I. Community Members and the Planning Process: Importance of Full Participation

The foundation of the HIV Prevention Community Planning process, and a major requirement for success for any community health planning effort, is diverse community participation. This is made clear in the Supplemental Guidance.

Community members with varied backgrounds and experiences are needed to obtain a broad range of perspectives. For example:

- Minority racial/ethnic group representatives can identify cultural and linguistic issues which are critical to developing appropriate and effective HIV prevention strategies and interventions.

- Persons from various defined high-risk populations — gay men, gay men of color, injection drug users, women whose sex partners fit major risk categories, etc. — can increase planning group understanding of the unmet needs of these groups.

- People living with HIV/AIDS can increase understanding of risk factors; they can help other planning group members understand some of the reasons why particular population groups have not been effectively reached in the past.

- People who have not been directly involved in the planning or delivery of HIV prevention efforts (e.g., school officials, mental health workers, community activists) can provide a fresh perspective on the extent to which particular communities or risk groups are being reached by current efforts, and are especially likely to question some of the assumptions made by those who work on HIV/AIDS issues every day.

If you are a member of one or several of these populations, the community planning group needs your full participation. You can make a great contribution to your planning group’s understanding of HIV in the context of the population(s) you represent. Your knowledge of your own population and community, your practical experiences and those of your friends and family, and your perspective on HIV/AIDS are all special and needed. Without your input, the community planning group cannot fully understand how HIV/AIDS is affecting — and will affect — your state or local area, and it cannot develop a truly comprehensive and practical plan of action to prevent the spread of HIV.
Community members bring many special kinds of knowledge, skills, and experience to the planning process, and offer perspectives essential to developing a truly comprehensive, valid, realistic plan for HIV prevention. If you are a community representative, you can contribute to every step of the community planning process; for example, you can:

- Identify formal and informal sources of quantitative and qualitative information important in understanding the current extent of HIV/AIDS among specific populations as well as risk factors for those populations; for example, you may know of special reports prepared by organizations that serve particular populations;

- Ensure that organizations and other resources located in specific communities or targeting particular population groups are included in the assessment of existing community resources; for example, you can be sure the planning group becomes aware of a church-related outreach and counseling program or Hispanic-focused youth group that uses teatro to make young people aware of HIV and other STDs — programs which otherwise might not come to the attention of the planning group;

- Assist in identifying culturally and linguistically competent people to help carry out the needs assessment; for example, you may know someone who could facilitate a focus group in Spanish, or an African American college student association that would like to assist with a neighborhood survey;

- Ensure that the needs assessment effort asks the right questions, in the right ways, to accurately assess HIV prevention needs among specific populations; for example, you might help rephrase survey or focus group questions that are inappropriate in their current form;

- Assure that reviews of specific strategies and interventions consider their appropriateness and probable impact on particular populations; for example, you could raise questions about whether a particular prevention message might be too sexually explicit for Southeast Asian or Hispanic immigrants;

<table>
<thead>
<tr>
<th>Steps in the HIV Prevention Community Planning Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>According to the Supplemental Guidance, HIV Prevention Community Planning requires the following steps:</td>
</tr>
<tr>
<td>1. Assessing the present and future extent, distribution, and impact of HIV/AIDS in defined populations in the community;</td>
</tr>
<tr>
<td>2. Assessing existing community resources for HIV prevention to determine the community's capability to respond to the epidemic. These resources should include fiscal, personnel, and program resources, as well as support from public (Federal, state, county, municipal), private, and volunteer sources. This assessment should identify all HIV prevention programs and activities according to defined high risk populations;</td>
</tr>
<tr>
<td>3. Identifying unmet HIV prevention needs within defined populations;</td>
</tr>
<tr>
<td>4. Defining the potential impact of specific strategies and interventions to prevent new HIV infections in defined populations;</td>
</tr>
<tr>
<td>5. Prioritizing HIV prevention needs by defined high risk populations and by specific strategies and interventions.</td>
</tr>
<tr>
<td>6. Developing a Comprehensive HIV Prevention Plan consistent with the high priority HIV prevention needs identified through the HIV Prevention Community Planning process; and</td>
</tr>
<tr>
<td>7. Evaluating the effectiveness of the planning process.</td>
</tr>
</tbody>
</table>
assist in planning community meetings and identifying individuals to participate in efforts to obtain community input, from formal hearings to focus groups; for example, you might suggest appropriate meeting locations and times, and ways to “get the word out” in your community;

