the Center, is the largest state health survey ever conducted in the United States, collecting information from up to 55,000 households drawn from every county in the state. CHIS provides statewide estimates for California's overall population, including important information not previously available on an array of racial/ethnic populations, and local-level estimates for counties with populations of 40,000 or more. CHIS data is used for local planning and comparisons across counties.

B. Overview of "Trends in the Health of Older Californians"

The *Trends in the Health of Older Californians* report provides information about the demographics, health status, health risks, the use of health services, and geriatric health indicators for older Californians. Data are available by region, county, gender, race/ethnicity, English proficiency, income as percent of Federal Poverty Level (FPL) and type of health coverage. The health data information featured in the report was compiled from the 2001, 2003 and 2005 California Health Interview Surveys and the U.S. Census Bureau's American Community Survey.

The *Trends in the Health of Older Californians* publication is divided into nine sections:

- Section 1: Introduction.
- Section 2: Maps of California that show the percentage of the total population of older Californians 65 years and over by county and the percentage of older Californians who self-reported health as fair or poor by county.
- Section 3: Demographic highlights about older adults from the 2001 and 2005 California Health Interview Survey.
- Section 4: A three-page table and summary text comparing health status, health risks and use of health services of older Californians by gender, race/ethnicity, English proficiency, income as percent of FPL and type of health coverage for 2001 and 2005.
- Section 5: Two-page tables and summary text displaying changes in health status, health risks and use of health services of older Californians by county and regions for 2001 and 2005.
- Section 6: A two-page table and summary text showing geriatric health indicators for older Californians by county
- Section 7: A six-page table and summary text for health status, health risks and use of health services of older Californians by county and regions for 2005
- Section 8: Conclusion.
- Section 9: Technical appendices and acknowledgements.

Highlights from Report Findings

- **Demographic trends for Older Adults in California:** The elderly population in California is getting older and more diverse. While the number in each age group 65-74, 75-84, and 85 and over increased between 2001 and 2005, the number of in the 75-84 population grew the fastest. As a result, a larger proportion of older adults are in the 75-84 year age range. During the same time period, the proportion of non-Latino white elders decreased from 69% to 66% as the population of older Latinos, Asians and Pacific Islanders grew.

- **Trends in Low Income Elderly:** The rates of older adults in households with incomes near and below the federal poverty level (0-199% FPL) both declined from 2001 to 2005. However, one-third of older Californians remained poor or near poor in 2005. In addition, there were about twice as many older adults who were near poor (100-199% FPL) as there were poor (0-99% FPL). Near-poor

older adults were almost all income insecure, meaning that they did not have sufficient income to meet basic needs while living independently

- **Trends in Health Status:** The health status of older Californians, overall, declined between 2001 and 2005. The proportion of individuals with cancer, skin cancer, diabetes, use of diabetic pills and high blood pressure increased significantly among the total population of adults age 65 and older. High blood pressure had the biggest increase over the four years. The rate of older adults with high blood pressure increased for both genders and most ethnic groups. The change was most pronounced for older Latinos. Heart disease was the only condition with a significant decrease among all older adults.

- **Trends in Health Risks:** Disparities in health risks were found between older men and women. A larger proportion of men consumed the recommended servings of fruit and vegetables and this gap widened. In addition, obesity increased among older women but not among older men.

- **Trends in Preventive Care and Use of Health Services:** In general, rates of preventive services, like mammograms and prostate-specific antigen (PSA) tests, improved between 2001 and 2005. Despite these improvements, over one-quarter of older Californians have still not had each of the recommended screenings.

- **Regional Trends in Elder Health:** The rates of diabetes and high blood pressure went up for older adults throughout California. While there were only 7 geographic areas with diabetes rates over 20% in 2001, the number had doubled to 14 areas by 2005. In addition, the proportion of older adults with high blood pressure was higher in 2005 in every single region statewide when compared to the 2001 rates. In 2001 there were only five geographic areas where more than 60% of the older adults reported high blood pressure. By 2005 this quadrupled to 22 areas. The San Joaquin Valley region is most notable for its worsening health situation between 2001 and 2005. This region now has the highest rate of diabetes among the elderly statewide and maintains the highest overall rate of reported heart disease.

