# NEW MEXICO
## DEPARTMENT OF
# HEALTH

# Community Health Assessment & Planning Guidebook

A joint project of the
### Epidemiology & Response Division,
Community Health Assessment Program

and the

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# *Part 1:*

# *Community Health Profile*

# *Guidelines*

# *Part 1.  Community Health Profile Guidelines*

## A.  Introduction

**How should the Community Health Profile Guidelines be used?**

The following guidelines are designed to assist in preparing community health profiles. The content of the guidelines is based on public health assessment as it is currently practiced in the United States. While other assessments may be focused on one or more specific issues, or on a particular population or sub-population, the Community Health Profile provides an assessment of the health of an entire population within a specific geographic area, from the youngest to the oldest.  These guidelines provide direction on how to measure the health of a given population over time, rather than as a snapshot of the current health in a population.

**What is community health assessment?  How is it related to a community health profile?**

Community health assessment is both a process and a product.  It is a process of gathering and interpreting information from multiple and diverse sources in order to develop a deep understanding of the health of a community.  It is also a process that uses these results to develop strategies to improve the health status of the community. Community health assessment also includes products, such as a community heath profile and a community health improvement plan.

These guidelines focus on the *product* — on the suggested structure, format, and content of Community Health Profile.  The *process* of developing this document may include such activities as:

- Engaging community health councils and the broader community in assessment and planning processes;
- Clarifying roles of community partners;
- Gathering published data with respect to demographics, socio-economic characteristics, health status, health care access, and services available;
- Summarizing, presenting, and interpreting data;
- Identifying the unique strengths and resources of a given community;
- Conducting original survey research, focus groups, and key informant interviews;
- Creating and facilitating work groups;
- Using assessment results to motivate action or to mobilize the community;
- Using profile results to monitor health status.

A number of resources are available to support community health assessment.  One of the most useful is a model for community health improvement called *Mobilizing for Action through Planning and Partnerships* (MAPP).  MAPP was developed by the National Association of County and City Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC) and is an additional resource that can be used to

develop a community health profile. A text introduction to MAPP can be found at *http://mapp.naccho.org/FullTextIntroduction.asp*. A graphic representation of the entire model is also available at *http://mapp.naccho.org/CommunityRoadmap.asp*. The MAPP website contains extensive guidelines for the varied processes of community health improvement. While MAPP emphasizes the critical importance of community leadership and involvement, the MAPP process was developed with local and regional health departments in mind.   Please note that New Mexico does not have local health departments; rather, tribal and county health councils have been funded to initiate and coordinate community health assessment work in the state.

The New Mexico Department of Health has a variety of resources for community assessment and planning, including the Community Toolbox and curriculum materials developed for training courses under the Community Health Improvement Training Institute (CHITI).

## What is a community health profile?

A community health profile is a comprehensive compilation of information about a community.  The data in a profile reflects the health of a given community from many different angles. A community can refer to a county, a locality within a county, a tribe, or a multi-county region. The information may include data already collected and published about a community or information collected by the organizations or individuals creating the profile.

## What is typically presented in a community health profile?

An assessment that covers an entire community will necessarily be broad and include a wide range of data.  A community health profile includes BOTH previously identified health issues AND the identification of new, emerging issues.

A comprehensive community health profile includes:
- A narrative description of the given community
- Community strengths and challenges
- Demographic and economic data
- Health status data
- Community input
- Community resources, including services, coalitions, and systems
- Interpretation of data presented, from both the perspective of the health council and the broader community.

A description of *community systems* can be limited to health and medical care systems, but it also can be broad enough to include educational, family, political, and religious systems operating within that community.

*A community's interpretation and analysis of health data in a profile is critically important.* The interpretation and analysis of health trends and patterns in the data can be included throughout the profile, with summaries at the end of each profile section, or at the end of the profile.

## How are a community health profile and a community health improvement plan related?

A community health assessment often yields a long list of public health needs, issues, and problems.  This list can then be used to set priorities. The purpose of prioritization is to develop consensus on a shorter list of goals that a community can realistically tackle. Prioritization is a critical and sometimes challenging process that can lead to measurable improvement in the health of a population.  A prioritized list of community health issues can serve as the basis of a community health improvement plan and can inform the use of limited resources. This is the key link between a health profile and a health plan.

A comprehensive profile will include many indicators; those related to selected priorities can be chosen as key indicators that a community monitors as part of keeping a pulse on community-wide changes. The monitoring of these indicators is a key element in the health *plan*, while a continuously updated *profile* will have many more indicators that are updated, maintaining a broader scope for use by the larger community.

## What are benefits of a community health profile?

The primary uses of a comprehensive community health profile are to:
- compile community data and interpretation of that data in one place, so that local health data can be reviewed and used by many sectors of the community;
- clearly present a community's health needs and issues so that they can be prioritized for action;
- identify health indicators and sources of data that can be used to monitor change and progress in addressing priority health issues; and
- form the basis for the Community Health Improvement Plan and other community planning documents.

Community Health Profiles are widely used in their communities.  They are quoted and referred to in a multitude of documents published by county and city governments and in funding proposals and reports done by community health centers, social service organizations, and community coalitions.   Profiles and plans often receive substantial publicity through media coverage.

# B. An Outline of Key Profile Components

# 1. Executive Summary

The executive summary succinctly summarizes what is said in the different sections of the profile and provides a quick overview of the important health issues, strengths, problems of a community, and a brief description of the community's process for developing the health profile. The executive summary should be no more than two pages. It is often written after all of the other sections have been completed, but it is the first thing that readers see in the profile.

# 2. Introduction

### a. Council description
Briefly describe the history of the health council: its composition, the nature of its working relationships with members, and the collaborative partners outside the council. The council description may also include how members are recruited and what the council does to sustain itself, its schedule of meetings, and contact information.

### b. Mission, vision and purpose of council
Briefly state the council's mission, vision and its specific purpose(s) as a context to understanding the purpose, content, and intended uses of the profile.

### c. Definition of health
Briefly state how the community defines health. How a community defines health will influence what is included in the profile and what the community decides to take on as its work and priorities. A definition of health can vary from very specific (for example, focusing narrowly on medical services) to very broad, encompassing socio-economic conditions (such as poverty, wealth, housing, education, and employment), and less tangible concepts such as cultural assets and overall quality of life.

### d. Profile purpose
Describe the purpose of the profile and its intended audience and uses. These can vary, depending on the council and the community context. In some instances, the audience may be limited to the council itself, while elsewhere the profile may be intended for much wider distribution — for example, to be used by medical and social service providers, legislators, businesses, non-profits, schools, grant writers, or policy makers.

### e. Profile development
Describe the actual process of creating, updating, and reviewing the profile, with information on who was involved. Describe how the work was done, including the work of subcommittees, data collection instruments used, and the process of analyzing and interpreting data. Some councils, for example, may have had a small group of council members do this work; other councils may have employed a

contractor; others may have distributed draft versions or conducted discussion forums for broad community input; still others may have used some combination of these methods.

# 3. Community Description

The community description should include both *secondary* data (data that have already been collected and/or published), and *primary* data (data gathered specifically for the profile, such as results of community surveys, focus groups, key informant interviews, and the like. Data used can be both quantitative and qualitative. If presenting primary data, the methods used (who, what, when, how) should be described.

### a. Geographic description
Geography enhances our knowledge of the world, including its human and physical features, through an understanding of place and location as well as the connections among people, places, and the earth. A community description should include the physical aspects of the county or tribal area and how people interact with, or are influenced by, their physical surroundings.

Common components to include in a geographic description are:
- Location, size, terrain, distances between inhabited areas, and how terrain, distances, and other factors influence how people live;
- Cities, towns, villages;
- Population densities *and metro/ urban/ rural/ frontier* classifications;
- Other factors (e.g., land ownership—state, federal, private, tribal; land use patterns, such as agricultural, industrial, recreational, parks, preserves, etc; rivers, lakes, mountains and their impacts on life in the area).

### b. Population Description
A community description also includes population information, including density, changes in the population over time, and a description of the population in terms of births and deaths. Population descriptions include percentages (not just counts), as well as changes over time or trends when possible and applicable.

Density characteristics include the population size, growth, density, distribution, migration, and vital statistics (births and deaths). Population descriptions are used to forecast population growth, analyze markets and services, determine potential land uses, set political jurisdictions, and to allocate resources.

Basic information on general *mortality* (deaths) and *natality* (births) is typically included in the Health Status section.

Some commonly used measures to describe a population, and to include in a community health profile, are:
- *Population* (counts, estimates and/or protections, as well as changes over time)
- *Gender* (counts and percentages)
- *Age* (counts and percentages)
  Narrow *age ranges*, such as 5- or 10-year age groups, are more useful than broad age groups, such as 25-45 or 65 and older. Standard age groups, such

as those used by the US Census and Vital Statistics Departments, are shown in Table 5 in Subsection d. Sometimes these agencies also use other age groups, such as <5 (combining the <1 and 1-4); and even narrower age groups, such as 25-29 and 30-34 (splitting the 25-34 group), 35-39 and 40-44 (splitting the 35-44).

*Gender by age* breakdowns can describe a given population and indicate current and future needs for services. The graph below, of the NM American Indian/Alaska Native 2000 population, shows proportions of the population in each age group, by gender. This represents the age structure of a population; the graph is called a population pyramid. Knowing the age structure over time helps to understand how much a population is growing overall, as well as in the different age groups. Population pyramids graphically show the effects of, for example, decreased/increased fertility or delayed reproduction and high mortality rates in certain groups (e.g. high mortality among men during a war). Population pyramids can help identify a growing pool of more long-lived men and women, which may in turn help to plan for retirement benefits and medical services in a given population.

Example: Graph B--Population Distribution by Gender and Age, 2000
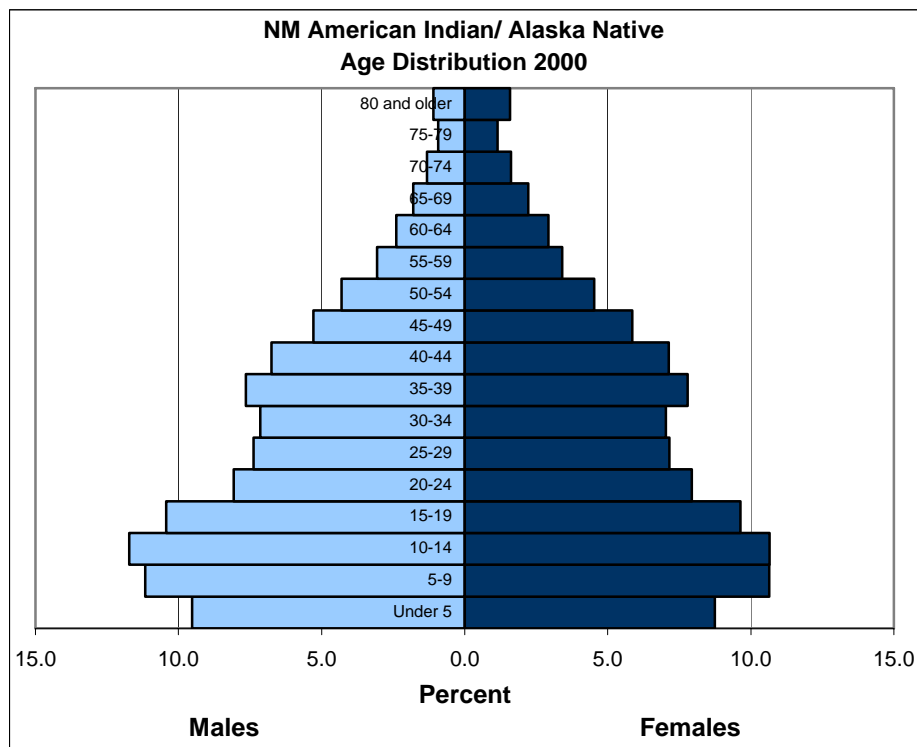


Data Source: US Census Bureau, Summary File 1, 2000.

- *Race and ethnicity* (counts and percentages)
  This topic is a confusing one. For official government business, race and ethnicity are seen as two different ways of describing a population. This often differs from lay people's understanding or use of these terms.

The following **Race** groups are used by the US Census and defined for official use by the US Office of Management and Budget: ***White, Black/African American, American Indian and Alaska Native, Asian, Native Hawaiian & Other Pacific Islander, and Some Other Race.***

***Ethnicity*** is a term that describes a group of people with a common tradition and a sense of identity that functions as a subgroup within the larger society. Ethnicity is a term that describes, for example, the cultural practices, language, cuisine and traditions used to distinguish groups of persons — it is not a term used to describe biological or physical differences. In New Mexico, the most common (and officially used) ethnicity designations are Hispanic and Non-Hispanic (popular term-Anglo).

- *Income*
  Sources of income, pre-tax income, disposable, net income. Examples: median household income, per capita income, annual average wages, earnings of employed persons

- *Income Inequality*
  Examples: The **Gini coefficient** is a statistical measure of inequality of a distribution. The **Robin Hood index** is another measure that equals the portion of the total community income that would have to be redistributed for there to be perfect equality.

