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ABSTRACT

The goal of this capstone project is to conduct a strategic assessment in support of the mission of the Consortium for Public Health Informatics (CPHI) which is to facilitate access to public health data and information in Nebraska. The intention of this assessment is that it will be used as a practical, administrative resource to aid in decision making and resource allocation. This capstone project is being designed to help CPHI move to the next stage in its life cycle. With a comprehensive strategic assessment, CPHI will be able to meet its mandate of providing the public health community with needed data and information. This will better facilitate the practice of evidence-based public health in Nebraska. Therefore, two objectives that will support this goal are:

1. *Identify stakeholder data needs and priorities-* This will be accomplished by utilizing a questionnaire to survey public health stakeholders identified by the researchers. Based on the findings, CPHI can configure its web portal so that it reflects the needs and priorities identified by survey respondents and improve access to and use of public health data and information. The CPHI web portal can be found at: <http://www.nebraskapublichealth.info>.
2. *Survey current best practices in facilitating access to public health information -* A literature review will be conducted to document current best practices in providing public health data and information to public health workers, researchers and others. An assessment of similar organizations will also be conducted to identify entities with a mission similar to that of CPHI. Best practices will be identified and organized to provide options that CPHI can use to facilitate access to public health data and information.

Background

In the United States, accurate and timely health data and information are critical to providing evidence-based health care. Especially in the realm of public health, practitioners must systematically use all available information in making decisions that affect health policy and programs. Some pressing needs in public health can include the ability to access, aggregate, analyze, translate and disseminate public health information. Access to this information is especially critical when making decisions regarding programming, staff and resource allocation, and other related functions of public health administration.

Public health stakeholders across Nebraska, from health department administrators to policy makers, currently search multiple and disparate sources when they need information. Better understanding of the specific barriers to effective use of available resources will be a valuable resource to public health administrators. Money, time, and perhaps even lives could be saved if scarce resources were used optimally in facilitating the public health workforce's access to these data. This optimization requires an accurate assessment of current needs and barriers around the use of public health data.

Research Methods

An online survey invitation was sent to approximately 600 Nebraska public health stakeholders. A portion of the survey was adapted from a previous research study conducted by Tennessee researchers (Lee, Giuse & Sathe, 2003) and was used with permission. Additional questions were added to also assess stakeholders' perceived level of importance and frequency of use of sources of public health data and information. This research was a collaborative effort between academic institutions and state agencies.

In what type of setting do you work?