Finding Additional Health Data on Older Adults

Additional health data on the elderly population in California can be obtained using AskCHIS, an interactive web-based data query system that allows users to construct their own tables at the California state or county level *(http://www.chis.ucla.edu)*

The data query system allows users to specify different population subsets (for example, age 75 and over), cross tabulations of interest (e.g. diabetes by self-assessed health), and variables not in the report (such as "went to Mexico to buy medications").

For a complete copy of "Trends in the Health of Older Californians: Data from the 2001, 2003 and 2005 California Health Interview Surveys" please go to:
http://www.healthpolicy.ucla.edu/pubs/publication.asp?pubID=278

C. Understanding Data

Learning Objectives:

- Determine appropriate uses and limitations of data
- Identify and apply criteria needed to evaluate the integrity of data

What is Data?

Data is factual information used for decision-making. Data comes in many forms. Data can be numerical like statistics or descriptive such as an individual's observations. Data generally falls into two main categories, quantitative (numbers) and qualitative (words). The most persuasive use of data combines both quantitative data and qualitative data. The Health DATA Toolkit in Appendix A includes a listing of different types of data and their definitions.

Criteria for Evaluating Data:

There are five criteria for evaluating data:

1. Credibility
2. Specificity
3. Generalizability
4. Reliability
5. Timeliness

1. Credibility – Who produced the data?

Credibility refers to the source of the data. Can you trust the research entity that produced the data?

- Who paid for, sponsored, or funded the study.
- How much of a stake does the data source have in a specific finding? What about their mission or constituents would affect their interpretation of the data? Research affiliated with or conducted by business groups, religious organizations or political organizations may have missions that influence how they conduct research and their interpretation of the data.
- What is the organization's public image or reputation for their research? Government and academic institutions are considered credible because research is conducted for the public benefit.
- Whatever the source of the data you will want to investigate the source and examine the data for bias. Is the data distorted by a particular point of view? For instance, would you trust data about the effects of smoking from a tobacco company or pro-smoking group?

2. **Specificity – Is the data precise for a particular population?**
   Specificity refers to data that is limited to particular conditions or factors impacting a specific population.
   - Research often seeks to answer specific questions. How close is the relationship between the data provided and the data you need?
   - For instance, you are looking for information on the number of Vietnamese women who smoke. Statistics are available on the number of Asians who smoke and the number of women who smoke, but nothing specific on Vietnamese women smokers.
   - If the data is specific to one population you may be able to "generalize" it, that is apply it to another population.

3. **Generalizability – Can you apply data from one population to another population?**
   Generalizability refers to data on a specific population that can be used widely for other populations.
   - If the study was done in North Carolina, does it also apply to people in California?
   - If it was a national study, can we use the same numbers for Orange County?
   - If the study looked at Latinos, is there anything particular to say about Central Americans as a distinct group?
   - How much can you "generalize" data to your constituents or service population? It is important to know the "who, what, why, when and where" of the data because it will determine how closely it matches your own need for data.

Note: specificity is similar to generalizability, but specificity refers to the information collected and generalizability refers to the population.

4. **Reliability - How was the data collected?**
   Reliability refers to the accuracy of the data. Can the data be trusted to be accurate?
   - Has the research that produced the data been reproduced by other researchers? Did other research studies get the same or similar results? Research studies that result in similar data are said to "validate" or confirm the results of the other similar studies.
   - How was the data collected? Was it consistent with the mission/goals of the researchers? Did the researchers adhere to ethical research methods?
   - Is there some kind of bias in who will reply? Did they conduct interviews only with older persons, which will miss the most ill who can't come to the phone (vs. letting the caregiver give information about the elder)? Did they conduct their survey in different languages if they need information about immigrants?
   - You'll want to scrutinize the methods used to produce the data and collect other studies that validate the data you want to use.

5. Timeliness – When was it collected?

Timeliness refers to when the research was conducted relative to the changes occurring among a population or conditions impacting the population.

- When was the study done? And how fast are changes occurring? 1 year ago? 3 years ago? > 10 years ago? (e.g., 1990 Census) Some data may be accurate over a longer period of time than others. Some are good for only a few years. For instance, the West Nile virus was a rapidly moving illness for which only the most current data is useful.
- Often there will be a lag time, especially with big studies such as the Census. Most comprehensive surveys will be a few years old by the time they are published.
- Remember too that even if the research is "old," it may be the best possible source if more recent data is not available. Admit the limitations of this kind of data and try to supplement it with other closely related research.