- *Poverty*
  Examples: percentage living in poverty all ages, for children, or for adults

- *Education*
  Examples: years of education, graduation rates, drop out rates

- *Languages spoken*
  Examples: primary language spoken, difficulty in speaking English, languages other than English spoken at home

- *Employment and industry*
  Examples: percent unemployment, wages and salaries, employment in different industries such as construction, agriculture, retail, professional/ technical services.

- *Other population subgroups*
  Examples: homeless, undocumented, migrants, uninsured/underinsured, home owners and renters

### c. Community Assets and Wellness
Community assets are strengths and resources that may contribute to the overall health or quality of life in a community. Listed below are possible ways to talk about assets. Include secondary and primary data (if available); these data can be quantitative and qualitative.

- *Physical*
  Examples: city parks, bicycle lanes, walking paths, well-lighted streets with curbs, green belts, wilderness areas, recreation areas

- *Social*
  Examples: theaters, civic clubs, churches, libraries, universities, businesses

- *Regulatory*
  Examples:   clean air ordinances, leash laws, fines for dumping trash, city curfews, automobile confiscation for DUI offenders

- *Individual*
  Examples: artists, living treasures, writers, community leaders, family and oral historians

- *Cultural/historical*
  Examples:  Historic sites, fiestas and other community celebrations, cultural and artistic traditions

- *Other*
  Examples: strong community volunteerism, visible civic participation or spirit, acceptance or celebration of diversity

## d.  Interpretation of Information in the Community Description Section

This section adds meaning to the community description data presented in the previous sections, both from the perspective of the health council and the larger community.   **Local interpretation** of the data is provided that lays out the significance of what is described from the perspective of those who live in the community. This makes the data meaningful and understandable to residents and readers.  Interpretation at the end of each section helps pull together all the different pieces presented in a given section.

For example, a profile will have population counts by age group and unemployment statistics. It may include Census 1990 and 2000 population and the unemployment trend for a decade, as illustrated in the following table

**EXAMPLE—Table 5: 2000 Population, Go County, New Mexico, United States**

| Age Group | Go County | | New Mexico | | United States | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Under 5 | 6,258 | 9.9 | 130,628 | 7.2 | 19,175,798 | 6.8 |
| 5 to 9 | 6,145 | 9.7 | 141,171 | 7.8 | 20,549,505 | 7.3 |
| 10 to 14 | 5,176 | 8.2 | 147,309 | 8.1 | 20,528,072 | 7.3 |
| 15 to 19 | 4,180 | 6.6 | 145,751 | 8.0 | 20,219,890 | 7.2 |
| 20 to 24 | 3,368 | 5.3 | 121,291 | 6.7 | 18,964,001 | 6.7 |
| 25 to 34 | 11,923 | 18.8 | 234,091 | 12.9 | 39,891,724 | 14.2 |
| 35 to 44 | 10,175 | 16.1 | 282,009 | 15.5 | 45,148,527 | 16.0 |
| 45 to 54 | 5,476 | 8.6 | 245,819 | 13.5 | 37,677,952 | 13.4 |
| 55 to 59 | 2,062 | 3.3 | 87,140 | 4.8 | 26,938,474 | 9.6 |
| 60 to 64 | 2,171 | 3.4 | 71,612 | 3.9 | 20,338,992 | 7.2 |
| 65 to 74 | 4,056 | 6.4 | 117,745 | 6.5 | 18,390,986 | 6.5 |
| 75 to 84 | 1,893 | 3.0 | 71,174 | 3.9 | 12,361,180 | 4.4 |
| 85 & over | 436 | 0.7 | 23,306 | 1.3 | 4,239,587 | 1.5 |
| **Total** | **63,319** | | **1,819,046** | | **281,421,906** | |

Data Source: 2000 US Census, American Factfinder website

The table may be followed by narrative text that describes or clarifies highlights of the table.  However, interpretation is more than description. For example, the interpretation might add that from 1990 to 2000, the proportion of the population ages 25 to 34 changed by 30% and unemployment generally increased, and that these trends were likely to have had effects on the health of area residents and consequently on the services that may be needed for this age group, since more of them would be unemployed or under-employed.

Here is another example:

**Graph of Table 5: 2000 Population**



**2000 Population, Percent by Age Group**
**United States, New Mexico and Go County**
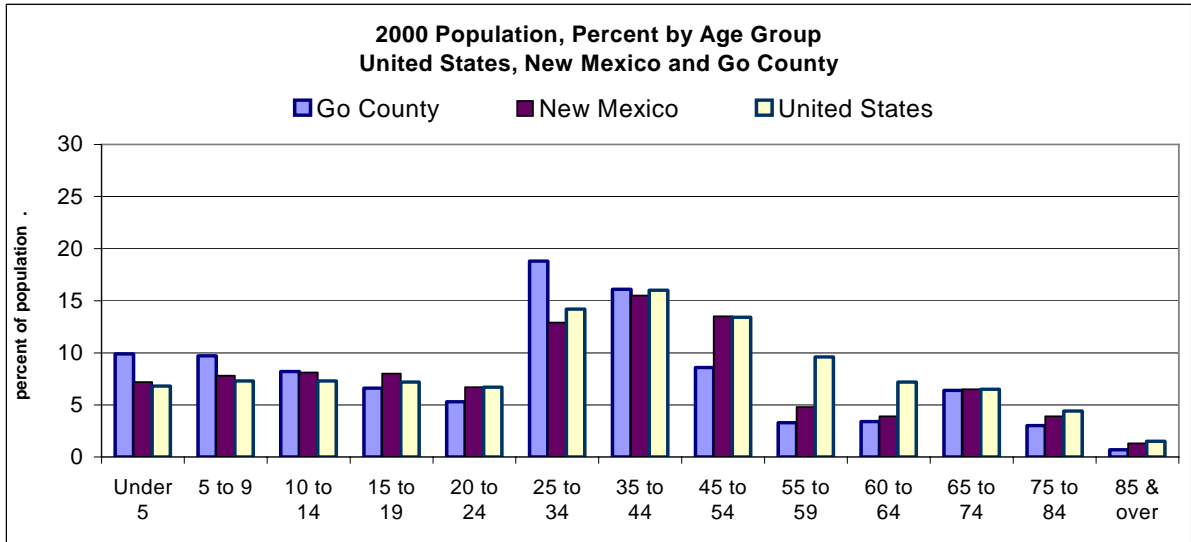
Data Source: 2000 US Census, American Factfinder website

Example of narrative description:  Table 5 shows the population by age group for Go County, NM and US from the 2000 US Census, in numbers and percentages. Data are graphed above to show the relationship among the three geographic areas more clearly. This shows that, in general, a higher percentage of Go County's population is in the younger age groups (that is, younger than 45 years old) than is the case in the New Mexico and the US populations. Consequently, the percentages of Go County people 45 and older are lower (except for 65 to 74), than those for New Mexico and the US.

Example of interpretation:  About 75% of people in Go County are younger than 45; 66% of the population for both NM and the US are in the same age segment. Go County has been economically declining for the last 6 to 8 years *(refer here to other tables or graphs with economic data)*. Infrastructure and services for this age group, as well as the need for employment for those of working age, are a serious concern if the county is to keep its younger population and maintain their health.

# 4.  Community Health Status

This section should include both secondary data (previously collected and/or published) and primary data (newly obtained data specifically for this profile) if available.  Both can include quantitative and qualitative. If presenting primary data, the methods (who, what, when, how) should be described.

## a.  <u>Maternal child health indicators</u>

The focus here is on indicators that reflect the health of babies, children and mothers.  Typically, data from the NM Department of Health's Vital Statistics Bureau and PRAMS (New Mexico's Pregnancy Risk Assessment and Monitoring System) are health status indicators, with some exceptions. In contrast, data from agencies such as Headstart, Children, Youth and Families Department, or Medicaid are indicators about *services* for the MCH population and are <u>not</u> health status data. Health services data from Vital Statistics are about prenatal care.  Health services data from PRAMS include, but are not limited to, timing of prenatal care, home visiting services, WIC participation and well child visits.  Obviously, health services are important in maintaining well-being.  Health services data should be presented in Section 4: *Capacity, Access and Utilization of Health-Related Services.* Alternatively, services data can be presented in this section but a clear distinction should be made between health status data (i.e., referring to health conditions of a given population) and health services data (referring to the availability or use of services).  Examples of maternal and child health indicators are:

- *Total births*
  Total number of births per year to all mothers

- *Births by age*
  Numbers, percentages or rates for different age groups. Includes births to teen females (<20 years old), 20-29, 30-39, 40+.  Can further break out the births to the<20 females into ages 18-19, 15-17 and 10-14 depending on the size of the population.

- *Low birth weight*
  Numbers, percentages; to all mothers, to different age groups

- *High birth weight*
  Numbers, percentages; to all mothers, by race/ethnicity

- *Births to teens*
  Numbers, percents, rates. The teen birth rate is different from the teen pregnancy rate. A teen birth rate is the number of live births to teen mothers per 1,000 teen females. In general, pregnancies include live births, abortions (generally under-reported) and fetal deaths/stillborns. Spontaneous abortions are not included. Thus a teen pregnancy rate is by far a less accurate estimate than a teen birth rate.

- *Births to single mothers*
  Number, percentage of births to single mothers

- *Prenatal care level*

Numbers and percentages for different age groups of mothers. Use either the Kessner Index (low, mid, high levels of prenatal care) or the Kotelchuck Index.

- *Infant mortality*
  Rate of death among newborns younger than one year of age.  May be presented, depending on the county population size, for different age groups of mothers, since infant mortality rates can vary based on the mothers' ages. Data may be further broken down into neonatal (before 28 days) and post-neonatal (between 28 and 365 days) death rates. Infant mortality rate by race may be useful. Comparison to Healthy People 2010 goal also may be useful.

- *Other*
  Examples: PRAMS data, mental health issues regarding MCH population, quantitative and qualitative data on health status –- not on service usage — collected locally.

## b.  **Mortality – General**

General mortality data usually describe deaths broken down by demographic characteristics such as by age, gender and race/ethnicity. These provide the largest context by which to understand the death rates in a population.

- *Total Deaths*
  Number for all ages from all causes of death

- *General Mortality or Death Rate*
  Rates of death for all ages from all causes. Use *age-adjusted death rates.* Compare county data to New Mexico and the US to provide context.

- *Deaths by Gender*
  Number, rates by male, female for all causes of death

- *Deaths by Age Group*
  Number and rates (known as age-specific death rates) from all causes of death.

  Standard age groups used in these rates are: 1-4, 5-14, 15-24, 25-44, 45-64, 65-84, 85 and older. In some small-population counties, even these wide age intervals may necessitate combining age groupings.

- *Deaths by Race/Ethnicity*
  Numbers and rates.  This may or may not be appropriate in small-population counties; it may also be necessary to add (aggregate) many years of data.

- *Other*
  Number and/or rates by race/ethnicity and gender, by race/ethnicity by age group. These may not be appropriate or useful for counties with small populations; alternatively, aggregation may be required over 10 to 20 years to get reliable rates.

A note on age-adjusted rates:

Comparing death rates across different areas or over time requires using *age-adjusted death rates*, which take into account the difference in age structures in differing populations.

Example of Comparison Across Areas: **Age-adjusted Death Rates, All Causes**

|  | Chamisa County 2000-03 | NM 2003 | US 2002 |
|---|---|---|---|
| All Causes | 801.5 | 805.1 | 848.2 |

## c.  Leading Causes of Death

Ranking the numbers or percentages of death due to specific causes shows the burden (or the amount present) of deaths due to specific causes and how these different burdens compare to each other. Thus, the rankings show the most frequently occurring causes of death among those causes that are eligible to be ranked.  Comparisons of leading causes of death among different areas (e.g., US, NM, county) and by race, age and gender are useful in raising questions or flags.

Leading causes of death data are available for the US, NM and counties and are calculated for each year.

Example**: Leading Causes of Death, 2002**

|  | Chamisa Co. | |
|---|---|---|
|  | % of Total Deaths | Rank |
| Malignant Neoplasms | 21.7% | 1 |
| Heart Diseases | 20.8% | 2 |
| Unintentional Injury (Accidents) | 7.6% | 3 |
| Chronic lower respiratory diseases | 5.4% | 4 |
| Cerebrovascular diseases | 5.2% | 5 |
| Diabetes Mellitus | 3.6% | 6 |
| Influenza, pneumonia | 2.9% | 7 |
| Intentional Self-Harm (Suicide) | 2.5% | 8 |

Source: NM Selected Health Statistics Annual Report for 2002

In this example, an unintentional injury ranks as the third leading cause of death in this county. This is a flag to start asking questions. Why might this be the case, and would this issue be an important one for the county to look into?  Another piece to add to this exploration would be to look at the age-specific death rates of the county, New Mexico, and the US. A health council can explore this in terms of the implications they see that arise from these data-based facts and what issues are important to address.