provide an informed context for analyzing needs assessment information from and about specific populations; for example, you might identify risk behaviors that appear uncommon because people won’t report them;

identify considerations important in setting HIV prevention priorities, so that these priorities equitably reflect the needs of various populations; for example, you may emphasize the need for services that reach out-of-school youth, given the high dropout rates in Hispanic and African American populations;

ensure that overall implications and conclusions drawn from the data reflect the unique characteristics and concerns of specific populations; for example, you can make sure that they address the special needs of gay men of color — who may not publicly identify as gay.

To make your best possible contribution to the planning effort, you — and all planning group members — must be fully oriented and trained. Some kinds of preparation are needed by all planning group members, while other needs will depend upon your background and experience. Providing such training early in the planning period helps to develop a positive and cooperative atmosphere, and avoid problems later. Among the most often needed types of orientation and training are the following:

All community planning group members need a full orientation to the HIV Prevention Community Planning process, including such critical topics as the following:

- CDC requirements as reflected in the Supplemental Guidance;
- Planning process purposes, products, and deadlines;
- How the planning group is expected to organize itself, including decisions which the planning group must make to guide the process (e.g., adoption of a charter, adoption of conflict of interest guidelines);
- The roles and responsibilities of state and local health departments, and the way in which decision making will be shared with the planning group;
- The roles and responsibilities of the community planning group(s), and special expectations for planning group leaders; and
- Resources and staffing available to support the planning process, including the extent to which needs assessment and related substantive tasks will be carried out by staff, consultants, and the planning group itself.

All community planning group members can benefit from team building and other group-focused training, including work on group decision-making, methods of dealing with conflict, and working effectively in multicultural groups.

HIV/AIDS and other health professionals can benefit from additional training on their roles and those of other community representatives, with emphasis on assuring their understanding of the critical perspectives brought by various categories of members, the importance of avoiding jargon (including acronyms and overly complex scientific terminology), and ways in which they can help contribute to a truly inclusive and participatory process.

Members without experience on planning bodies should have access to training on large-group deliberations and decision making. This may be particularly valuable for individuals who are not staff or Board members of nonprofit organizations or public agencies.

Members who do not have a health or HIV/AIDS background should receive “AIDS 101 for HIV prevention planners” training, to ensure familiarity with such information as basic HIV/AIDS terminology, major modes of HIV transmission and ways in which HIV is not transmitted, risk factors and behaviors, federal and state legislation related to HIV/AIDS (from the CARE Act to state laws requiring

**HIV Prevention Community Planning Is a Participatory Process**

**Requiring Appropriate Orientation and Training**

Community planning requires a participatory process, according to the Supplemental Guidance. To help assure this, the Guidance defines a number of principles which all HIV Prevention Community Planning efforts supported by CDC funds are required to address. The following deal specially with assuring broad community involvement and participation (emphasis added):

- HIV Prevention Community Planning reflects an open, candid, and participatory process, in which differences in background, perspective, and experience are essential and valued.

- HIV Prevention Community Planning is characterized by shared priority-setting between organizations administering and awarding HIV prevention funds and the communities for whom the prevention services are intended.

- From the outset, all members of the HIV Prevention Community Planning group(s) [should] understand the roles and responsibilities as outlined in this guidance and agree to the procedures and ground rules used (by planning groups) in all deliberations and decision making.

The Guidance also indicates that one of the uses of planning funds should be to:

...support capacity development for parity, inclusion, and representation of community representatives and for other members of planning groups to participate effectively in the process.
mandatory reporting of test results for persons found to be HIV+), concepts of primary and secondary prevention, definitions used for HIV disease and AIDS, other local or state planning groups related to HIV/AIDS and their relation to the community planning effort, and other related topics.

- All members need information about HIV/AIDS and about prevention services in the planning area, including information on levels of HIV infection and AIDS cases among various populations, HIV prevention strategies and interventions and what approaches seem most promising with particular populations, and HIV/AIDS service providers and the types of services they offer.

- Members who have limited backgrounds in working with statistics should participate in training on how to understand, interpret, and use statistics. Training should focus on the kinds of statistics and reports most likely to be used in the community planning process, such as epidemiologic studies, surveillance reports, other surveys focusing on HIV and on AIDS, and on evaluations of HIV prevention programs and strategies.