Concluding Points:

- You are bringing your own credibility to the data, so it is important to set standards for yourself with regard to the data you plan to use. Researchers judge their data and the studies of others using the above criteria. You can use these criteria as well to assess the quality of data that you collected, assess the quality of other sources of data, and critique the data of your opponents.
- No data is perfect. Use your own judgment regarding the use of data you think is defensible. Knowing the assumptions behind the data you use will hold you to a good standard build your credibility for being a good source of information.

D. Determining the Data You Need

Learning Objectives:

- Identify relevant and appropriate data needed for community stakeholders and policymakers
- Identify research questions that can be answered with data

Data can play a critical role in explaining why an issue is important. Whether you are talking to policymakers such as legislators or boards of directors, community stakeholders, or the media, data can persuade, convince and motivate action. Before beginning a search for data, it is important for you to outline and define the questions you need the data to answer.

To determine the data you need, answer these questions:

- ✓ What do I need the data to do?
- ✓ What message does the data have to deliver?
- ✓ Who are the audiences for the data, and what data does each audience need?

What do you need the data to do?

- Define the problem
- Show that your solution alleviates or solves the problem
- Show the negative consequences of not using your solution
- Measure program outcomes

At any given time, you may need the data to do all these things, some of these things, or just one. To determine what you need the data to do, get a picture of your social, economic, and political environment:

1. What are the key public health issues for your community?

2. Define the problem central to the issue: i.e. access to health care, a particular chronic disease, lack of places for physical activity, etc. Think about how these affect your community.

3. Who are the stakeholders in these issues? Stakeholders are those individuals or organizations who have a "stake" in the issue. Some examples may include: Taxpayers, community activists, community-based organizations, businesses, health departments, researchers, etc. What makes them stakeholders and what do they have to gain from supporting or opposing health policies? Now let's list policies that would impact these issues. (Advertisers subscribing to a code of ethics committed to eliminate sexist advertising, stronger penalties for elder abuse, falls prevention programs, etc.)

4. Who has the power to advance the policies you have identified? Consider in particular policymakers at the local level in your community such as: health departments, service providers, financial institutions, law enforcement, elected officials, senior centers, etc.

5. Barriers/Facilitators: What are the challenges to enacting your policy? Who are your allies? Who are your opposition?

Now that you have "mapped out" your issue, you can now begin to determine the data you need to:

- State the problem accurately in a compelling way;
- Show how your solution would alleviate the problem;
- Illustrate the negative consequences of not doing it;
- Refute arguments the opposition will use against you.

What message will the data deliver?

- Cost
- Quality
- Access
- Equity
- Rights

What is the message that the data will deliver? What will mobilize your stakeholders and motivate the decision makers into action? Different things will convince different people. For some, the statistics alone with motivate them; for others a more personal story of overcoming hardships will be the key.

In either case, the statistics and the stories are most effective when they appeal to someone's values. If you can supply data that not only accurately describes what people experience and data that appeals to their values or belief system, then you have some very powerful tools with which to achieve your goals.

Some common values that data can address are cost, quality, access, equity, and rights.

- *Cost*—what is the cost of the problem to taxpayers, community, business, individuals, and others.
- *Quality*—how is quality of life, environment, services, and programs impacted?
- *Access*—who has access to services, programs, insurance, jobs, education, clean air, etc.? Who doesn't?
- *Equity*—is there an equitable distribution of resources among segments of a community?
- *Rights*—what are the rights of members of a community? What laws, regulations, or constitutional protections confer rights and on whom are the rights conferred?

What data does your audience need?

- Elected officials, juries, media, general public need data to understand the scope of the problem (the forest)
- Committee staffs, judges, special interest groups with legislative analysts need more specific information on who and what is impacted (individual trees)
- Agencies, courts, academics need details and statistics (roots)

The data you need not only depends on what you are trying to do, but also whom you have to convince. Some of this depends on the amount of time you have to present your position or the depth of information that you decide is appropriate. In general, the level of complexity you use when presenting data depends on the people you are trying to convince and their data needs.