## d. Chronic Disease Indicators

Chronic means something that lasts a long time or frequently recurs. Examples of chronic diseases are asthma, hypertension, and diabetes, in which the conditions that led to illness or death evolved over a long time. Include data on **morbidity** (that is, illness or disease among the living population) and **mortality** (that is, death) in this section; it is important to distinguish which data are about disease/morbidity and which data are about death/mortality. Because topics overlap, it is sometimes difficult to know exactly where some data and interpretation should be placed; this will be clearer when looking at the following examples. The more common chronic diseases are included here.

- *Years of Potential Life Lost  (YPLL)*
  The YPLL measures *premature* mortality—that is, death occurring before age 65, due to specific conditions or causes. While 65 years seems young given current life expectancies, 65 years is a commonly used standard; however, some states use 75 years.

  NMDOH historically calculated and reported YPPL data annually. This data is currently reported routinely, and is available upon request.

- *Heart Disease*
  <u>Definition</u>: Any disorder that affects the heart's ability to function normally.  The most common cause is narrowing or blockage of the arteries which supply blood to the heart itself.

  <u>Risk and Protective Factors</u>:  Diet, exercise, smoking, high blood pressure, high cholesterol, diabetes and body weight are factors that can increase or decrease the risk of developing heart disease. Environmental influences such as workplace policies and/or programs to encourage physical activity, restriction of smoking, nutritious eating habits, etc. can also be considered in the risk and resiliency category.

  <u>Data</u>: Including statistics and interpretation about risk and protective factors (from the **Behavioral Risk Factor Surveillance System** (BRFSS) for adults and **Youth Risk and Resiliency Survey** (YRRS) for youth in this section or in the Risk and Resiliency Section would be appropriate. Data can also be included here about environmental influences on behavior, such as the existence, accessibility and affordability of exercise facilities or programs, work and school policies, and practices that encourage physical activity or nutritious eating. Primary data on these environmental influences can also be included.

  For death data, include numbers and/or **age-adjusted rates of death** for heart disease in the general population. Include rates by gender and race/ethnicity if appropriate; if rates are similar, they may warrant only a mention in the narrative rather than a table or graph. It may be necessary to get rates of combined years for counties with small populations. Death rates are available for the US, NM and counties from NMDOH. State rates are also available at CDC's Cardiovascular Health website*, www.cdc.gov/cvh/maps/index.htm*.

  Estimated **prevalence rates**, which indicate how many heart illness/living cases exist in the population, are available for the US by gender, age, race, ethnicity, education, family income, poverty status and insurance coverage from the National Health Interview Survey (NHIS) *at www.cdc.gov/nchs/fastats/heart.htm*.

Estimated NM heart disease prevalence rates are available from the BRFSS; county-level data availability will depend on the sample size for a county (which depend on the number of years heart disease questions have been asked). *Incidence rates*, which are about new or newly diagnosed cases of heart disease, are not available.

Hospital discharge data or **hospital inpatient discharge data** (HIDD), which are service-related data about hospital clients, will show the use of hospital in-patient services by those with severe heart disease. These data are available at the state and county level. While not a health status indicator, this data set provides information about people admitted to a hospital (excluding Indian Health Services, Veteran's Administration and other federal facilities). These data can be included here or in Section 4, *Health-related services: Capacity, Access & Utilization*.

- *Cancer (Malignant Neoplasms)*
  <u>Definition</u>: Cancer is the uncontrolled growth of abnormal cells that have mutated from normal tissues and can prevent normal function of organs or spread throughout the body. Lung cancer is the most common cause of cancer deaths. A few of the causes of cancer are known, such as tobacco use, excessive exposure to sunlight, radiation, some viruses and chemicals.  Gender and age play important roles in the presence, as well as types of, cancer.

  <u>Risk and Protective Factors</u>:  Risky behaviors are smoking or chewing tobacco, exposure to secondhand smoke (environmental tobacco smoke or ETS) excessive sunlight exposure, poor nutrition, inadequate physical activity, and heavy drinking. Screenings, such as breast examinations, mammographies, Pap smears and colonoscopies, are preventive health behaviors because they may help detect cancers at their early, most treatable stages..

  <u>Data</u>: Including statistics and interpretation about risky and preventive behaviors (from the BRFSS for adults and **Youth** YRRS for youth in this section or in the Risk and Resiliency Section would be appropriate. These are available for NM and NM counties; US data are available from the national BRFSS website and the national Youth Risk Behavior Surveillance System.  Include data or information about environmental factors that influence people's ability to engage in healthy and unhealthy behavior, if available. Examples of these are workplace and public place restrictions on smoking, and insurance coverage for screenings.

  Estimated smoking rates for youth and adult are available from the YRRS and the BRFSS, respectively.

  Environmental tobacco smoke (ETS) is linked to lung cancer. The **NM Youth Tobacco Survey** (NM YTS) is a survey of middle and high school students, conducted for the first time in 2002 and done every other year. This survey is a state-level survey; county data aren't available.  Data on ETS are available. The NM Adult Tobacco Survey, done every other year (the first was done in 2003), provides data on workplace smoking policies and on ETS at home and at work for NM and larger counties.

  The number and age-adjusted rates of cancer death in the general population are available for US, NM and counties; if appropriate for the size of population, include rates by gender, age and race/ ethnicity.

Estimated rates of ***incidence*** (occurrence of new cases) are available nationally, for NM and for counties from the NM Tumor Registry at the University of New Mexico.

In addition, hospital discharge data for cancer can be included here or in Section 4, *Health-related services: Capacity, Access & Utilization.*

- *Cerebrovascular Diseases (Stroke)*
  Definition: A generic term for all disorders in which an area of the brain is momentarily or permanently affected by restricted blood flow or bleeding and one or more of the cerebral blood vessels are involved. Strokes are a common result of such disease.

  Risk and Protective Factors: Diet, exercise, body weight, smoking, hypertension and excessive alcohol use are factors that can negatively or positively influence the risk of developing such diseases.

  Data:  Statistics and general interpretation about risky and positive health behaviors are available from the BRFSS for adults and YRRS for youth at the state and county level; US data are also available from the BRFSS website. Presentation and interpretation of risk and protective behaviors in this section or in the Risk and Resiliency Section would be appropriate. For mortality, present numbers and/or age-adjusted rates of death in the general population; include rates for specific age groups, male/female, and race/ethnic groups if available and appropriate. For some counties, it may be necessary to get rates of combined years.  NM rates on the prevalence of stroke are available from the NM BRFSS; data for counties with large enough sample sizes are also available.

  Hospital discharge data can be included here or in Section 4, *Health-related services: Capacity, Access & Utilization.*

- *Chronic Obstructive Pulmonary Disease (COPD)*
  Definition: A group of lung diseases involving limited airflow and air sac enlargement, airway inflammation, and lung tissue destruction. Emphysema and chronic bronchitis are the most common forms.

  Risk and Protective Factors: Smoking is the leading cause of COPD. Discussion of the prevalence of smoking among youth and adults, and how this may influence the prevalence of COPD in the county's population, would be appropriate in this section or in the Risk and Resiliency Section.

  Data: Smoking rates, at the state and county level, are available from the BRFSS and the YRSS. For mortality, present numbers and/or age-adjusted rates of COPD death in the general population; include rates for specific age groups, male/female, and race/ethnic groups if available and appropriate. For some counties, it may be necessary to get rates of combined years. Prevalence rates are unavailable for the state or county level.

  Hospital discharge data may be available. HIDD data are annually reported in broad diagnostic categories (in this case, respiratory conditions) rather than more specific medical conditions (i.e., COPD). Because of this difference in published

data (death data are about COPD, and HIDD data refer to respiratory conditions), one could present both types of data with an explanation, or request HIDD data about COPD from the NM Health Policy Commission or through NMDOH epidemiology staff.

- *Diabetes*
  Definition: Diabetes is a condition marked by high levels of sugar in the blood (high blood glucose), caused by too little insulin (a hormone produced by the pancreas to regulate blood sugar), the body's difficulty in using the insulin, or both.

  Risk and Positive Factors: As with most chronic illnesses, risk factors are excess body weight, hypertension, high blood levels of triglycerides (a type of fat molecule), high blood cholesterol, non-nutritious dietary habits, inadequate physical activity and environmental conditions that encourage beneficial or not-so-beneficial behaviors. Non-modifiable risk factors for diabetes include: having a parent, brother, or sister with diabetes; age above 45 years; racial/ethnic heritage such as Hispanic, American Indian, or African American; and having gestational diabetes. Making healthy food choices, working at moving your weight into a healthy range, and increasing physical activity can help delay or prevent the onset of type 2 diabetes.

  Data: Data on risk and protective factors from the BRFSS and YRRS may be useful to include here.  The numbers and/or age-adjusted rates of death in the general population are available for NM and counties; also include rates by gender, specific age groups and race/ ethnicity, if available and appropriate. Estimated rates of prevalence are available for the US, New Mexico, and NM counties from the BRFSS.  In terms of service data, hospital discharge data can be included here.  NM hospitalization data are usually reported in broad diagnostic categories rather than in specific conditions. Diabetes and its complications are in the broad category of endocrine and metabolic disorder; hospitalization data about diabetes and diabetes complications would have to be specifically requested. (Please see comments in the COPD section above about HIDD data.)

- *Arthritis*
  Definition: Arthritis involves joint inflammation and the breakdown of cartilage, which protects the joint in movement and absorbs shock.  Without the usual amount of cartilage, the joint bones rub together, causing pain, swelling and stiffness. Often the inflammation subsides but with some injuries or disease, the destruction results in long-term pain or deformity; this is chronic arthritis. There are many forms of arthritis, and they can occur at all ages.  The most common is osteoarthritis.  Arthritis is fairly common in the US.

  Risk and Protective Factors:  Being overweight or obese is a risk factor for arthritis. Risk factors for osteoarthritis, the most common form of arthritis, include overweight, previous injury to the affected joint, and using the affected joint in a repetitive action that stresses the joint.

  Data: Estimated rates of incidence and prevalence are available nationally and for New Mexico from NMDOH Chronic Disease Bureau; these estimates are based on BRFSS data. County-level estimates will need to be requested from the

BRFSS Program. Include rates by gender, race/ethnicity if appropriate. Data on activity limitations and the presence of a disability among those with arthritis are also available for the US and NM.  Hospital discharge data (HIDD) are also available; arthritis is only one condition under the usual HIDD category of diseases of the musculoskeletal system.

- *Asthma*
  Definition: Asthma is an inflammatory disorder of the airways, marked by periodic attacks of wheezing, shortness of breath, coughing and chest tightening. Attacks can last minutes to days and can be life-threatening if severe.

  Risk and Protective Factors:  Symptoms can be triggered by inhaled allergens, respiratory infections, exercise, cold air, tobacco smoke and other pollutants, stress, and food or drug allergies. Thus, an important risk factor is the quality of indoor and outdoor air. Air pollution can increase the incidence of asthma attacks. Air pollution includes cigarette smoke, industrial dusts, and irritating vapors, mists, perfumes or other airborne liquid or solid particulate matter. Indoor air pollution (in buildings and homes), can include dust mites, mold, animal dander, cigarette smoke and wood smoke.

  Data: Discussion of air quality would be appropriate here. However, indoor air quality data are generally unavailable; outdoor air quality data are available but limited. (See F. Environmental Health Indicators, Air Quality subsection later in these guidelines.) Include numbers and/or age-adjusted rates of death in the general population; death data by age and gender data are available and may be appropriate depending on the size of the population. Estimated prevalence rates for adults and for children are available the US, NM and for some counties.

  Hospital discharge data can be included here but data for asthma HIDD data will have to be requested. Looking at the trend of hospitalization for asthma is one of many pieces that can help a community understand if asthma is being adequately addressed or controlled at stages earlier than the in-patient level. Again, hospital cases represent the most severe cases of a disease.

- *Disability*
  Definition: Disability is defined as any limitation experienced by people in performing any activity, including the kind or amount of work or in learning, remembering or concentrating, because of any impairment or health problem. People with disabilities may or may not require help with personal care needs (such as eating or dressing) and in handling routine needs (such as daily chores or moving around).

  Data: Estimated prevalence rates are available the US, NM and for some counties. NM prevalence rates are available by various demographic characteristics, such as age, gender, education and household income; the prevalence of disability as well as the need for assistance varies among groups with differing characteristics.

- *Oral Health*
  Definition: The health of teeth and gums affects the health of the entire person. Oral health means being free of chronic oral-facial pain conditions, oral cancers

and lesions, and birth defects such as cleft lip and palate, to name a few. The functions of these tissues allow us to chew, swallow, speak, smell, taste, touch, convey feelings and emotions, and provide protection against microbial infections. Diseases of teeth and gums are largely caused by plaque, a sticky combination of bacteria and food.  Unremoved plaque hardens over time into tartar; both can cause tooth decay. Plaque and tartar can lead to bad breath, abcesses, pain, cavities, gingivitis (swollen, bleeding gums) or periodontitis (destruction of supporting ligaments and bone).  Dental disease can also lead to other health problems, from preterm labor to heart disease.