- Members who have not been involved in needs assessments or community planning should participate in training on the needs assessment process. Such training should emphasize the typical steps in needs assessment design and implementation and important considerations related to each.

As a planning group member, you should be encouraged to request training — and you should be very assertive about receiving effective training early in the planning process. You are being asked to devote a great deal of your time to the HIV Prevention Community Planning process, and you should be sure that you receive the information and training needed to be an active and informed participant. Grantees are expected to set aside funds to provide such training; you need to help assure that these funds are used in ways most beneficial to the planning process.

You should never feel embarrassed or uncomfortable about requesting information or training. You were selected because you bring valuable experience to the table, and no one is expert on every aspect of HIV/AIDS and community health planning. Just as you may need training on how to use statistics, other members need an understanding of the characteristics and needs of various populations. Each of you has knowledge resources to share and knowledge gaps to fill. The worst possible approach is to remain silent or not attend meetings that focus on unfamiliar topics or involve a discussion of statistics. If you do this, you will not be an effective representative for your community or population group, and the planning group will be shortchanged because it will not receive the diverse perspectives it needs to develop a sound comprehensive plan. It is your responsibility to request needed training. It is the grantee’s responsibility to assure that no member is ever put in an embarrassing situation because appropriate training is not offered, or treated disrespectfully by another member of the planning group who has extensive background in that topic.

Be proactive — try to define and then ask for what you need. The best way for state and local health departments to understand the kinds of information, materials, and training you need is for you to tell them. Of course, they also have the responsibility to be proactive, to try to predict and meet your training needs, since you may not initially be sure what kinds of training would be most useful. As you become aware of a gap in your knowledge or experience, share that insight with the staff responsible for coordinating the planning effort.

Make sure your community planning group has appropriate methods for determining and meeting training needs. Staff coordinators and Co-Chairs should make it a point at the first meeting to offer training, and to encourage the members of the community planning group to help determine training needs and priorities through an informal process or a written survey of training needs and priorities. You should know whom to
contact about training needs, and you should be encouraged to do so individually if you would rather not make your request in a meeting. It is helpful to have a committee or other planning subgroup which coordinates or oversees the training effort, and procedures to use in making suggestions to that body. If you are unsure whether other members have the same training needs, there should be a process for raising the question — orally or in writing — to the full planning group.

You have a right and a responsibility to participate in training which is:

- **Of high quality**, experiential rather than passive, and directly related to planning group activities; and

- **Readily accessible** at minimal additional cost, where possible by being scheduled in conjunction with a planning group meeting, committee meetings, hearings, or other planning-related activities.
II. Becoming Comfortable with Statistics

A. Importance of Statistics in the Planning Process

Much of the HIV Prevention Community Planning process involves collecting, reviewing, analyzing, interpreting, and assessing the value of statistics. Its major purpose is to develop a comprehensive HIV prevention plan, which needs to be built upon a sound information base, including a needs assessment. Two required elements of the plan, an epidemiologic profile and a description of target populations, are particularly likely to emphasize statistics. In addition, throughout the planning period, surveys and other information using statistics are likely to be brought to the community planning group.

Community planning groups will vary in the extent to which they use and depend upon statistical information as a foundation for their decision making. Some community planning groups are likely to heavily emphasize statistics, such as reported AIDS cases, HIV test results, results of Knowledge-Attitude-Behavior (KAB) studies where they exist, and other large-scale surveys in assessing and prioritizing needs. As part of their needs assessment process, groups may also collect new information through surveys of community residents, leaders, and HIV/AIDS program operators. Some planning groups may depend more on non-statistical information, such as public input through hearings and community meetings, systematic but non-statistical information obtained through focus groups, and non-statistical evaluations of prevention strategies. Still other planning groups will consciously attempt to balance statistical and other information in their deliberations.