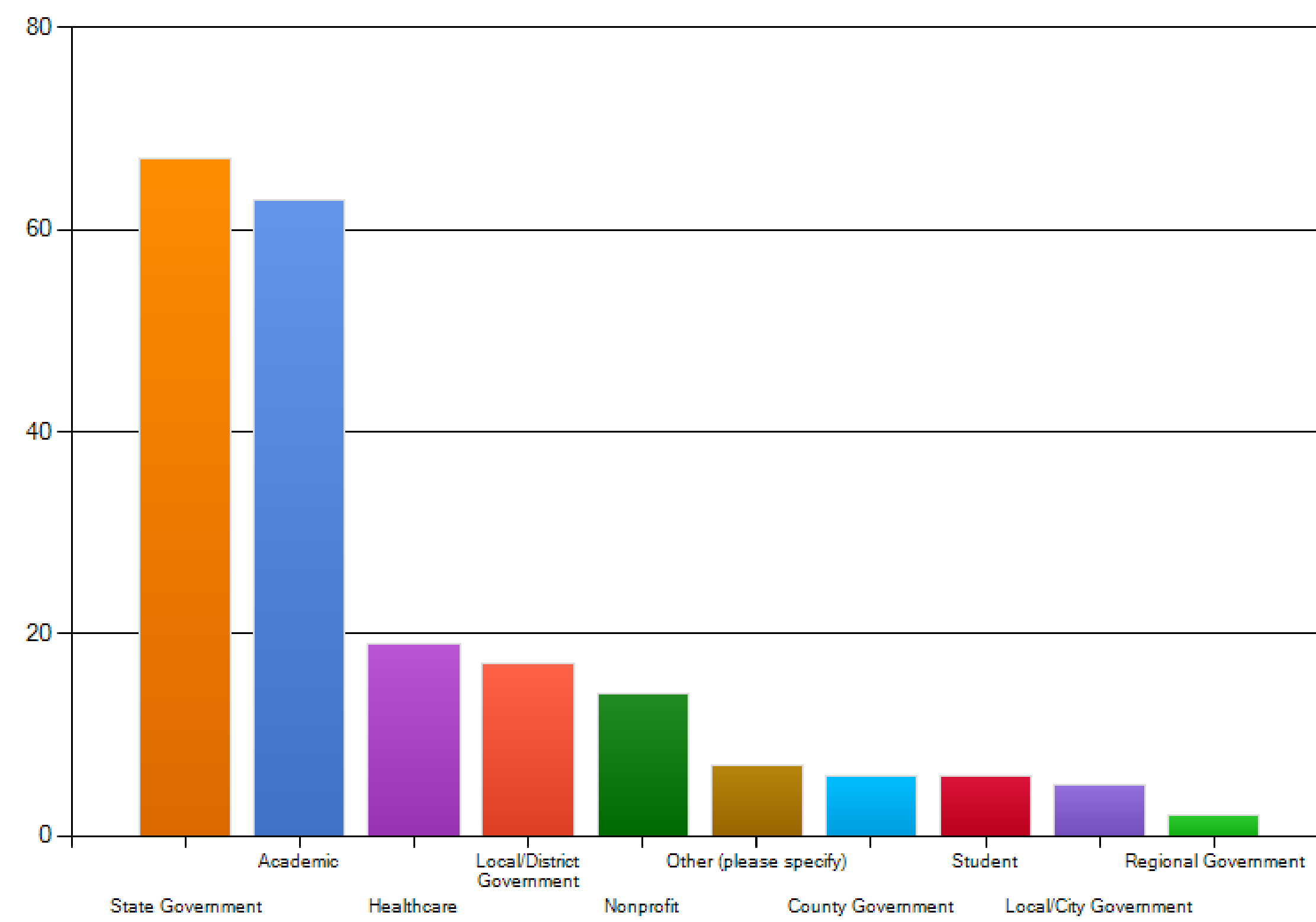


Chart 1. Respondents' Work Settings, N=191

Results

As shown in Chart 1, a large majority of the 191 research subjects who provided responses to the needs assessment represent state government (35.1%) and academic (33.0%) work settings. Other work settings contributing to the remaining number of respondents include local (city and district) government (11.5%), health care (9.9%), and nonprofit organizations (7.3%).

The respondents perform a wide variety of public health-related job functions. There were twenty-six job categories for respondents to choose ranging from administrators to emergency preparedness coordinators to epidemiologists. Thirty-eight respondents (20.0%) and 36 respondents (18.9%) identified themselves as either an educator or health educator/promoter respectively. Other job functions contributing to the remaining number of respondents include:

- health department administrator/director (13.2%)
- data analyst (10.0%)
- epidemiologist (9.5%)
- nurse (6.8%).

Chart 2 illustrates the responses from 'Information Use/Needs', question 8: **How often do you use the following resources to find public health information?** 177 survey respondents indicated their responses (with options of daily, weekly, monthly, yearly, and never) based on 22 web-based sources of public health information. These categories included mostly State and Federal DHHS websites (cdc.gov, medlineplus.gov, Nebraska.gov, ahrq.gov, etc), in addition to general internet searches and a category for other.

How often do you use the following resources to find public health information?