Risk and Protective Factors:  Risky behaviors include inadequate daily tooth brushing and flossing, not getting regular teeth cleaning and exams by dentists/ hygienists, and eating a lot of sugary foods or liquids. Protective factors include daily tooth brushing and flossing at least twice a day, dental sealants for children at appropriate ages, eating nutritious foods and reducing the amount of foods with refined sugars eaten.

Data: Limited data currently exist on oral health for NM, but the NMDOH Oral Health Program is developing an oral health surveillance system. A statewide study of third graders, completed in 1999-2000 and available from the Oral Health Program, resulted in estimates of the percentage with and without caries, with sealants and the percentage needing dental treatment. County estimates were calculated; as is the case with county-level data for many other health issues, these estimates may be statistically unreliable (especially for smaller counties) and this should be noted in interpretation. NM and county oral cancer incidence rates and counts are available from the NM Tumor Registry.

- *Other*
  The council or community will likely have other indicators of chronic disease to include in a profile. One example is mental health; however, data on this broad, critical issue are more difficult to obtain and may be limited at this time to service-related/ encounter data.

## e. Infectious Disease Indicators

Infectious diseases are those resulting from the action of disease-causing organisms, such as bacteria, viruses and parasitic worms. They may be spread by direct contact with an infected person or animal, by ingesting contaminated food or water, by insects like mosquitoes or ticks, or by contact with contaminated matter like animal droppings or even contaminated air.

**Leading causes of infectious diseases**
To provide an overall picture of infectious disease in the community or county for the year or period of interest, list the numbers of infectious diseases that occurred in the county, from highest to lowest. The subsections below have more detail about different categories of infectious diseases to aid in getting and interpreting data. Sexually transmitted diseases, one category of infectious disease, are typically discussed separately from other infectious diseases because their transmission and the interventions are different from food or water borne diseases.

- Influenza
  Definition: **Influenza** (the flu), common worldwide, is a contagious infection of the nose, throat and lungs caused by the influenza virus. A common way the infection is transmitted is via droplets expelled when an infected person coughs and sneezes.

  Risk and Protective Factors: A yearly flu vaccination is recommended for people who are at high risk of complications or for those who live or work with persons at high risk. Preventive behaviors during flu season include good hygiene, such as hand washing with soap and water after using bathrooms or after taking care of people who have the flu, and not sharing the same household items when someone in the household has flu.

  Data: Incidence data are unavailable, though estimates (through sampling) are available for NM only. Mortality data are available for the US, NM and counties. Breakdowns/stratification by age and gender should be included when the numbers are large enough.

- Pneumonia
  Pneumonia, an inflammation of the lungs caused by an infection, is a common illness and a leading cause of death worldwide. Bacteria and viruses cause most cases; pneumonia ranges from mild to severe, depending on the cause. Pneumonia can be contracted while staying in the hospital. Pneumonia can be more serious when the patient's underlying immune system is impaired.

  Risk and Protective Factors: Preventive measures include good hand washing, especially after blowing the nose, going to the bathroom, diapering, and before eating or preparing foods; not smoking; and being vaccinated (especially for high-risk groups). Protective vaccines include pneumococcal vaccine, flu vaccine (prevents pneumonia and other infections caused by influenza viruses) and Hib vaccine (prevents pneumonia in children from *Haemophilus influenzae* type b).

  Data: Incidence and mortality data are available for the US, NM and counties. Data by gender and age may be appropriate to include, depending on the size of the population. Hospital discharge data are available on respiratory conditions, though requests for pneumonia (and influenza) data can be made.

- Food-borne Infectious Diseases (Campylobacter, Salmonella, E. coli, Shigella)
  Definition: Food-borne means the disease-causing agents/organisms exist in food and are transported from person to person via food. Different bacteria, *Campylobacter jejuni*, *Salmonella*, *Escherichia coli* and Shigella, cause infections in the small intestine; the infections are named after the disease-causing bacteria. Norovirus illness is another common food-borne disease, and causes 'stomach flu' or gastroenteritis.

  Risk and Protective Factors: Environmental conditions and the hygiene habits of people are both important in the spread and control of these infections. Risk factors include consuming untreated or contaminated water or food; unsanitary conditions in food preparation, in food/water handling and storage areas and bathrooms; recent travel to areas with unsanitary food services; recent family illness with E. coli. Another risk factor for Shigella, besides food-related issues, is living in crowded and/or unsanitary conditions. Preventive behaviors include:

avoiding improperly prepared foods; practicing sanitary food preparation and handling; and storing foods properly. Good hand washing is important, including when handling eggs and poultry.

Data:  Data on risk and protective factors are usually unavailable. However, the NM Environment Dept. collects data on the number of violations of drinking water standards in community well systems (See F. Environmental Health Indicators, Water Quality subsection later on in these guidelines.)  Incidence numbers and rates of cases of Campylobacter, Salmonella, E. coli and Shigellosis are available for the US, NM and counties. Incidence data may be available by age and race/ethnicity, depending on the number of cases of a given illness. Mortality numbers and rates are available for the US, NM and counties. Cases of Norovirus, while fairly common, are not reportable to the NM Dept of Health; thus, data are not available.

- Hepatitis
  Definition: Hepatitis means inflammation of the liver. Causes include: infections from parasites, bacteria or viruses (such as Hepatitis A virus, Hepatitis B virus and Hepatitis C virus); liver damage from alcohol, drugs or some medications; and inherited disorders such as cystic fibrosis. The term hepatitis is thus a description of the effects of many diseases in which the liver's affected and is inflamed.

  Risk and Protective Factors:  Risk behaviors for acquiring hepatitis are injection drug use, unsafe sexual behaviors such as unprotected intercourse (no or inconsistent condom use), eating contaminated food, alcohol abuse, being a health care worker (blood contact) and getting a tattoo. Other risk factors include having a family member who recently had Hepatitis A, having AIDS, and being a newborn whose mother has Hepatitis B or C. Preventive measures include: being vaccinated with Hep. B vaccine, Hep. A vaccine or immunoglobulin; avoiding contact with blood; avoiding sexual contact with someone with Hepatitis; avoiding contact or sharing utensils or bathrooms with someone with Hep. A; washing hands after using the bathroom and before handling food; not consuming uncooked/partially cooked food or untreated water in areas where hepatitis is prevalent; practicing safe sex; not using IV drugs or not sharing razors or needles if you do; and not drinking alcohol at the same time you take acetaminophen.

  Data:  Hepatitis C is a reportable condition to the NMDOH, but current prevalence data for Hepatitis C is not complete.  Incidence data and mortality data for Hepatitis A and B are available. Data for the US, NM and counties are available, including by gender and age where the numbers are large enough.

- Pertussis
  Definition: Pertussis, or whooping cough, is a highly contagious respiratory illness that can occur at any age. Pertussis spreads from person to person by breathing in infected respiratory droplets produced from a cough or sneeze, or by direct contact with respiratory secretions of an infected person. It produces spasms of coughing that may end in a characteristic, high-pitched, deep inspiration (the "whoop").

  Risk and Protective Factors:  A vaccine helps protect children against this disease. Vaccination starts in infancy with a booster dose before school entry. Preventive antibiotic medication should be given to close contacts of persons infected with pertussis, regardless of vaccination status.

Data:  Incidence and mortality data for the US, NM and county levels are available. Data by gender and age may be available, depending on the size of the population.

- Tuberculosis
  Definition:  Tuberculosis (TB), caused by the bacteria *Mycobacterium tuberculosis*, is primarily an illness of the respiratory system, and is spread by coughing and sneezing. TB is preventable, even in those who have been exposed to an infected person. TB infection can remain dormant in people for years or decades making infection very difficult to detect; TB is considered active when symptoms appear.

  Risk and Protective Factors: The risk of contracting TB increases with the frequency of contact with people with TB and/or living in crowded or congregate (group living) settings. TB incidence has recently been increasing in certain areas in the US, but NM incidence has been steadily decreasing since the 1950s. TB in the US is generally among foreign-born persons from areas where TB is prevalent.

  Data: Incidence data for NM and counties are available for active TB. Mortality data are available, including by the usual breakdowns by gender, age and race/ethnicity where the population size is large enough. Data on TB infection are unavailable.

- Sexually Transmitted Diseases: Chlamydia, Gonorrhea, Syphilis
  Definition: Diseases that are transmitted by sexual contact are termed sexually transmitted diseases (STDs) or sexually transmitted infections (STIs). STDs are common in the US; the most common are chlamydia, syphilis and gonorrhea. These diseases may be acquired jointly.

  Risk and Protective Factors: Having multiple sexual partners (including over a lifetime), unsafe sexual practices (including no or inconsistent condom use), and having a partner who has had any STD in the past are risk factors.  Having a monogamous sexual relationship with a person known to have no STD, using condoms (either the male or female type), getting periodically screened if sexually active, and treatment of partners to prevent re-infection will decrease risk for acquiring STD. Not having intercourse is the only way to absolutely prevent chlamydia.

  Data:  BRFSS and YRSS data that address risk and protective behaviors would be appropriate here or in the Risk and Resiliency Section.  Incidence counts/numbers and rates for the population are available for the US, NM, and counties. Include rates by gender, age groups and race/ethnicity, as appropriate for size of the county population and frequency. Mortality data are available as well for the same areas and for the same breakouts (but under the same constraints in small populations).

- Sexually Transmitted Diseases: HIV/AIDS
  Definition: The human immunodeficiency virus (HIV) causes a viral infection that gradually damages or destroys cells of the immune system.  HIV is transmitted through infected blood and bodily secretions and most commonly occurs during illicit intravenous drug use and sexual intercourse. Most persons infected with HIV will progress to AIDS if not treated.

  Risk and Protective Factors:  Risky behaviors include unprotected (no condoms used) sex with persons suspected or known to have HIV infection, persons who

have multiple sex partners, commercial sex workers, or injection drug users; using IV drugs, sharing needles or syringes; and anal intercourse or oral contact with the anus. While safer sex behaviors may reduce the risk of acquiring HIV, abstinence is the only sure way to prevent sexual transmission of this virus.

Data: Prevalence, incidence and mortality data, both for HIV and for AIDS, are available for the US, NM and at a county level. For HIV, incidence data are based on reported new positive HIV tests.  For AIDS, incidence data are based on reported dates of AIDS diagnoses. Data are available by age, gender, mode of exposure, race/ethnicity, and age at first positive HIV test though data by these strata may be unavailable by county. Examples of mode of exposure are men having sex with men (MSM), injection drug user (IDU), MSM and IDU, heterosexual, blood transfusion or adult hemophiliac, and pediatric.

- Other
Animal bites, especially from dogs and because of the risk of rabies, are a serious concern in many parts of NM...There is no surveillance system for animal bites so data are not available centrally. Local animal control agencies may have data, but data are typically not collected in an easily retrievable way.  Community-level data may be available through working with local animal control agencies.

Other issues of concern are West Nile Virus, plague and Hantavirus. Incidence data (counts) are available, although county data may or may not be available.

## f.  Environmental Health Indicators

The interactions between people and their environment directly affect the health and quality of life of people as well as the health of the environment. Different government agencies monitor the presence of specific regulated substances (i.e., pollutants) that could be hazards to humans, other living resources and ecological systems.

Such monitoring shows us whether harmful exposure may have occurred.  However, it is often difficult to show that actual harm has been produced in humans. It is a complex issue to show human health effect from monitoring or exposure data; the chain and/or web of events and interactions is not straightforward or immediately apparent.  In addition, the measurement of human illness and health status outcomes is a different system than the system of measurement of pollutants (and thus possible exposure to pollutants) in the environment. Nevertheless, some data are available to help communities be informed about possible exposures. It is useful to present multiple environmental health indicators for they may measure related effects. For example, measures of environmental hazard, environmental exposure and health effects would all be beneficial. Assistance on this issue, and on interpretation, is available from the NM Dept. of Health Environmental Health Epidemiology Bureau as well as various NM Environment Dept. programs (listed throughout the following sections).

Discussion of possible health effects due to exposure to environmental pollutants or conditions can be included here or may have already been done in the previous sections; if so, refer to where the discussion occurred.

- Safe streets, neighborhoods, parks
The power of the created or built environment to shape people's behavior and health is immense. A basic environmental health question is: how do these environments enhance and/or diminish the health of the community? Public places that are safe for people, including children, to walk. picnic, or play, are part of what makes neighborhoods and communities flourish and contribute to civic wellness. Neighborhood layouts can encourage or discourage walking (to schools, churches, parks, shops, or for exercise), staying outdoors, and other sorts of social interaction. Other enhancements to community health include parks, greenbelts, trails, plazas, open spaces, and streets that people can use without fear of being hit by traffic or be affected by crime.  Other examples are neighborhood streets that have sidewalks on which people with disabilities can navigate, and where traffic flow is geared to the pedestrian rather than to high-speed drivers.