Often, statistical information will receive heavy emphasis simply because — whatever its limitations — it provides a source of specific information about the AIDS epidemic. Reported AIDS cases, the percent of people testing positive for HIV at an anonymous testing site, or the reported increase in AIDS cases among particular populations (for example, Hispanics or women) or transmission categories (for example, injection drug users) — all these provide specific information about the epidemic.
Sometimes statistics used have major weaknesses or limitations, because of such problems as incomplete or inaccurate reporting, exclusion or undersampling of certain populations, or poorly or inappropriately stated survey questions. In other words, they don’t accurately present the “real” situation. While some of these weaknesses involve technical factors best identified by researchers or epidemiologists, many are “common sense” problems which may be very clear to individuals knowledgeable about a particular community or population. As a community member of the planning group, you are likely to be able to identify some of these weaknesses as they apply to a particular group or situation. To do so, however, you must first understand the format and content of the statistical reports so you can identify questionable assumptions, questions, or findings. You must be comfortable as a reviewer and critic of statistical information.

B. Overcoming Innumeracy and Math Anxiety

In the United States, many people suffer from illiteracy, and this problem is well recognized (although inadequately addressed). Perhaps less well understood is the fact that many people also suffer from innumeracy, a lack of skills in understanding and using numbers and mathematical concepts. Many more actually do have a good foundation in math, but are uncomfortable dealing with numbers; they suffer from what has been called math anxiety. Innumeracy and math anxiety are common among people at all educational levels, from people with little or no formal education to those with high school diplomas, college degrees, and advanced credentials. If you don’t feel you can read and interpret statistical reports, understand pie or bar charts, or compare data about different population groups, you are not alone! Math anxiety is common among elementary school teachers, who are very often uncomfortable teaching math; among parents, who don’t feel they can help their children with their math homework; and among other adults from cashiers to lawyers to social workers, who feel that their skills lie in other areas, and avoid tasks requiring more than basic arithmetic. Unfortunately, innumeracy and math anxiety can be serious barriers to your full participation in many planning and decision-making forums — including community planning groups.

The first step to overcoming innumeracy or math anxiety is making a commitment to overcome your lack of math skills and/or your fear or dislike of working with numbers. Many people with math anxiety really do have the knowledge to read, understand, and use statistics. Moreover, understanding statistics does not require a knowledge of higher math. It simply requires becoming familiar with some basic concepts and applying the same kinds of logic and life experience to numerical information reports as you do to other kinds of information. Learn some concepts and terms, and apply them to reviewing the kinds of reports and data you are most likely to use in the HIV Prevention Community Planning process. Most of the concepts have a “common sense” base.
III. Key Statistical Terms and Concepts

A. Importance of Terminology

Learning the terminology is important; once you are familiar with the terms health researchers and statisticians use, you will find the information being presented much easier to understand. This manual makes no attempt to be a complete source of such terminology, but does try to present some frequently used terms in the context of the work of the planning group, and provides some references which offer additional information and insights. This section presents key terms and concepts that every planning group member will need to use. Part 3 provides some additional concepts that build on the definitions and descriptions provided here.

Definitions used here are as straightforward as possible, and focus on the concepts likely to be most useful to community representatives who are members of HIV Prevention Community Planning groups. With apologies to technical experts, the explanations are designed to provide practical understanding of the concepts as they are most likely to be used in HIV/AIDS planning, rather than comprehensive definitions or discussions. For a list of definitions, see the Glossary in Part 5; for more complete descriptions of the nuances and applications of these terms, consult one of the references in Part 5.

Many of the terms and concepts needed for HIV/AIDS planning and needs assessment are broadly used in many kinds of research and statistical work. Most fields, from carpentry to sociology, have their own "language," terms which provide a kind of shorthand in discussions. Community health planning is no exception. You may be familiar with many of these terms, but perhaps have not used them recently. This subsection describes some of the most important terms. It also suggests some kinds of questions you might want to ask when reviewing statistics, about how the data were analyzed and presented.

B. Types of Data

HIV/AIDS information can take different forms, and can come from many types of sources. Perhaps the most basic distinction is whether the data are in numerical (quantitative) or narrative or other non-numerical (qualitative) form. Then there is the question of whether the data are obtained from some existing source — such as the Census Bureau or the CDC — or are collected by the planning group through its own needs assessment process. Figure 1 on the next page summarizes these concepts.

Statistics are generally used to describe, rather than explain, a situation. They provide information about a situation as it exists, but do not tell you why that situation exists; for example, statistics can tell you that some states have more AIDS cases per 100,000 population than others, but they do not tell you why. Narrative information is often used along with statistics, to interpret and explain the data. It is very important that you be able to question both the statistics and their interpretation, as demonstrated in Figure 2.
Figure 1

Common Terms for Data Types and Sources

Data refers to information collected for research purposes. Data can be divided into two major types:

- **Quantitative data or statistics** — data presented in numerical terms. For example, the numbers of reported AIDS cases by population group and method of transmission, which are provided by the CDC in its AIDS Surveillance reports, are quantitative data.