- The Forest -- *Big Picture:* Politicians, the general public and the media are audiences who tend to need information that is descriptive and easy to understand, often from an overall perspective or big picture point of view. The following is an example of "forest" type data from the Alliance for Aging Research "Every seven seconds, another Baby Boomer turns 50. That's more than 12,000 people each day nationally." *(see http://www.agingresearch.org/aging_stats.cfm)*

- Individual Trees -- *Some Details*: Committee staff, judges, and special interest groups with legislative analysts tend to need more detail than the big picture. These individuals want to know what kind of trees are in the forest or how many trees per square acre. They may want to know if they clear this part of the forest, what does that do to the ecosystem, etc. This information will have more layers to it; often the audience understands the general ideas, but does not understand the details. An example of data that provides some details about an issue is this one from the California Epidemiology and Prevention for Injury Control office (CA DHS), "Falls accounted for 764 fatal and 59,481 nonfatal injuries requiring hospitalization. At highest risk are males for fatal and females for nonfatal injuries." *(see http://www.dhs.ca.gov/epic/publications/EPICProportions/EP10_Senior.pdf)*

- Roots - *Specific Details*: Government agencies, court officials, and academic institutions often need data to be more academically focused or statistically driven to understand and critique. This type of data may require a high degree of accuracy because funding or planning decisions will be made based on those numbers. These audiences need to have as much detail as possible. Here's an example of "roots" data from a report in the Journal of Managed Care Pharmacy: "In 1997, 9% of the non-institutionalized elderly population of the United States reported medical conditions related to falls. The estimated total direct medical cost of these conditions was dollar 6.2 billion in 1997 dollars and dollar 7.8 billion in 2002 dollars. The mean cost per person who had fallen was dollar 2,039 in 1997 dollars and dollar 2,591 in 2002 dollars" (Carroll, Slattum and Cox, 2005). (*http://www.amcp.org/data/jmcp/research_307_316.pdf*)

You can begin your search for data by "cutting the data question." That is, what specific data are needed? "Cutting the data question" provides you with basic research questions to focus your search for data.

Cutting the Data Question

When looking for data, consider the following questions before you begin your search:

- ✓ What is the **Problem / Issue** you are trying to resolve?
- ✓ What is the **Cause** of the Problem?
- ✓ What are the **Effects** of the Problem?
- ✓ What are the characteristics of the **Population**?
- ✓ Does **Geography** have an effect on the problem?

E. Finding Data

Learning Objectives:

- Learn effective means for narrowing data searches and finding data
- Collect, summarize, and interpret information relevant to a specific public health problem
- "Localize" data and create local estimates using national and state level data
- How to combine quantitative and qualitative data

Framing your argument

Your first step is to determine the health problem or issue you want to address. It is important to be as specific as possible about the issue or problem before starting your data search. Your health focus, population of interest and geographic area will help you conceptualize the different types of data that you will need and where you may go to access the data. Use the *Argument-Counter Argument Worksheet* to help you formulate your argument (see Appendix B).

Data search challenges

There are three themes that may arise during your data search.

1. **Limited Resources:** Organizations may lack the internal capacity to search for appropriate data or fully utilize the data that they find. Often the organizations may not have the time, knowledge base, and/or people power to access the data.

   Plan to spend time looking for data when you do a campaign. Be realistic about how much time this is going to take you and the manpower and expertise that you will need. Getting the data you need can take weeks, or months. You should plan accordingly.

2. **Access:** The limited quantity or non-existence of certain data can be very problematic. It may take some time to find the data you need or it may require that you create a local estimate based on national or state data you find. See section below on how to make estimates using national or state data.

3. **Quality:** It can be difficult to determine the reliability of information, especially if time constraints are involved in the process. Refer to the five criteria for evaluating data (credibility, specificity, geneneralizability, reliability and timeliness).

What can you do if the data you need are not available?

Sometimes the data you need may be limited or unavailable for your specific population. In these cases, you can try to *localize data*, or take existing data and show how it applies to your population of interest. The following approaches can help you localize data:

A. Using Proxy measures
B. Extrapolating national or state data to make local area estimates
C. Painting a picture
D. Asking a researcher

A. Using Proxy Measures:

"Proxy" measures are information that can substitute for the data you need because it is closely related to your issue. For example, you may need recent elder poverty data for your neighborhood. Since Medi-Cal is limited to low-income persons, you could take the number of elders receiving Medi-Cal as an indicator or proxy of the poverty level of elders in the neighborhood (this would be an undercount since not all low-income elders are on Medi-Cal). Similarly, you could use the number of emergency room visits for falls among older persons as a proxy of risk for all falls by the elderly. These data do not give you a precise number or rate of your problem, but the data provide useful comparisons between communities, such as, "The elderly rate of poverty in our neighborhood may be much higher than the city average, as shown by our higher rate of elders on Medi-Cal."