  Data:  If compiled information on the quality and location of public safe places and streets does not exist, start with the local land use planning office and the local parks/recreation office to gather such data.

- Food Safety
Definition: Food and water-borne diseases are leading causes of illness in the world, including in the United States. Food safety encompasses an immense range of activities that ensure the safety of food, from production to storage to transport to consumption. Food safety applies to food produced and distributed commercially as well as in homes. In NM, yearly inspection of the approximately 8,000 food service and processing facilities is critical to keep food safe and communities healthy.

  Data: Data on inspections of food service and processing facilities are not electronically captured but are available through over 20 local NM Environment Department field offices. Inspected facilities include grocery stores, hospital kitchens, public restaurants, group residences and school cafeterias. Because these inspections cover many issues and types of regulations besides just storage and preparation, interpretation should be done with NMED Field Operations Food Program staff. Contact information is at www.nmenv.state.nm.us.

- Water Quality
Water should be safe for ingestion, bathing, swimming, irrigation, recreational use, as well as supporting fish and wildlife.  Water quality work is vast: keeping sources (streams or underground aquifers) of drinking water from being contaminated, treating drinking water, providing fish consumption advisories, managing and treating wastewater, and supporting economic and recreational uses, to name a few. Water pollutant examples are sewage (or components of), heavy metals, and organic compounds.

  Data:  Various programs of NMED collect data on water pollutants in surface water, ground water and community water systems. Data and contact information are available at www.nmenv.state.nm.us, under specific programs. Interpretation of data should be done in consultation with NMED staff.

  *Drinking water quality* data are available on regulated water systems that deliver water to communities. Not all types of systems are regulated; private wells are not regulated. Inspections of water systems occur regularly, and proceed on schedules according to the type of system. Compliance data from inspections and

investigations are available by water system and by county from NMED Drinking Water Bureau. A recent assessment of the quality and vulnerability (to contamination) of source water for water systems also is available from this bureau. Interpretation of compliance data should be done in consultation with NMED water system oversight staff.

Available g*round water quality* data are facility-specific. The NMED Ground Water Quality Bureau (GWQB) requires facilities that generate wastes to have ground water pollution prevention (discharge) permits; the data collected varies according to the wastes that a facility generates and the permit requirements. These analytic data can be requested from the NMED GWQB. Information about permits (facilities, location, and waste type generated) is available online. Interpretation of data should be in consultation with GWQB staff.

*Surface water quality* data about NM lakes and segments of streams and rivers are in the NMED Surface Water Quality Bureau (SWQB) biennial report on impaired waters. This report, "Clean Water Act 303(d)/305(b) Report", is on the NMED website. It details the designated uses of specific surface waters and whether or not the quality of the water is sufficient to support that use. For example, a particular river reach may have three designated uses: coldwater fishery, irrigation, and wildlife habitat. The quality of the surface water may be good enough to support irrigation and wildlife habitat uses but not coldwater fishery. Assistance with interpretation of these data is available from SWQB.


- Air Quality (Indoor, Outdoor)
  The cleanliness of indoor and outdoor (ambient) air affects health.  Industrial and commercial discharges, as well as common daily practices by individuals (such as driving or smoking) decrease air quality. Some air pollutants have serious health effects on humans and other species, while the link for other and human illness is unclear or not known.

  Risk and Protective Factors:  People with asthma, emphysema, or other chronic respiratory problems have lower tolerance for air pollution. All persons, but especially more sensitive groups, can decrease their risk by staying indoors if the outside air pollution is high and stay away from indoor air pollution such as cigarette smoke, wood smoke, animal dander, mold, paints, glues and other construction materials. Many communities use indoor air ordinances as a policy intervention for decreasing indoor air pollution from cigarette smoke. Occupational asthma, i.e., asthma induced by airborne substances at work, often can be alleviated by removal from exposure

  Data: Ambient (outdoor) air is monitored in northern and southern areas of NM; the monitoring stations are located based on population and locations of facilities that emit regulated pollutants. The NM Environment Department monitors and collects data on sulfur dioxide, nitrogen oxide, carbon monoxide and particulate matter. Data from and the locations of monitoring stations and information about the monitored pollutants (what they are, typical sources, health effects) are available online at *http://air.state.nm.us*. These data should be interpreted in consultation with NMED Air Quality Bureau staff; contact information is on the website.

  No systematic surveillance of indoor air quality exists. Some local/community efforts at indoor air monitoring occur related to asthma surveillance. NMED's Indoor Radon Outreach Program has data, based on surveys done from 1987 to 1989, that show

which areas of the state are at high or moderate risk for radon exposure. Contact information is at *www.nmenv.state.nm.us/nmrcb/radon.html.*

- Lead
  Definition: Lead is a natural element that is widespread and has thousands of uses. It can contaminate food and water, though is undetectable visually or by taste. Sources of lead include lead pipes (or lead solder in pipes) from plumbing in older homes; canned goods that may have lead solder; ceramic bowls, plates or cups that may have lead in the glaze; and, lead paint in older homes.

  Risk and Protective Factors: Exposure to lead has decreased for the US population because of several actions since the 1970s: lead was banned in gasoline, house paints, and lead pipes, and lead-containing solder was eliminated in cans.  R: removing pre-1978 paint (especially if chipped or peeling) and repainting with lead-free paint; disposing of old painted toys; letting tap water run for a minute before drinking or cooking with it; using a filter or bottled water if water has tested high for lead; and not storing wine, liquor, or vinegar-based salad dressing in lead crystal decanters or bottles for long periods of time.

  Data:  NMDOH Environmental Health Epidemiology Bureau keeps track of the number of blood lead screenings, of elevated blood lead (>10 micrograms of lead per deciliter of blood, i.e., >10 g/dl) cases, and lead poisoning (>20 g/dl) cases. The number of screenings is available for NM but not at the county level. The number of cases with >10 and >20 g/dl are available at the county level.

- Other
  Many other factors of the environment affect our health: housing quality, quantity and affordability, poverty, income disparities, the percentage of jobs available that are low vs. adequate wage, the availability and affordability of recreation (from museums to gyms, from music to hunting, indoor to outdoor).  These can be addressed in this section or included throughout the profile as appropriate.  Data on some of these issues are online (with overlapping information). Census data on housing is available through the American Factfinder website at http://factfinder.census.gov. Economic indicators for NM are available from the Census, NM Bureau of Business and Economic Research (*www.unm.edu/~bber*), and NM Dept of Labor (www.*dol.state.nm.us/dol_lmif.html*).  A new feature is the NMDOL interactive function at *http://laser.state.nm.us/analyzer* for data on New Mexico's economy. Community /county profiles are available from the NM Economic Development Department at *www.edd.state.nm.us/COMMUNITIES/index.html.* Information on public lands and recreation can be found at *www.publiclands.org.*

## g.  Injury, Violence, Substance Abuse Indicators

- Violent Deaths (homicides, suicides, workplace, firearm-related)
Definition:  Violent deaths are self-inflicted (suicide), inflicted by others (homicide), or caused by unintentional injury (accidents).  Suicides and homicides may be intentional or unintentional. They can occur anywhere, including in the workplace. Vehicles, alcohol, illicit drug and/or firearms may be involved.

Risk and Protective Factors:  National and state survey systems, such as the YRRS and the National Longitudinal Adolescent Health Study (*Add Health*), gather information on youth knowledge, attitudes and behavior. These surveys show us what risk factors and resiliency factors influence whether youth will be involved in violent behavior, including suicide attempts. A long list of risk and protective factors differs somewhat for girls and boys. Studies of national Add Health results give us information about the most important risk and resiliency factors for specific behaviors, such as violent behavior. (See Glossary.) How risk and resiliency interact is also being studied via Add Health data. The New Mexico YRRS data are available at the county or local level.

Unfortunately, there is no parallel systematic survey of adult attitudes and behavior that would give us data on risk and protective factors for abuse and violence.

Data:  Mortality data (rates, counts) are available for the US, NM and county and by age and gender for all these areas. Particular compilations that shed light on the circumstances of death — such as whether alcohol, drugs, firearms, and/or vehicles were involved — are becoming increasingly available. Rates for small counties, or for more rare events (such as homicides of children), may have to be used in multiple-year totals for appropriate interpretation.

Data on risk and protective factors are available for youth from the Youth Risk and Resiliency Survey and are available by county, age, gender, and grade — depending on the size of the county or school district sample.

- Abuse/ neglect or violence (child, elderly, domestic violence)
  Definition:  Federal legislation defines child abuse and neglect as, at minimum, a parent's or caretaker's act or failure to act which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act which presents an imminent risk of serious harm.  Elder abuse and neglect is similarly defined, along with some additions. Domestic violence (partner abuse, spouse abuse, or battering) is when one person uses force to inflict injury, either emotional or physical, upon another person with whom they have or had a relationship.

  Data: Data on reported cases of child and of adult abuse and neglect for NM and counties are available from the Children, Youth and Families Department (Child Protective Services Division). Note that these data are on reported incidents only. Data types include investigations (substantiated, unsubstantiated, disposition), type of abuse, and recurrence of maltreatment of a previously substantiated report.

  Likewise, data on domestic violence incidents are available for NM and counties. These data on reported domestic violence incidents are collected from various sources throughout the state (shelters, law enforcement, courts) by the NM Domestic Violence Data Central Repository. The completeness of abuse and violence data is greatly influenced by the resources available at the local level to collect such data. The Pregnancy Risk Assessment Monitoring System (PRAMS) has data on physical abuse experienced women before and during pregnancy.  PRAMS survey data are available for the US and NM; some county-level data are available.

- Unintentional injury
  Definition:  An unintentional injury (accident) is an injury or poisoning that is not inflicted deliberately. This includes falls, or injuries related to vehicles, firearms,

agriculture, the worksite, water, poisoning, alcohol or drugs and others. These broad categories overlap; for example, poisoning may be drug-related or agricultural, a fall may be an occupational, playground or nursing home occurrence, and a vehicle injury may also be due to drugs or alcohol.

Risk and Protective Factors:  No data on these are available on a consistent, systematic basis. A very wide range of risk and preventive factors reflect the variety of injuries that can be prevented, and range from industrial hygiene measures at large workplaces to simple changes in lighting and furniture or rug placement in homes to prevent falls by elderly residents.

Data:  Unintentional injury data are available on those injuries resulting in death; data on non-fatal injuries are less complete. Mortality data (counts, rates) are available for the US, NM and counties. Data by age, gender, race/ethnicity may be available at the county-level depending on the injury type and population size.  For example, counts of poisoning deaths in a county may be too low to get data by age, gender or race/ethnicity.

NM DOH has two new surveillance systems: non-fatal injury data, collected from some hospital emergency departments, and data about ambulance runs, collected from some EMS/ambulance services. The data do not yet cover the entire state. Data about injuries treated at primary care or urgent care centers are not centrally collected.

The New Mexico Environment Department's Occupational Health and Safety Bureau (OHSB) annually conducts a statistical survey of industries to estimate rates of work-related illnesses and injury for NM.  County rates are not available. State rates by industry are at *http://www.bls.gov/iif/home.htm*. Work fatality rates also are available here.  Data about inspections of worksites by OHSB are available by contacting OHSB staff; contacts are at *www.nmenv.state.nm.us* (occupational health link). Consult with OHSB when interpreting these data.


- Substance Abuse
  Discussion of substance abuse (alcohol and illicit drugs) can be woven throughout the previous subsections and/or can be in a separate subsection.

  Risk and Protective Factors:  Any use of alcohol or illicit drugs among youth is often seen as a risk behavior in itself, as well as a risk factor for violence, suicide and other injury. Alcohol abuse, such as binge drinking, is a risk behavior. Protective factors for youth are those factors that tend to help youth avoid substance abuse, ameliorate possible harmful effects of such behavior, and/or recover more quickly from substance abuse effects.

  Data: Data on risk and protective factors are available from the YRRS, available through NMDOH staff. Data on adult smoking and drinking are available from the BRFSS; no data are available on adult illicit drug use from the BRFSS. The YRRS and BRFSS data are available by county, gender, age, grade (YRRS only), race/ethnicity and income (BRFSS only).

  Mortality data on deaths due to alcohol, smoking, and illicit drugs are available for the US, NM and county; these are available by age, gender and race/ethnicity as appropriate for the size of population and frequency. Alcohol-related death rates and counts, which include a broader range of causes of death with alcohol involvement, are also available for NM and its counties. These data demonstrate the burden of

alcohol abuse.  Demographic breakdowns by race/ethnicity, gender and age are available depending on the size of the population.

## h.  Risk and Resiliency Indicators

Definition:  A risk factor is a habit, trait, condition, genetic alteration or environmental condition that increases the chance of developing a disease or unhealthy state. A protective or resiliency factor is a habit, trait, condition, genetic alteration or environmental condition that enhances one's ability to avoid, resist or recover from stressful life events, risks or hazards. Risk and resiliency factors therefore are individual and/or environmental variables; they interact, in complex ways, to help or hinder the health of individuals and populations. Discussion of risk and resiliency data can be throughout the profile or can be concentrated in this section. As there are a great deal of youth risk and resiliency data, some data not discussed elsewhere may be discussed here.

