DATA INTERPRETATION AND ANALYSIS

Once data has been collected as part of the CHNA process, the question remains of *"What do to with the data?"* Depending on the data collection methods utilized for the CHNA, you may possess a large amount of quantitative (numeric) and qualitative (interpretive) data. Quantitative data can provide communities with descriptive information, and qualitative data seeks to identify themes and assess the correlation, for example between access to health care providers and self-reported health status. Often, community health needs assessments use simple, descriptive statistics to describe the health and health needs of the population.[1]

Once you have collected the desired data, the next steps include *analyzing and interpreting* the data. This step provides information about the community's demographics, health status, needs and strengths, and will help you understand how the CHNA findings compare to community residents' behaviors and perceptions. Analysis will reveal the relationships, patterns, trends, etc. that can be found within the data. Interpretation of CHNA data can support community program planning and evaluation, as well as developing a community action plan based on the needs and strengths identified in the CHNA.

Engage Community Members

"Community members must be engaged in a meaningful and substantive way throughout the CHNA processes, including indicator selection, data collection, data analysis, data presentation and distribution, issues prioritization, development and implementation of the CHNA, and monitoring of results."

(Lisa Scott McCracken, NACCHO, February 27, 2012)[2]

STRATEGIES FOR DATA INTERPRETATION AND ANALYSIS

A number of strategies and methods can be used to interpret and analyze quantitative and qualitative data, including formal or informal evaluation, depending on available resources. Small community workgroups leading the CHNA process may not have extensive resources to conduct a formal evaluation. Formal analysis and evaluation often requires the assistance of a statistician or qualified professional who can effectively analyze the data using sophisticated software. Informal evaluation does include some data collection and analysis, such as "totaling responses and presenting frequency distributions (e.g., 32% indicated fair or poor health, and 68% indicated good or excellent health)" and can be beneficial in providing program direction.[1]

Some considerations for analysis of qualitative and quantitative data findings include[3]:

Qualitative (i.e. Focus Groups, Key-Informant Interviews)
- Identify key themes, not everything discussed
- Interpret and analyze information gathered from qualitative data collection methods, including participant demographics
- Identify key conclusions

Quantitative (i.e. Surveys, Secondary Data Collection)
- Data is typically collected as numbers and often referred to as Descriptive Statistics, such as:
  - Frequency (rate, duration) of specific behaviors or conditions (i.e. smoking rate)
  - Self-reported survey results (i.e. rating of health status)
  - Percentages with a certain characteristic in a population (i.e. diagnosed with diabetes, employed)
- Organize and clean data prior to analysis
- Identify data collected is from valid and reliable sources to ensure quality analysis

When developing a profile regarding the community's health status consider the following:
- All of the data collected in the CHNA process, does not have to be reported. Key data that describes the current health issues in the community, along with data that describes needs and gaps an action plan may address should be reported.
- Identify trends and sub-population specific data. Report changes in the data that have occurred over time, as well as information on local, target populations that often can not be collected from most state and national health indicator databases.

- Review similar data, health indicators, etc. from peer communities to understand where you compare to other neighboring communities, states, and/or nationally.
- Use a broad set of community health indicators and varied types of data (quantitative and qualitative) and data sources, including federal, state, and/or local as appropriate.
- Incorporate data from a variety of community sectors. Utilize feedback garnered from the *South Dakota Good & Healthy Community Checklist* to incorporate qualitative data from your community Healthcare, Community, Worksite, and School Health Sectors.
- Include information on population demographics and overall characteristics of the community you are assessing. Examples include age distribution, educational attainment, race ethnicity, socioeconomic status, etc.
- Address the *Social Determinants of Health* which are influential determinants of health in a community. Social Determinants are "the complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world."[3]
- The *South Dakota Good & Healthy Community Primary and Additional Indicators* include indicators to measure the Social Determinants of Health in South Dakota communities and understand the factors that may affect a community's health status.
- Review the data findings to determine Health Inequities that might exist. Health Inequities factor into the social determinants of health, and means "a difference or disparity in health outcomes that is systematic, avoidable, and unjust."[3]
- Review the CHNA data findings to demonstrate that community needs, gaps, and strengths were assessed to help understand how to use the findings to set priorities and develop an action plan for addressing the community's health.

Depending on the data collection methods that are used in the CHNA process and the purpose and goals of the CHNA, analysis methods will also vary. It is important to analyze data collected from each method (i.e. survey, focus group, etc.) to develop a comprehensive understanding of the efficacy of all available data, as well as what the data findings from each data collection method show regarding the community health status.

Resources

Refer to the following resources for detailed information regarding analyzing and interpreting quantitative and qualitative data. Depending on available resources, refer to a statistician or professional experienced in statistical methodology and evaluation.

Data Interpretation and Analysis
Healthy Carolinians Community Assessment Guide Book. North Carolina Department of Health and Human Services. • Phase 4: Analyze and Interpret Primary and Secondary Data
Collecting & Analyzing Qualitative Data in Community Health Assessments. Lisa Scott McCracken, National Association of City and County Health Officials.
Collecting and Analyzing Data. The Community Toolbox, University of Kansas.
Analyzing Quantitative Data. University of Wisconsin Extension.
Research Methods Knowledge Base. Cornell University.
Quantitative and Qualitative Evaluation Methods. Center for Civic Partnerships.
Guidelines for Conducting a Focus Group. Eliot & Associates, 2005.

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