A major advantage of this approach is its low cost. The data can be relatively easy and inexpensive to collect. However, there are some concerns with bias. Your estimates may be biased because they are not able to capture actual rates or precise numbers but it does offer some estimates for when data are not available.

B. Extrapolating From Existing Data:

Extrapolating involves taking a national or state pattern of a problem and applying that pattern to your local area. Diabetes, for example, is a condition that needs on-going medical care. We know that there are large differences by race/ethnicity in the rates of diabetes. To estimate the number of persons 65 and over with diabetes by race/ethnicity in your community based on statewide trends, you can take the following steps:

1. Identify the diabetes <u>rate</u> (percent with diabetes) by race/ethnicity using the statewide data source. For example, the 2005 statewide diabetes rate for persons 65 years and over for non-Latino whites is 13.4, for African Americans is 27.3, for Asian Americans is 18.4, and for Latinos is 30.1. [Source: Trends in the Health of Older Californians, Exhibit 2, p. 10]

2. Identify the <u>local</u> <u>number</u> of persons 65 and over by race/ethnic group. For example, say your community has the following:
    a. 234,371 Non-Latino Whites ages 65 and over,
    b. 1,878 African Americans ages 65 and over,
    c. 29,808 Asian Americans ages 65 and over, and
    d. 28,175 Latinos ages 65 and over.

3. Multiply the statewide rates by the local numbers and add them up.

Number of older adults 65 and older by race/ethnicity with diabetes in your community =

Rates x Population 65 and older in your community (by race/ethnicity)

0.134 x 234,371 non-Latino Whites (ages 65 and over) = 31,406
0.273 x 1,878 African Americans (ages 65 and over) = 513
0.184 x 29,808 Asian Americans (ages 65 and over) = 5,485
0.301 x 28,175 Latinos (ages 65 and over) = 8,481

There are an estimated 31,500 non-Latino Whites, 500 African Americans, 5,500 Asian Americans, and 8,500 Latinos 65 years and over with diabetes in your community. This is about 46,000 seniors total with diabetes.

Remember that this method does not provide "precise" data on your topic, but it offers a way to generate useful estimates that can be used in your program planning and policy advocacy work.

C. Paint a Picture

If you are unable to find the exact numbers you need to describe the impact of a health issue in your community. You can PAINT A PICTURE with the information you do have. The approach allows you to piece together data from several sources to illustrate your argument. It also allows you to use anecdotal information that can compliment your statistical data. The *Paint a Picture Worksheet* at the end of this section guides you through the various steps (see Appendix B).

D. Ask a Researcher

- If you find a particularly helpful study, it might be possible to contact the researcher to find out more.
- Expect that it will take time, many researchers have moved on to their next discovery by the time data from their last experiment becomes available to the public.
- When you do get data this way, pay attention to any caveats the researcher places on the data, these caveats may be the reason the researcher did not publish that information, even if he/she found it interesting.
- Seek out those sources of information that provide ongoing support or technical assistance.

Producing Local Estimates Using *Trends in the Health of Older Californians: Data from the 2001, 2003 and 2005 California Health Interview Surveys*

You can use the Trends in the Health of Older Californians report to develop local estimates for older adults in your county. These estimates show that there is a specific health problem or issue in your county.

I. How to calculate the number of people receiving a particular health service

Example 1: What is the number of women age 65 and over living in Contra Costa County who have not had a mammogram in the past year (2001)?

Go to Exhibit 3 (pages 14 - 17) in the *Trends in the Health of Older Californians* report and look towards the middle of the table for Contra Costa County and search for the *No Mammograms in Past 12 Months* column for **2001**. Next calculate the number of women who have not had a mammogram in the past year by multiplying the percent of women in the county without a mammogram times the population size for Contra Costa County from the Census 2000 table (handout 1).

Number of women who have not had a recent mammogram in the past year would be =

% of women without mammogram (2001) x pop. of older women in Contra Costa County

48.2% x 62,921 = 30,328

Applying the CHIS 2001 rate to the 2000 Census shows that an estimated 30,000 older women in Contra Costa County who did not have a mammogram in the past year.

Example 2: What is the number of women age 65 and over living in Contra Costa County who have not had a mammogram in the past year (2005)?