Data: Youth risk and resiliency data primarily come from surveys of students, such as the NM Youth Risk & Resiliency Survey (YRRS) and the Search Institute's Developmental Assets Survey. US data on the prevalence of risk factors and behaviors are available from the US Youth Risk and Behavior Survey (YRBS). NM, county and school district data are available from the NM YRRS. School district data are available only with school superintendent permission. YRRS data are available by age, gender, race/ethnicity and grade for NM; availability depends on the size of the sample for county or school district level data.

Adult risk factor data are available from the NM Behavioral Risk Factor Surveillance System (BRFSS). There are data on positive behavior (for example, if adults have gotten screenings for cancer) and on positive health conditions (for example, if perceive one's health as good or excellent); however, there are no data that parallel the youth resiliency data (such as feeling connected to family or adult). The NM Pregnancy Risk Assessment Monitoring System (PRAMS) also has risk and resiliency information on pregnant women and recent mothers.

Some localities in NM have conducted the Search Institute survey, which focuses on assets or resiliency. Locally collected data, such as the Search Institute survey or locally developed surveys may be available.  Discussion of methods and results here, or in other sections as appropriate, would enhance a community profile.

# 5. Interpretation Of Community Health Status Information

Numbers, words and images – different types of data – are representations of what may or will happen or has happened. The meaning or significance of data is shaped by education, training, commonly held beliefs or definitions, experience and other cultural factors. An image or number can therefore take on several meanings, depending on who is looking at it. Data interpretation may be dangerously close to lying or it could be the 'honest truth', depending on who is talking and who is listening! This is why interpretation, the act of giving meaning to something such as data, is so important. An assessment is an excellent opportunity to interpret what data mean. A profile that lacks interpretation is a lost opportunity to convey what is important to a community, what the background might be, why something is of importance, and what the connections might be – all from the perspective of those involved in developing the community profile.

Interpretation of the data might include the positive and negative highlights of the health status data.  It might paint the council's or community's big picture, created from all the health status data pieces.  It might also enumerate the various protective influences and risk factors operating in the community.

# 6. Health-related Services: Capacity, Access, and Use

Definition: One important factor in keeping communities healthy is the health services system and its viability in helping residents stay or become healthy.  The health services system in a community can include a wide range of services, including medical services in a primary care clinic, hospital or rehabilitation facilities, mental health counseling in schools or a private counselor's office, community health promotion activities, acupuncture, chiropractic care and substance abuse treatment. Here we describe a system's capacity, access and utilization. In this discussion, it may be helpful to define what constitutes a working health services system for your locality; this will differ from locality to locality depending on what already exists and/or works there.

## a. Capacity: What services exist for whom

One definition of capacity is the ability to perform or produce health services. Here we are concerned with the capacity in a community to perform or produce health services. In other words, what services exist in or near the community and for what groups of people?

## b. Access: What influences access to services for different groups

Access is a complex issue, but generally it means whether people have the appropriate health care resources at their disposal to preserve or improve their health. The main concerns about access are:

- If services exist, is there an adequate supply of services for our population(s)?

- What financial, organizational, social/cultural barriers limit people's use of existing services?

- Are the available services relevant and effective for the population(s), such that satisfactory health outcomes can be achieved?

## c. Utilization: who utilizes existing services

Utilization is about how much health care people use, the types of health care they use, and the timing of that care. Utilization is about a population's, not an individual's, use of existing services. Like capacity and access, it is a complicated topic. Factors such as increased supply of services, a growing population, more elderly people, new technologies or drugs, and changes in insurance coverage or in the pattern of health services can affect utilization. Decreased supply (e.g., hospital closures), better prevention, better understanding of risk factors for diseases, changes in patterns of care (e.g., reducing length of stay), and pressures to reduce health services costs are some of the factors that can decrease utilization. The timing of when care is received is important, in order to learn if people are seeking care when

they should (not delaying care until the condition is harder to treat) and if they are seeking care at appropriate sites (at a primary care clinic or provider rather than emergency rooms or specialty centers). These factors will indicate whether care can appropriately be provided at less intensive and less expensive levels.

Data: Some data on capacity (e.g., number of health care professionals, or health professional shortage areas) are available from the NM Health Policy Commission (HPC). Other data, such as the client populations targeted or the hours of services, may have to be gathered locally from providers or from an existing service inventory.

The ability to pay for services is one issue in access. The HPC's annual *Quick Facts* publication (at *http://hpc.state.nm.us*), reports US and NM data on poverty and health insurance coverage for adults and children and by type of insurance; these insurance data are estimates from the US Census Bureau's Current Population Survey (CPS). According to the CPS, health care coverage estimates are low due to a variety of reasons. Data on health insurance coverage for adults for the US, NM and counties are available from the BRFSS; these are derived differently than those from the Census' Current Population Survey and will give different estimates. BRFSS insurance data are available by population characteristics such as gender, age group, income, education and employment status; availability of these data will depend on the size of the county sample. While the BRFSS is primarily a survey about adults, it also asks questions about children in the household and the insurance coverage for those children. The BRFSS also has data on the ability to obtain medical care when needed and the reasons for not being able to get care. Again, these are available by the usual population characteristics, depending on the county sample. Many communities have primary data on the particular access issues in their localities; these add a rich vein of information not available from national or state surveillance systems and should be included here.

Hospital utilization data are available from the HPC's Hospital Inpatient Discharge Data (HIDD) for NM and counties. One useful analysis is about *Ambulatory Care Sensitive Conditions*, which may, over time, help determine which conditions are being appropriately or inappropriately treated in hospitals. HIDD data are available by discharge (there may be more than one discharge per year per patient) and by patient.

Utilization data for non-profit primary care centers are available from the NMDOH Health Systems Bureau, Office of Primary Care and Rural Health. These data will be only for non-profit community-based centers funded by this office, or about 60% of non-profit primary care centers. (For-profit community-based centers are thus not included.) The BRFSS has limited utilization data, based on questions on whether people have seen a doctor for routine checkup and a dentist/dental clinic in the past 12 months. These are available by the usual characteristics (gender, age group, income).

# 7. Health Disparities

The New Mexico Department of Health 2008 Strategic Plan calls for increasing awareness about health disparities. The U.S. National Institutes of Health define health status disparities as "differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions between specific population groups." Usually disparities refer to differences in health status among racial and ethnic groups, but they can also apply to gender, rural vs. urban, or other specific population groups.

Disparities are usually expressed statistically as a ratio between the incidence rates of two different population groups. The ratio, or relative disparity, is the rate for one subpopulation divided by the rate for the second subpopulation. If the two rates are the same, the rate ratio equals one, and there is no disparity. If the first rate is greater than the second rate, the rate ratio is greater than one; if the first rate is less than the second rate, the rate ratio is less than one. Disparity change scores examine relative disparities over time.

NMDOH published a *Racial and Ethnic Health Disparities Report Card* in August 2006 that addresses 19 health indicators. This report uses disparity ratios calculated by dividing the rate for a given population by the population with the best rate and 20 or more cases during the given time period. (Disparity ratios are not calculated for populations with fewer than 20 cases during the time period.) The Disparities Report Card also uses a grading system, as illustrated in the following table.

**Disparities: Teen Births Ages 15 – 17**

| Race/Ethnicity | Grade | 2003-05 Rate (per 1,000) | Disparity Ratio |
|---|---|---|---|
| African American | B | 20.6 | 1.5 |
| American Indian | C | 32.7 | 2.4 |
| Asian/Pacific Islanders | NA | 6.4* | NA |
| Hispanic | F | 56.2 | 4.2 |
| White | -- | 13.4 | 1.0 |

The profile should address the possible impacts of disparities on overall community health. Gathering county-level or tribal-level disparities data may be difficult or costly to obtain, but it is important to at least address the potential impacts of health disparities in your community.

# 8. Summary of Profile Highlights & Overall Interpretation

This is where all of the data in previous sections get woven together into a big picture. This summary is critical and can serve to help readers understand what is important in the community. Clarity in presenting the summary of highlights and in the big picture interpretation will greatly enhance the value of the profile.

### a. <u>What issues strongly affect the health of county or tribal population</u>

Given all the data already presented, what are the highlights – both positive and negative – that are strong influences on the health of the entire population and sub-populations?

### b. <u>Explanation or discussion, from council's perspective</u>

Now that the highlights have been presented, of what importance are they to the council and, if known, to tribe or the communities in the county?  How are the highlights linked to the council priorities, if priorities are already chosen? If the council has not yet gone through a prioritization process, then will there be such a process? In other words, include some acknowledgement of uses, current and potential, of the assessment.  This may also be the place to point out if a community health improvement plan is available to interested readers.

# *Part 2:*

# *Community Health Improvement Plan Guidelines*

# Part 2: *Community Health Improvement Plan Guidelines*

# A. Introduction

These guidelines describe key components in a community health improvement plan. In the following sections there are definitions, examples, and descriptions that will help to communicate the aims and activities that your community is using to address local health priorities. A thoughtful plan serves as a long-term framework to guide diverse interests, agencies, and individuals towards accomplishing common aims. Short-term and long-term aims and activities are included in a community health improvement plan.

**What exactly is a community health improvement plan?**

A community health improvement plan is a collective statement of intent that reflects a broad community consensus. It is a roadmap of how a particular community (in the case of New Mexico, a county or a tribal unit) has decided to work together toward improving the health of its citizens. A good community health improvement plan is one that:

- Articulates a shared *vision* of what a healthy community is;
- Includes clear, specific, and measurable *aims* or long-term goals;
- Reflects the results of a *participatory planning process* that includes significant involvement by key community sectors: private citizens, health care consumers, health care providers, and key elements of the public health system;
- Focuses on the development of *systems*, in which various components of a community work together for common ends; a health council is an ideal mechanism for encouraging and facilitating this collaborative process.

A community health improvement plan has at its foundation the belief that communities have the wherewithal to improve the health of their own residents. The community health plan is a tool to guide communities through their action steps in order to address priorities that have been defined in the community health profile through community input and review of local health data.

A community health improvement plan should be easy to understand and to use, so that community groups and individuals know exactly what steps have been identified to address local priorities. After reviewing the plan, community members also should have a better sense of what measures will be used to keep track of changes in health around a chosen set of strategies and activities. The plan uses as its starting point the data and conclusions developed in the community health profile. <u>While the documents are meant to be used together, the plan should also be usable as a stand-alone document, since some policy-makers and other potential users may not use the documents together</u>.

**What are the uses of a community health improvement plan?**

First and foremost, a community health improvement plan serves as a tool for guiding community action and for monitoring and measuring progress toward achieving common aims. Plans and their accompanying community health profiles also are used in many other ways. They often are quoted or referred to in other planning documents published

by county, city, and tribal governments, as well as other community councils and coalitions. They serve as the basis for needs assessments by community health centers, health and social service organizations, and other public health initiatives. They are often quoted as justification for funding requests and proposals, and they may be used to provide criteria for funding agencies for choosing proposals and projects to support. Overall, community health improvement plans can be a key element in a community's efforts to attract financial resources and to build local infrastructure to improve overall quality of life.

**What are the main components in a community health improvement plan?**

Studies have shown that effective plans require the following components:
- *Priorities* that are identified and agreed upon by the community
- Specific *aims* for each priority
- Evidence-based approaches that identify appropriate *strategies* for each aim
- Specific *activities* to carry out strategies for each aim
- *Measures* by which progress will be assessed and a description of how the work will be monitored on an ongoing basis
- The respective *roles* of specific entities in the community who will be involved in implementing and monitoring the plan.
- *Timetables* for the accomplishment of short-term and longer-term aims and benchmarks.

**Who develops and implements a community health improvement plan?**

The community health improvement planning process is generally led by a group that has been identified and sanctioned by state or local government agencies to coordinate the development of a community plan. In New Mexico, health councils have assumed this role. *The community health improvement plan is a community-wide plan to address health priorities for a given county or tribal community.* Some health councils also have used it as a *council strategic plan.* Sometimes it is difficult to distinguish between the two types of plans, since the health council is itself representative of the larger community. The plan is primarily a community-wide document, although it may also serve as a council's strategic plan. In any case, it is useful for the plan to address the respective roles of the health council and other entities or community partners in achieving community-wide aims.

**What format should be used for a community health improvement plan?**

The New Mexico Department of Health has been promoting the use of an approach known as *systems thinking* since 2001. This approach includes a set of tools — specific concepts, terminology, charts, and formats — that many people have found useful in organizing and presenting community health improvement plans. This approach forms the basis for these plan guidelines and for reporting systems that are used by the NMDOH. For these reasons, it is recommended that counties and tribal units use this approach in developing their plans. At the same time, however, it is recognized that different people and communities will want to present information in slightly different ways, reflecting their own ways of thinking and expressing what is important to them.