- **Qualitative data** — data presented in non-numerical, usually narrative, form. For example, if the planning group held a focus group of outreach workers to identify and discuss what they see as the greatest barriers to effective HIV prevention among Hispanic teenagers, the resulting information would be qualitative data.

The source for data is also important. For example, data can be:

- **Primary source data** — which means original data that you collect and analyze yourself. The results of focus groups held as part of the work of the planning group are primary source data. If the planning group did a survey of HIV prevention program clients, the results would also be primary source data.

- **Secondary source data** — which means the information was collected by someone else. Sometimes, secondary source data are already analyzed and published, and you use the information in the published form, without further analysis — for example, you might review a published report on the rate of HIV+ inmates in the local jail, with data analyzed and compared by race/ethnicity, age, and gender. Sometimes, the data are available in tabulated form, but the planning group does some additional calculations — for example, the AIDS Surveillance reports from CDC provide the number of reported cases of AIDS for particular population groups, but if you wanted to determine what percentage of AIDS cases were in specific racial/ethnic groups or transmission categories, you would have to calculate the percentages. Sometimes, the data are available in “raw” or unanalyzed form, in a computer usable format, so the planning group can do the analysis itself — for example, 1990 Census data on your planning area might be obtained from the Census Bureau and analyzed by the planning group to determine and compare the size, age, and socioeconomic status of various population groups in your planning area.


Figure 2

The Need for Statistics and Narrative

Most statistical information must be accompanied by narrative information in order for you to understand what the data mean, decide whether the statistics are believable, and draw implications from them.

For example, a chart estimating the HIV+ population in a large metropolitan area provides the following statistics:

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Estimated Number of HIV+ Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Non-Hispanic</td>
<td>5,177</td>
</tr>
<tr>
<td>Black/African American</td>
<td>818</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>787</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>26</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>31</td>
</tr>
<tr>
<td>Other</td>
<td>237</td>
</tr>
<tr>
<td><strong>Total, All Populations</strong></td>
<td><strong>7,076</strong></td>
</tr>
</tbody>
</table>

This chart tells you that most of the HIV+ population in the metro area are White non-Hispanic, and it tells you the number of people from other racial/ethnic groups who are HIV+. The chart is not self-explanatory, however; unless narrative is added, you lack several very important kinds of information needed for understanding and using these data:

- A time period — HIV+ persons in the community as of what date;
- Who is included in the “other” population;
- How the estimates of HIV+ people were calculated; and
- How many of these people have AIDS and how many are HIV+ but do not have AIDS.

C. Sampling

Another critical factor in reviewing statistics is sampling. It is important to know whether statistics are considered to be a total population count — like data from the Census conducted every ten years, when everyone in the United States is supposed to be counted — or whether the data were obtained through some form of sampling process, which means that information was obtained not from everyone in the population but from a smaller group (sample) of people selected from the total population or universe. This is commonly done through survey research, which involves a sample drawn from a population and interviewed, observed, or otherwise systematically studied to obtain information about the population — its opinions, reported behavior, or other factors (See Figure 3).

Figure 3

Basic Sampling Terms and Concepts

A sample is a group selected from a total population or universe with the expectation that studying the group will provide important information about the total population. Where possible, you will want to be able to generalize from the sample to the total population; you want to be able to assume that the conclusions you reach about the sample are also true of the total population from which the sample was drawn. This usually means that you will need to sample from the total population, probably drawing a random sample, which means a sample drawn by chance, in which every individual in the total population has an equal probability of being included in the sample.