Go to Exhibit 3 (pages 14 - 17) in the *Trends in the Health of Older Californians* report and look towards the middle of the table for Contra Costa County and search for the *No Mammograms in Past 12 Months* column for **2005**. Next calculate the number of women who have not had a mammogram in the past year by multiplying the percent of women in the county without a mammogram times the population size for Contra Costa County from the Census' 2005 American Community Survey table (handout 2).

Number of women who have not had a recent mammogram would be =

% of women without mammogram (2005) x pop. of older women in Contra Costa County

24.9% x 67,657 = 16,847

Applying the CHIS 2005 rate to the 2005 American Community Survey shows that an estimated 17,000 older women in Contra Costa County who did not have a mammogram in the past year.

Questions for Example 1 and Example 2:

- Was there a change in the rate of women 65 and over who did not have a mammogram in the past year for Contra Costa County?

- What may be some reasons for your observation in trends in mammogram participation?

II. How to calculate the number of people with a particular health status

Example 3: What is the number of Californians age 65 and over living in Shasta County who have ever been diagnosed with cancer?

Go to Exhibit 5 of the *Trends in the Health of Older Californians* report and look for the row with data on Shasta County and the column for cancer. Next calculate the number of Californians age 65 and over who have been diagnosed with cancer by multiplying the percent of older adults in the county with cancer times the population size of Shasta County from the Census' American Community Survey table (handout 3).

Number older Californians who have been diagnosed with cancer would be=

% of Californians 65 and over diagnosed with cancer x pop. of older adults in Shasta County

32.3% x 26,335 = 8,506

Applying the CHIS 2005 rate to the 2005 American Community Survey shows that an estimated 8,500 older adults in Shasta County have been diagnosed with cancer.

Important Notes:

- Obtain data from a CREDIBLE source that resembles/approximates the data you need.
- Consider the TIMELINESS and GENERALIZABILITY of the data. Note the similarities and differences between the demographics of the data and the demographics of your constituents.
- What will the estimate be used for? Is it appropriate to estimate in certain instances?
- Sometimes no number is better than a bad one; sometimes a fuzzy one is better than none. You must decide.
- Be prepared to defend the information you use and your methods for getting it.

Combining Quantitative and Qualitative Data

Keep in mind that there are two different kinds of data you may encounter through your data search, quantitative and qualitative.

Quantitative data are usually measured and expressed in the form of numbers or percentages. This data answers the who, what, when and where.

Qualitative data are usually measured and expressed in the form of words, concepts, themes, or categories rather than numbers. Qualitative data is often used to gain a more in-depth understanding of a particular incident or phenomenon—answering how or why something is occurring.

The following are some important distinctions between quantitative and qualitative data:

	Quantitative	Qualitative
DESCRIPTION	• Measured and expressed in the form of numbers or statistics • Also called numeric data • Can answer the who, what, when and where of an issue	• Measured and expressed in the form of words, stories or themes • Also called anecdotal data • Can answer the how or why • Used to gain a more in-depth understanding of an issue
DATA COLLECTION METHODS	• Secondary data • Surveys • Interviews	• Observations • Focus group • Surveys • Interviews
BENEFITS	• Can demonstrate cause and effect • Can "represent" a community by capturing the perspectives of many respondents • Usually easier to interpret	• Richer, more in-depth information about the topic being studied • Can provide data from a respondent in their own words • Can collect new data and new ideas from respondents in a dynamic and unstructured way
DRAWBACKS	• Unable to provide rich, in-depth data • Cannot collect new ideas or responses – you are restricted to the data that has already been collected	• Cannot demonstrate cause and effect • Usually not able to "represent" a community • Can be difficult to interpret

Note that surveys and interviews can collect quantitative or qualitative data, depending on whether the question is asked in a closed- or open-ended format.

- An example of a closed-ended question may be: How many times have you seen a doctor during the past six months? Answer choices: 0, 1-2, 3-4, 5 or more.
- An example of an open-ended question may be: What challenges, if any, have you faced when trying to see a doctor in the past six months?

If possible, it is recommended that both kinds of data be collected and used in drafting your policy or program proposal because they serve two very different and necessary functions when attempting to paint a complete picture of your health problem or issue. Quantitative data can describe the size of a health problem and determine its associations with other issues, such as demographic factors or insurance coverage. Qualitative data can help give meaning and appropriate interpretation of the quantitative data, as well as answering "why" and "how".