*The important point is that the various elements of a plan flow logically, with connections and consistency.* For example, the data in a community health profile will lead to certain

conclusions about a community's most urgent health needs and concerns, which will then translate into priorities.  For each priority, there will be long-term goals, as well as shorter-term objectives, all of which can be monitored and measured using specific kinds of data.  For each priority specific strategies will be identified — again, with verifiable and measurable outcomes.  The goal is to develop a plan that is understandable, user-friendly, that uses evidence-based strategies, and that retains a unique community "voice" that reflects an area's shared values, traditions, and unique strengths and assets.

# B.  Outline of Key Plan Components

## 1. Executive Summary

An executive summary provides a brief overview of the community health improvement plan, with highlights of the essential elements of the plan.  The executive summary is usually no more than one or two pages and is usually used as a communication tool with public health partners and the broader community.  The executive summary should be designed for possible use as a stand-alone document.

    a.  The Executive Summary should include:
    b.  Purpose of the Community Health Improvement Plan
    c.  Brief description of the health council
    d.  Discussion of the process that was used to:
- Develop the community health profile
- Prioritize local health issues identified in the community health profile
- Develop the community health improvement plan

    e.  Listing of the community health priorities
    f.  Listing of the aim(s) for each priority, with outcome measures for each aim
    g.  Listing of main strategies for each aim

## 2. Introduction

The introduction can include:

    **a.**  The purpose of the community health improvement plan:  Why was it developed?  Who is the intended audience?  How will it be used?  Why was a particular approach or format used?
    **b.**  The process of developing the plan:  Who was involved, how was community input gathered and analyzed, and how was community or tribal approval obtained?
    **c.**  The organization and format of the plan:  Why was a particular approach or format used (with an explanation of terminology used, if appropriate)?

## 3.  Council Description

    a.  Vision:  What the council sees as a healthy community
    b.  Mission and role:  A one- or two-sentence description of why the council exists, what it does, and what it intends to accomplish
    c.  Core values:  Any shared values, beliefs, or assumptions that guide the council's work

d.  Council history, and its relationship to other planning councils (e.g., county commissions, tribal councils, other health planning councils)

e.  Council composition: How council membership is determined, and who is represented

f.  Council functions:  It may be helpful to list the major areas of activity of the council, which often fall into the following areas:

Assessment: Identifying community resources, needs, strengths, and concerns, in this case related to health.

Planning:  Bringing various community sectors together to identify common aims and to develop common strategies.

Coordination:  Collaborative monitoring and information exchange to identify gaps in services, avoid duplication, and strengthen community efforts through inter-agency collaboration.

Community outreach:  Raising public awareness of significant community health issues, and developing mechanisms to ensure that people know about, and have access to, available services and resources.

Advocacy:  Advocating at the local, county, state, and national level on behalf of health issues that are important to the community.

Resource allocation:  Working collaboratively to develop grant proposals and other means of attracting additional resources in support of health improvement.

g.  Community collaboration: The council's principal community partners and collaborating entities

## 4.  Highlights of the Community Health Improvement Plan

This section should contain a brief synopsis of the data gathered and conclusions reached in the community health improvement plan. This also would be an opportunity to describe the priorities and why they were chosen.  Briefly summarize the data (quantitative and qualitative) used to support the priority, and cite where in the community health profile the supporting data can be found.   Ideally, the priorities, aims, and strategies chosen in the *plan* will directly reflect the information in the *profile*.

## 5.  Priorities, Aims, Strategies, Outcome Measures, and Activities

This section is the heart of the community health improvement plan, since it provides a guide for council operations and for monitoring progress for a several years.  The following is a suggested format for organizing these various components, organized by priority area.

For each priority, include the following:

a.  **Priority:**  This is a health-related issue of major importance or urgency that the health council has chosen to focus on.

b.  **Aim(s) for this priority:**  Aims are specific, desired ends or goals to be accomplished.  Aims should be stated in specific, verifiable terms.  An aim is likely to be long-term — i.e., requiring more than one year to achieve.

*Example:* Picacho County has "Youth Substance Abuse" as a priority. This priority is quite broad. Further focus was required to provide clear direction as to

what exactly what is to be accomplished. The health council and community then developed an aim for this priority; the aim is "Delay the age at which youth ages 10 to 18 start drinking in Picacho County."

Many different aims can arise from one priority.  Briefly describe why the council chose this particular aim or aims out of the many others that might have been chosen.

c. **Community resources:**  clearly and succinctly summarize existing community assets or resources available to accomplish this aim.  Alternatively, cite where in the community health profile the specific assets for this aim are listed.  Assets and resources may include health and social service providers, the public health system, community coalitions, or other entities.

d. **Outcome measure(s):**  List an outcome measure for each aim.  This measure will be used to gauge a community's progress toward accomplishing the long-term aim.  The outcome measure should be specific, verifiable, and quantitative.  An outcome is a visible change in health status, behavior, or condition of a given individual or population.  The outcome should be expressed in terms of readily available data.  Progress toward accomplishment of the aim can be measured by looking a current (baseline) data, and then monitoring changes up or down, usually on an annual basis.

> Example:  In Picacho County, the 2003 YRRS showed that 42% of middle school and high school students surveyed had their first drink of alcohol before age 18.  Three years later, the 2006 YRRS showed that this percentage had dropped to 37%, indicating substantial progress toward meeting the aim of delaying the start of drinking alcohol.

e. **Strategies:**  A strategy is a specific course of action that the council has chosen to implement in order to accomplish a given aim.   Note that several strategies will probably be needed to successfully accomplish one aim. Ideally, these strategies will be *evidence-based* — that is, based on approaches that have been shown through research or systematic evaluation to be effective in accomplishing the desired aim. These may be new or existing strategies, or they may be strategies that other organizations or sectors in the county or tribe are already successfully implementing. It is crucial that some evidence indicates that these strategies have worked elsewhere. Ask community and DOH program staff to assist in determining which are and are not successful, evidence-based strategies for the specific aim.

In some cases, valid reasons may exist for choosing a strategy or strategies that have not been shown to be effective elsewhere.  If this is the case, explain why this strategy was chosen.  For example, it may be an approach that is too new to have been documented or evaluated as effective, but it may have been found to be successful enough to qualify as *promising*, rather than meeting the accepted criteria for *evidence-based*.

f. **Indicators or measures for each strategy:**  These are measures (shorter term than those for aims) that can be used to gauge progress toward accomplishing the strategy.

*Example*:  In Picacho County, the school system decided to implement an after-school program (i.e., set of interventions) that had been shown elsewhere to lower the age of onset of drinking alcohol.  An indicator chosen was the number of middle school students who successfully completed the program and demonstrated certain resiliency factors that are known to correlate with delayed onset of drinking.

g.  **Activities for each strategy:**  Activities may be programs, services, or interventions that have been shown to be effective in addressing the specific aim.  A strategy is essentially a set of coordinated activities.  These activities may be new ones, ones that are currently used in your community, or ones that are offered on a limited basis and need to be expanded to new or larger populations.  In order to track activities, it may be helpful to include a work plan or chart that includes **strategies, activities, a timetable, and entities responsible** for implementing the activities.

## 6.   Graphic Tools

Developing a comprehensive community health improvement plan involves gathering a huge amount of data (involving many individuals and organizational entities), and then putting it together in an easily understood and usable format.  The best plan in the world is not worth much if it sits unused on a shelf.  A community health improvement plan is designed to be used continuously to establish consensus around aims and to monitor progress toward accomplishing those aims.

There are a number of ways that plans can be summarized in chart form, so that people can know at a glance what the "guts" of the plan are.  One useful tool is a tree diagram, illustrated on the following page.

**Tree diagram**

A tree diagram is a graphic tool used for reporting or planning that comes from the continuous improvement/quality improvement field.

| Aim | Strategies | Indicators | Major Activities |
|-----|-----------|-----------|-----------------|

**Outcome Measure:**
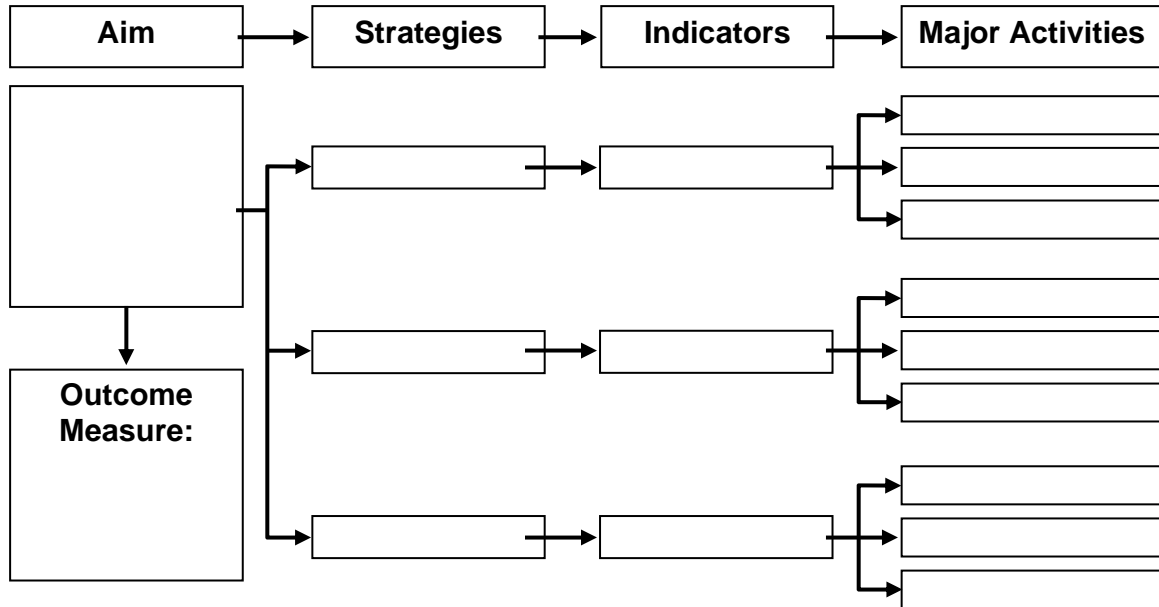
Tree diagrams:
- Encourage development of common understanding;
- Provide a simple graphic of the big picture that's easy to understand;
- Force  thinking about fit and connections among the elements (aim, measure, strategies);
- Emphasize the use of data.
- Can use at high level as well as in detail, depending on need

The connections (sometimes called line logic) between aim, measures, strategies and activities are vital. Ideally these connections have been proven to exist. If not, it is just as critical in a logic model that these connections (and the assumptions made about them) are well thought through and make sense.

On the next page is a logic model, or another alternative for charting the various plan components.

| Priority: | | | | |
|-----------|---|---|---|---|
| **Aim:** | | | **Measure:** | |
| **Strategies** | **Activities** | **Timeline (Dates)** | **Resources/ Responsible Entities** | **Indicators/Measures** |
| Strategy 1: | | | | |
| Strategy 2: | | | | |
| Strategy 3: | | | | |

# *Part 3:*

# <u>*Monitoring Guide*</u>
# <u>*and*</u>
# <u>*Monitoring Worksheets*</u>

# *Part 3.  Monitoring Guide and Monitoring Worksheets*

**What is meant by "monitoring community work" or "monitoring community action?"**

Monitoring is not about documenting what the health council is doing, but about observing and documenting the work and results of community organizations, agencies and other partners — with coordination by the council l — that are related to council priority areas.  In community health, monitoring is a part of any continuous quality improvement effort.  Monitoring provides input on whether the approaches and activities being implemented for a given aim are having a positive influence.

Monitoring is a process that takes effort and time, and group effort.  It is not an exercise that one person can do.  By continuously monitoring major activities and strategies, a group should begin to note any changes in selected indicators.  The information obtained through monitoring helps to inform whether a specific set of strategies being implemented is on target for a given aim.

It is not necessary to monitor or report on all activities; communities should monitor only the activities that contribute significantly to carrying out a specific strategy and to accomplishing a specific aim.

**Monitoring Guide**

The purpose of this Monitoring Guide is to provide health councils with some tools for observing and tracking progress toward accomplishing aims.  While other methods may be used, councils are urged to use this or some other structured way of ensuring that community health improvement activities stay on track with respect to the aims, strategies, and activities laid out in their community health improvement plans.

Gather your community's planning documents; you will need them to answer the questions below.  These questions, which are the *Monitoring Guide*, instruct you on how to complete the *Monitoring Worksheets*, which immediately follow and are included in Part 2.

**Questions to Guide Your Process**

A.  What are the priorities that have been chosen by your community that your council is addressing?

B.  Are these written up in a community-wide planning document?

Take each priority. Go through the questions listed on the plan worksheet for each priority.  Use a separate worksheet for each priority.

Have you stated an aim to address this priority? What is it?

1.  What are the *strategies* for this aim on which your community bases or will base your community (not the council's) interventions or efforts?

> Strategy X:

> Strategy Y:

> …and so forth.