For example: Suppose you want to know the level of awareness and knowledge about HIV/AIDS among school children grades three through six in your city or county. Your total population would be all children enrolled in grades three, four, five, and six, in public and private schools. You would want to draw a random sample of these children, so that you could generalize from the study findings, assuming that they are also true of the entire population of children grades three through six.
If you want to be able to assume that what you learn about the sample is representative of the total population, then it is extremely important that the sample be genuinely representative of the total population. Among your most important concerns as a community representative will be assuring that total populations for sampling are defined in ways which include important population groups, and that studies include adequate samples of various populations, so that findings are meaningful in documenting the need for HIV prevention services for particular populations. For example, sampling of teenagers which is based on the school population will exclude dropouts, and cannot give an accurate picture of the teenage population. To get a representative sample of youth, it will be necessary to include youth who are not in school; this might be done by including samples of teenagers enrolled in programs for dropouts or incarcerated youth. In addition, many racial and ethnic minorities are overrepresented among dropouts, so such a study will also tend to underrepresent the needs of minorities. Properly designed and implemented surveys can provide a great deal of information about a population and about subgroups within that population.

D. Data Analysis

Many statistical approaches are used to analyze and interpret data. Some are quite complex, involve extensive computer tabulations, and are very difficult to understand unless you have a background in statistics. For that reason, it is very important that you have on the planning group or available to it experts in statistical analysis whom you trust to review, question, and explain the data for you. Other approaches, however, are very straightforward, and becoming familiar with them will allow you to question and correct some assumptions and conclusions.

One of the most straightforward and important ways to review and compare data is through percents. Percents help greatly in making sense of comparisons among groups. It is easier to compare percents than numbers. For example, suppose you know that in your community, of the new AIDS cases reported in the past year, 87 were pediatric cases, 392 were among women, and 1,104 were among men. It isn’t easy to make sense of those numbers. But if you convert them to percents, you find that 5% were pediatric, 25% women, and 70% men. Now you can more easily see the relative size of each group, in comparison with the other groups. Figure 4 provides basic information about proportions and percents.

In an earlier example, we looked at statistics on the number of HIV+ persons in a metro area, and what was given were raw numbers. There were 5,177 White non-Hispanics (Anglos), 818 African Americans, 787 Hispanics, 26 Asians/Pacific Islanders, 31 Native American Indian/Alaskan Natives, and 237 “other” people who were HIV+. It is hard to get a sense of the epidemic just from these numbers — it is hard to picture the relative size of the HIV+ population of each racial/ethnic group and relative to the overall HIV+ population. However, transform these numbers into percents, as shown in Figure 5, and you can see that almost three-fourths of the HIV+ population in that metro area are White non-Hispanic, about one in eight are African American, one in nine are Hispanic, and a very small proportion are Asian/Pacific Islander, American Indian, or “other.” The data become even more meaningful if we compare the percent of people who are HIV+ with the percent of the total metro population who are of each group. This shows which groups are overrepresented or underrepresented in the HIV+ population — which groups have more or fewer HIV+ members than would be expected, given their proportion of the population.
Now it is clear that African Americans and Hispanics are overrepresented among the HIV+ population, and that White non-Hispanics are underrepresented. While African Americans represent 6% of the population, they make up 12% of the HIV+ population; Hispanics represent 9% of the population and 11% of HIV+ persons. Whites are 80% of the total population but only 73% of the HIV+ population. If there were no relationship between race/ethnicity and HIV status, then you would expect the percent of each group that was HIV+ to be about the same as its percent in the total population, but this is not the case. Of course, these comparisons do not tell you why these groups are overrepresented in the HIV+ population; other information is needed to try to answer that question, such as whether African Americans and Hispanics are more likely than White non-Hispanics to engage in behaviors that place them at risk for HIV.

In addition to percents, one of the most commonly used methods of analyzing, understanding, and comparing statistics is the use of averages. Averages are useful in comparing groups of statistics, and understanding typical responses, scores, or values.

For example, in looking at risk factors for HIV, it may be important to understand the typical age at which young people become sexually active, and to be able to compare this across popula-

**Figure 4**

**Using Proportions and Percents**

A proportion is a part of the whole, where the whole can be any size.

School-based programs made up 12 out of 20 HIV prevention programs in Partrural Region.

Percent is a proportion of the whole, where the “whole” is 100. Percentages are used for many statistical calculations.

A percent is found by dividing the part of the whole by the whole, and multiplying the result by 100.

For example: If there are 20 HIV prevention programs in Partrural Region, and 12 of them are in the schools, then 60% of prevention programs are school-based (12 divided by 20 = 0.6; 0.6 x 100 = 60%).

If you are given only the percent and the “whole,” and you want to know the “value,” divide the percent by 100 and multiply it by the “whole.”