F. Presenting Data

Using tables or graphs provides a useful visual presentation of the data.

Tables:

- Suitable for providing simple or more complicated numeric or percentage information.
- Best used for side-by-side comparison of data for various variables or groups.
- Important to use when you want to show the exact numeric or percentage values.
- Here is an example of a table that was used to show results in a research report about older Californians who live below the Elder Index (Wallace SP and Smith SE. *Half A Million Older Californians Living Alone Unable to Make Ends Meet*. Los Angeles, CA: UCLA Center for Health Policy Research, 2009.) The full report is available at: *http://www.healthpolicy.ucla.edu/pubs/publication.asp?pubID=323*

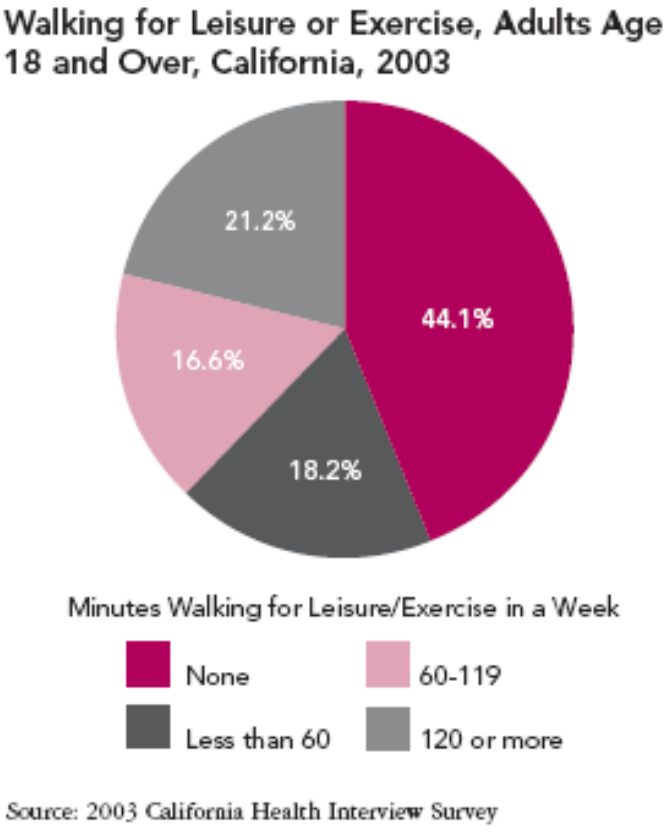
Percent of Elders with Incomes Below Elder Index in Each County

County	Living Alone	Couple	County	Living Alone	Couple
Total	50.9%	26.1%	San Mateo	37.7%	29.9%
Alameda	54.0%	26.5%	Santa Barbara	47.2%	25.3%
Contra Costa	46.1%	20.8%	Santa Clara	50.2%	22.9%
El Dorado	41.8%	19.1%	Santa Cruz	59.4%	20.9%
Humboldt	43.9%	9.7%	Sonoma	41.6%	14.3%
Imperial	67.1%	47.8%	Stanislaus	54.6%	29.9%
Kern	46.3%	24.3%	Ventura	45.7%	16.3%
LA City	58.8%	37.8%	Alpine, Amador, Calavaras, Inyo, Mariposa, Mono, Tuolumne	57.1%	20.0%
LA County (except City)	54.4%	31.2%	Butte, Colusa, Glenn, Tehama, Trinity	48.6%	33.3%
Marin	37.0%	5.7%	Fresno, Madera	51.9%	26.4%
Merced	53.7%	32.1%	Kings, Tulare	48.8%	26.9%
Orange	47.3%	20.8%	Lake, Mendocino	57.7%	37.6%
Placer	48.0%	23.5%	Monterey, San Benito	47.6%	27.3%
Riverside	46.9%	24.5%	Napa, Solano	56.1%	19.4%
Sacramento	44.3%	20.6%	Shasta, Del Norte, Lassen, Modoc, Siskiyou	51.9%	29.6%
San Bernardino	58.6%	25.9%	Yolo, Nevada, Plumas, Sierra, Sutter, Yuba	49.6%	27.2%
San Diego	46.3%	23.0%			
San Francisco	61.3%	48.6%			
San Joaquin	46.4%	26.4%			
San Luis Obispo	52.8%	22.4%			

Note: Small counties are combined due to small sample sizes for those areas.