2.  Which of these strategies are known to be evidence-based?

> Note:
> Evidence-based (see Glossary) strategies can be found in the literature. (Note: These are <u>not</u> the data that justify why certain health priorities were chosen.) Ask community and agency partners and funders if they already have reviewed the current literature. Ask if they have identified evidence-based strategies and principles appropriate for the particular aim the council/ community has chosen.

> If they have not, put together a workgroup to take a look through the literature. Ask for assistance from partners and funders. There are websites developed to disseminate information on evidence-based approaches and principles.  Have other communities had success in addressing this *aim* using a similar strategy (or strategies) your community is considering?  In some cases, there will be some; in other cases, your community will have to adopt these to your community's circumstances. In yet others, there are no evidence-based strategies and/or principles to serve as guidance.

3. Pick one strategy from Question 2 to think through.  For example, pick Strategy X. Think about Strategy X in concrete terms over the next few periods of time.
   a. In the first 3 to 5 years (or 2 to 3 years —  that is, manageable periods of time), what concrete evidence will show that Strategy X has been achieved or that significant progress has been made?
   b. In 5 to 10 years (or 3 to 5 years), what evidence would show that Strategy X has been achieved or show further significant progress?

   - After looking closely at a strategy, the next set of questions will help to identify *activities* for each strategy.

   - ***You will go through this set of questions for each strategy that has been identified.***

4. Do a quick inventory (if this hasn't been done) of *activities* that are already happening throughout the community around this strategy.

5. Has your health council identified other activities that are missing around this strategy?

6. In answering Question 1, strategies that have been shown to work (i.e., be effective) for this aim were identified. What are possible *activities* to carry out these strategies? Which of these have already been evaluated and shown to work?   [Note: You might ask partners and other resources to investigate this.]

7. Are these *activities that have been shown to be effective* (from Question 7) part of what the community is already doing?

8. Do these activities need to be adapted to your community's local conditions or unique characteristics?

9. How well are these activities being done?

10. How much of your community's population do these activities reach and/or are intended to reach?

11. How will you capture the implementation and effectiveness of these activities in written format (such as on a grid, monthly report, or tree diagram)?

    Note: Monitoring the major activities related to your strategy that are occuring in the community is part of monitoring the community work of your priority. It is not necessary to monitor or report on all activities. Monitor and document only the activities that contribute significantly to carrying out your strategy.

    - Now that you've looked closely at your strategies and activities, we can work on *measures* for the strategy (not the activities).

Note: Some communities choose measures after they choose their strategies. Some communities find it easier to work on measures after understanding what activities are already happening and what other activities are necessary to succeed in implementing a strategy. Thus, you can decide to do Questions 5-11 first, or Questions 12-15 first.

12. Consider what you now know about activities around a strategy.  Rather than having a measure for each activity (too overwhelming), what is an overall measure that your community can keep use that will show that your community is succeeding at this strategy?

    Note: This may already be in the community health plan.

13. What needs to be done to monitor this indicator or measure? Who will be the lead? How often should this be reported on and to whom should this be reported?
    Note: Sometimes communities choose more than one measure to help them determine how they are progressing; as much as possible, keep the number of measures to a minimum. Monitoring each measure takes resources and effort.

14. Repeat steps 2-14 for each of the other strategies under a given aim for a priority. Remember, achieving an aim will require implementing a few well-chosen strategies. While a community realistically not be able to carry out all the strategies for an aim at the same time, it is wise to remember that all the strategies build on each other over time, in order to achieve the aim.

    - You have now worked through planning the implementation and the monitoring of *strategies, measures, and activities* to reach your stated aim.

15. Lastly, take a step back and take a broad view again.  Explain to each other and/or in narrative form to the larger community *the connections* (see tree diagram) that run all the way through, starting from your aim, through the strategies, through the measures for all strategies, through all the major activities. This helps to lay bare the logic (see Glossary) connecting all that will be or is being implemented.

16. This higher level check of the logic from aim to activity helps determine if the connection makes sense because it has been tested and shown elsewhere to exist or if there is no or little evidence.  If there's little or no evidence, your community can test, on a small scale, whether a connection exists through the logic line by conducting small tests of change (PDSAs; see Glossary) to gather that evidence.

17. Lastly, has an indicator or a measure for the aim been stated?  What is it?

18. If no aim measure has been stated, given what you now know, what might be a useful aim measure that can show the community if progress is being made?

19. Putting all this in a document creates an action + evaluation plan. Who will you share the plan with?

    Note:  Sharing parts of your plan, such as your Executive Summary, may be useful in communicating to decision makers and stakeholders in your community

# Monitoring Worksheets

**Monitoring Worksheets for Council:** _____

Council Priority #_____
Write the priority here:




The aim for this priority, as stated in the Council Plan:




After you have completed the rest of the worksheet, come back to this question.

How can the aim be measured?

**Strategies** for Achieving the Aim of the Priority

Priority # ____ Strategy #____. (or write out)

Is this an 'evidence-based' strategy?  Yes__   No__   Unable to Find Evidence__

Are any major strategies missing?

Describe what progress you would like to see the community achieve on this strategy over the next 3 to 5 years (or some manageable time period):

Priority # _____ , Strategy# _____ (cont.)

**Activities** for carrying out this strategy:

What activities are already going on in the community around this strategy?

Are there other activities that your health council has identified that need to be happening in order for this strategy to be achieved?

What are the activities reported in the literature that have been demonstrated to work in this strategy?  Are these activities that the community is already doing?

Priority # \_\_\_, Strategy # \_\_\_\_ (cont.)

**Activities** (cont.)

Are there ways in which these activities need to be adapted to local conditions or unique characteristics?

How many people does each activity reach?

How does the council monitor these activities?

Priority # _____ , Strategy# ____ (cont.)

**Measures for Strategies**

What is an overall measure that the community can use to tell if the community is making progress on the strategy?

Describe how the strategy measure will be collected and reported.

# *<u>Part 4:</u>*

# *<u>Glossary</u>*

# *Part 4:  Glossary*

Many other terms related community health improvement can be found at
*http://mapp.naccho.org/mapp_glossary.asp.*

**activity**
Any specific behavior, action, or a specific task or grouping of tasks. A named process, function, or task that occurs over time and has recognizable results. Activities use up resources to produce products and services. Activities combine to form business processes.  Activities are the action steps, behaviors, or interventions undertaken to carry out and achieve a **strategy**.

**aim**
What is to be accomplished in the long term; the end state or state in the future that is to be brought about; the long term goal. Can be broad or very specific. An aim serves as the guiding compass for complex, multi-layered effort.  An aim, like a goal, is a statement of intent that is generally long-term.

**community health**
A perspective on public health that assumes community to be an essential determinant of health …[and] takes into account the tangible and intangible characteristics of the community – its formal and informal networks and support systems, its norms and cultural nuances, and its institutions, politics, and belief systems. (mapp.naccho.org/MAPP_Glossary.asp)

**evidence-based**
Evidence-based, science-based, and research-based are often used interchangeably. The term can be applied to principles, strategies, activities, and interventions that are supported as effective by current scientific research. The evidence can come from a wide variety of disciplines but generally has to meet specific standards. The evidence is based on research studies, or comprehensive reviews of many research studies, about the effectiveness of interventions that have implemented. These studies or reviews are often published.

Evidence-based practices or approaches mean that such practices have been shown to work because there is evidence about their effectiveness. It is also possible to find in the literature the accepted principles underlying proven strategies. In other words, these are the foundation concepts that guide what to do.

An example of principles that work (used within the aim-strategy-activity framework):

>  Aim: Increase physical activity among our town residents.
>  Principle that Works: Social support in community settings increases levels of physical activity
>  Strategy (based on above principle): Create and expand social supports for families, students, workplaces
>  Activities (based on above strategy):  have buddy system in workplaces, institute reduced gym fees for families, make school gyms available to school

and city leagues after hours, establish competitive and non-competitive group activities after school

**implementation**
The carrying out or physical realization of something, such as the carrying out of a plan or a concept. The execution or putting into practice a decision. Often proceeds dynamically, or sometimes turbulently, and can be highly influenced by, and interact with, changing circumstances.

**indicator**
Provides evidence that a certain condition exists or certain results have or have not been achieved. Indicators enable decision makers to assess progress towards the achievement of intended outcomes, aims, objectives and strategies. It is a specific, observable, and measurable characteristic or change that shows the progress is being made toward achieving a specified outcome. An indicator is often, but does not have to be, a numerical measure.  Indicator and measure are sometimes used interchangeably.

**logic or line logic**
Reasoned and reasonable judgment; interconnections of elements; the use of critical thinking as a means of testing ideas and debate; the principles that guide reasoning within a given field or situation.

**logic model**
Schematic representation of the relationships among aims, strategies, activities, resources, and measures.  Logic models are used in other planning and evaluation frameworks to show needs, goals, strategies, activities, outputs, outcomes, indicators, and evaluation methods.

**outcome**
The result of a strategy, activity, or intervention.  A *population-based* outcome is an observable change in the behavior or condition of a given individual or population.  A *system outcome* is a change in community systems or infrastructure.  A *community health status outcome* is a change in a health status indicator.

**outcome measure**
in the Aim-Strategy-Activity framework, this is the indicator chosen to show progress on or accomplishment of an aim. Thus, it is an indicator that will show progress or the culminating/resulting effect over the long term.

**qualitative**
Descriptions or observations that refer to the *characteristics* of something rather than exact numerical measurements. Expressed in terms of quality, either measurable or subjective, as distinct from quantitative. Example: a qualitative comparison would say whether one thing is larger, smaller, or equal to another, without specifying the size of any difference.  In social research qualitative data might come from focus groups, key informant interviews, or other non-quantitative research methods.
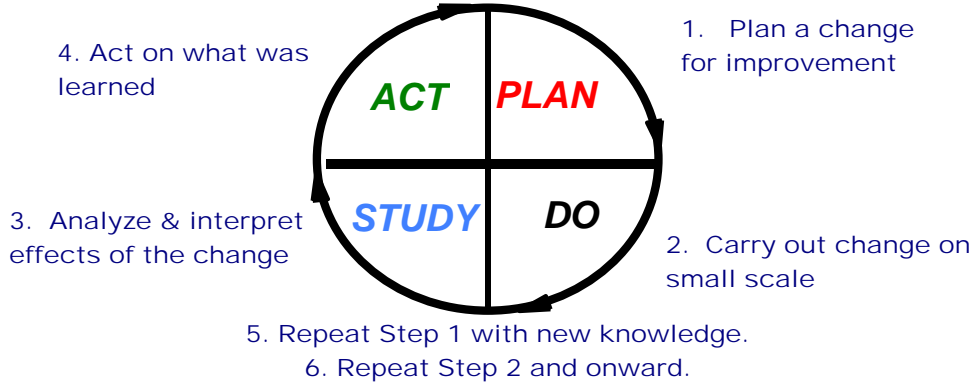
**quantitative**
Descriptions or observations that involve measurements and numbers; something you can give meaning or value to by giving it a number, such as birth rate.

**plan**
proposed or intended method of getting from one set of circumstances to another. Used to move from the present situation,towards the achievement of one or more aims..

**PDSA**
Plan-Do-Study-Act cycle. A four-part method for discovering and correcting causes to improve the quality of processes. Synonyms: Deming cycle; Shewhart cycle. Also called small test of change.

4. Act on what was learned

1. **Plan a change for improvement**

ACT | PLAN

STUDY | DO

3. **Analyze & interpret effects of the change**

2. **Carry out change on small scale**

5. Repeat Step 1 with new knowledge.
6. Repeat Step 2 and onward.

**priority**
Status established in order of importance or urgency.  In the case of county or tribal health councils, it is a health or health-related issue seen to be of significant importance to the health of the county's or tribe's population on which the health council has chosen to focus.

**strategy**
Strategies give overall direction for an initiative. (Compare this with activity.)  A strategy is a way of describing *how* you are going to get things done. It is less specific than an action plan (which tells the who-what-when); instead, it tries to broadly answer the question, "How do we get there from here?"  Strategies suggest paths to take (and how to move along) on the road to success.  Developing strategies is a way to focus your efforts and figure out how you're going to get things done.  Strategies are somewhat broad directions that a community can go when they have a specific aim in mind.

An example:

Long-term aim: reduce infant mortality due to injury in Bolton County.
Some possible strategies for this aim:
- Understand where/how most infant injuries occur;
- Create or enhance supportive policies at local, state levels;
- Enhance existing home visiting services and place emphasis on injury prevention for infants.

**systems thinking**

An approach to planning and analysis that comes from the fields of continuous quality improvement and quality management. A systems approach to community health improvement looks holistically at a community as a system — one whose nature can be better understood by looking at the interactions and relationships between the elements that comprise the whole system. Applied to community health, the systems approach encourages looking beyond isolated elements, sectors, or organizational entities (sometimes referred to as "silos") as a means of transcending narrow, competing interests, in order to develop a community in which diverse entities learn to work together collaboratively for the common good. That process involves developing consensus around common aims, strategies, and measurable outcomes.