For example: If you were told that 60% of the 20 HIV prevention programs in Partrural Region were school-based, and you wanted to know how many school-based prevention programs there were, you would divide 60% by 100 and get 0.6, then multiply 0.6 x 20 and get 12, so you would know that 12 programs were school-based.

**Figure 5**

**Percent Comparisons: HIV+ Population versus Total Population**

<table>
<thead>
<tr>
<th>Racial/Ethnic Group</th>
<th>Percent of HIV+ Population</th>
<th>Percent of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (non-Hispanic)</td>
<td>73</td>
<td>80</td>
</tr>
<tr>
<td>Black/African American</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>&lt;1</td>
<td>2</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>&lt;1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Total, All Populations</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Percents in each column are calculated using the method described in Figure 4. The percent of the HIV+ population who are from each racial/ethnic group is calculated by first adding up the total number of persons who are HIV+, and then dividing the number of HIV+ people in each racial/ethnic category by that total number of HIV+ persons. Similarly, the percent of the total population from each of the racial/ethnic groups is calculated by dividing the number of people in that racial/ethnic group by the total population of the community.
Figure 6
Understanding “Averages”

An average is a way of describing the typical value or “central tendency” among a group of numbers. There are several different ways to calculate averages; the most commonly used is the arithmetic average or mean.

Suppose the planning group is looking at a report on a survey of young adults aged 18-30 in your community who participated in an HIV prevention program, to find out the “average” age at which these young people became sexually active. Suppose there were 15 young people in the program, and they reported the following ages at the time of first sexual encounter:

18, 18, 12, 11, 25, 15, 14, 20, 16, 13, 19, 13, 14, 17, 14

The arithmetic average or mean age is 16. It is calculated by adding up all the individual values — the ages at first sexual encounter of all the young adults in the sample — and dividing by the number of values — the number of young adults surveyed.

Adding all the values, you get 239. Divide by 15, and the result is 15.9 — approximately 16.

Figure 7
Significance

Significance means that a research finding is meaningful or important. A research finding is considered to be statistically significant if there is only a small probability that the observed result could have occurred by chance alone, rather than measuring something that is real — such as a real difference between the behaviors of two populations, or a real effect of an HIV/AIDS prevention intervention.

Several other aspects of analysis are especially important in reviewing data. When a study reports differences among population groups — such as different rates of AIDS cases among various racial/ethnic groups — it is important to know whether these differences are statistically significant. While you don’t need to be able to carry out such tests, you do need to be sure that the tests have been done (See Figure 7).

E. Questions to Ask When Reviewing Statistics

When reviewing statistics, keep in mind these concepts, ask that data presented to the planning group be presented in a clear and appropriate format, and question the data you are given. You might want to ask, for example, that:

- Data routinely be presented as both numbers and percents, so you know population size, the sample size, and the number of cases being described in each grouping or category presented;
- Wherever possible, information from existing studies be separately presented for each major racial/ethnic minority group or other special population; if groups are combined (for example, if
data from several minority groups are presented together), it is impossible to identify and analyze differences among them;

- Wherever possible, cases for each population subgroup be presented alongside data showing what percent that subgroup is of the total population; this enables you to see whether specific groups are over- or under-represented among risk groups, persons who are HIV+, persons with AIDS, etc.;

- Specific samples of minorities and other defined populations be included in any new data collection effort conducted by the planning group; this helps assure large enough numbers for meaningful analysis of each population group; and

- The sampling population for any study be explained; this lets you know, for example, if a youth study was limited to in-school youth, or whether a community study excluded any neighborhoods or rural areas.

In addition, when reviewing information from existing or new studies, ask yourself such questions as the following:

- Do these numbers seem to make sense?

- If not, what seems wrong or surprising about them? Do they seem surprising from the perspectives of the communities or populations you know best?

- Do data from other studies or other communities seem consistent with these figures? If not, did this study do something differently — population definition, sampling, data collection, etc. — that might explain the differences?

- Who did the study? Were people from diverse communities involved in the design and sampling, as well as the information collection?

- If responses to a particular question seem strange, is it possible that some questions might have been misunderstood?

- Does the analysis seem to go beyond the information available, making inappropriate assumptions? Was the analysis done with the involvement of people from the various populations covered?

Never be embarrassed to ask questions. Your knowledge of your community makes you an important substantive reviewer and critic of research designs, data tables and presentations, and reports.