Pie Charts:

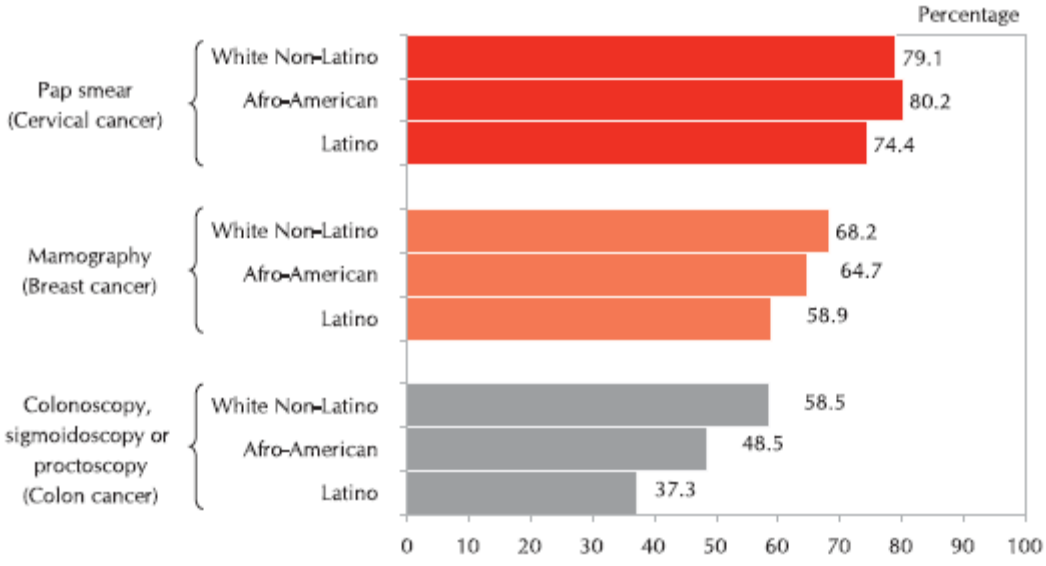
- Best when you have simple percentages and the “slices” of the pie are not too numerous.
- Ideal for depicting the size of each part as a percentage of the whole.
- Avoid dividing the pie graph into too many “slices”. It can lead to confusion when interpreting it.
- Important to make sure the grayscale or patterns you use to represent the different "slices" are clear and distinguishable from one another. The best option is to display in color, if possible.
- Here is an example of a pie chart that was used to show results from a research report on walking behavior of California adults from the California Health Interview Survey (Brown ER, Babey SH, Hastert TA and Diamant AL. *Half of California Adults Walk Less than One Hour Each Week*. Los Angeles: UCLA Center for Health Policy Research, 2005.) The full report is available at: *http://www.healthpolicy.ucla.edu/pubs/publication.asp?pubID=160*



Bar Graphs:

- Good for comparing quantities – simple bar lines are easy to read and compare
- Avoid comparing things that are on different scales—uneven scales can lead to confusion when interpreting the graph
- Important to make sure the grayscale or patterns you use to represent the different "bars" are clear and distinguishable from each other. The best option is to display in color, if possible.
- Here is an example of bar graphs used to show results in a research report about the health of Latinos in the United States (Wallace, Steven P., Xóchitl Castañeda. *Migration and Health: Latinos in the United States*. Berkeley, CA: Health Initiative of the Americas. October 2008.) The complete report is available at: ***http://www.healthpolicy.ucla.edu/pubs/publication.asp?pubID=274***

Figure 41. Early Cancer Screening Tests, 2005



Note: Men and women ages 50 and over who have never reported having a colonoscopy, sigmoidoscopy or proctoscopy or have had a fecal blood examination over the past 2 years. Women ages 40 and over who had a mammography within the past two years. Women ages 18 and over who had a pap smear within the last three years.
Source: Drawn up by CONAPO, based on the *National Healthcare Disparities Report*, 2007.

Line Graphs:

- Excellent choice when illustrating trends over time
- Line movement, up and down, is easy to understand and interpret
- Here is an example of a line graph that was used to show results from an AskCHIS query: Persons 65 years and over who have ever been diagnosed with diabetes, comparing three counties (Alameda, Fresno and Los Angeles), for CHIS 2003, CHIS 2005 and CHIS 2007. The AskCHIS query can be found at: *http://www.chis.ucla.edu/*