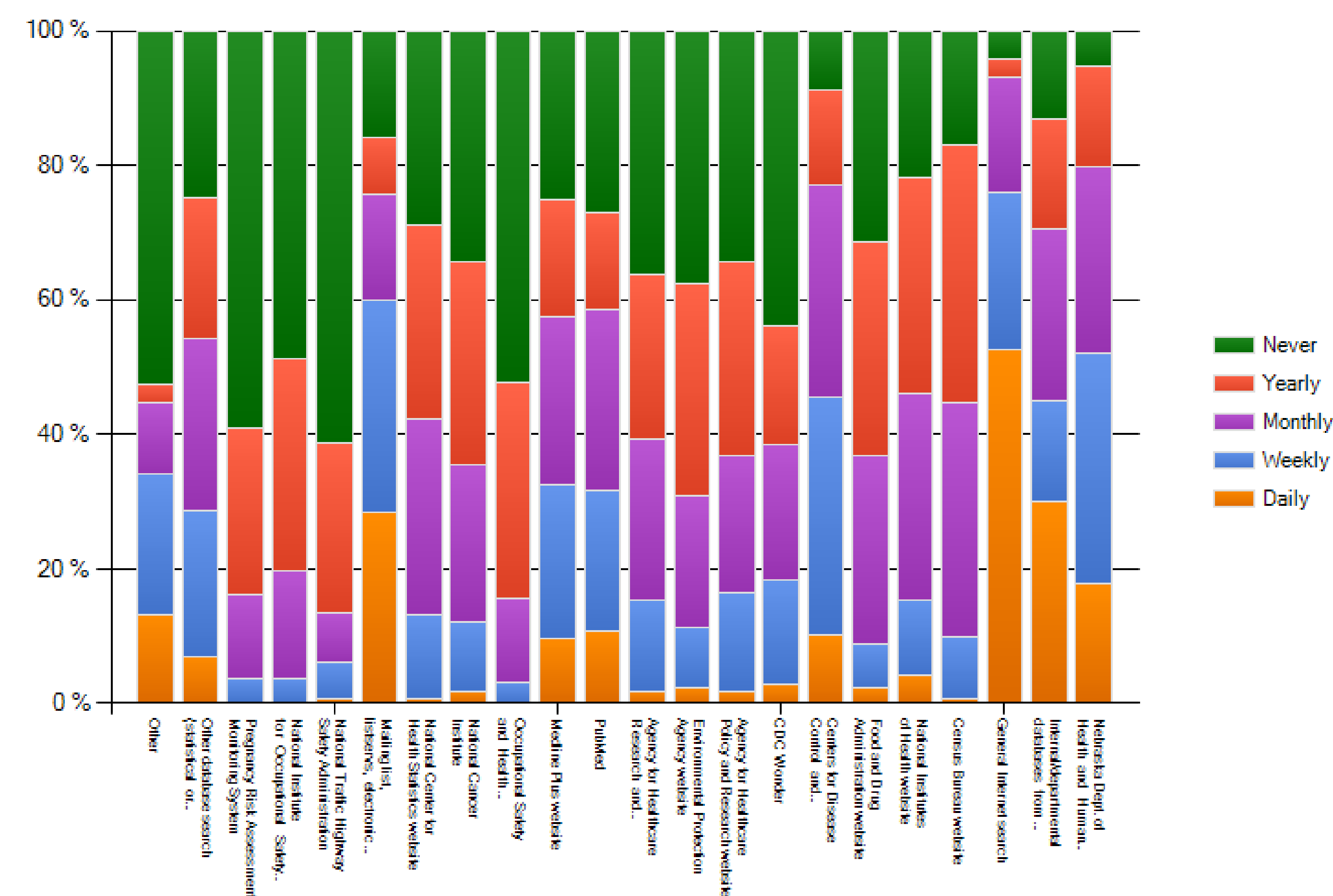


Chart 2. Frequency of use for common sources of public health information, N=177

To better understand the specific data needs of the public health workforce, this needs assessment also contained questions designed to rate the level of importance of specific data sets. Chart 3 illustrates the responses from 'Information Use/Needs', question 10: **How important are each of the following data to your work?**

172 survey respondents indicated their responses on a five-point Likert scale that ranged from 'Not Important' to 'Very Important'. Responses were based on 16 commonly sought after data sets, in addition to a category for other. The 'Other' responses included:

- Data sets specific to minority populations
- Data on STDs, teen pregnancy, and risk behavior for youth
- Nutrition dataset
- Substance abuse data

How important are each of the following data to your work?

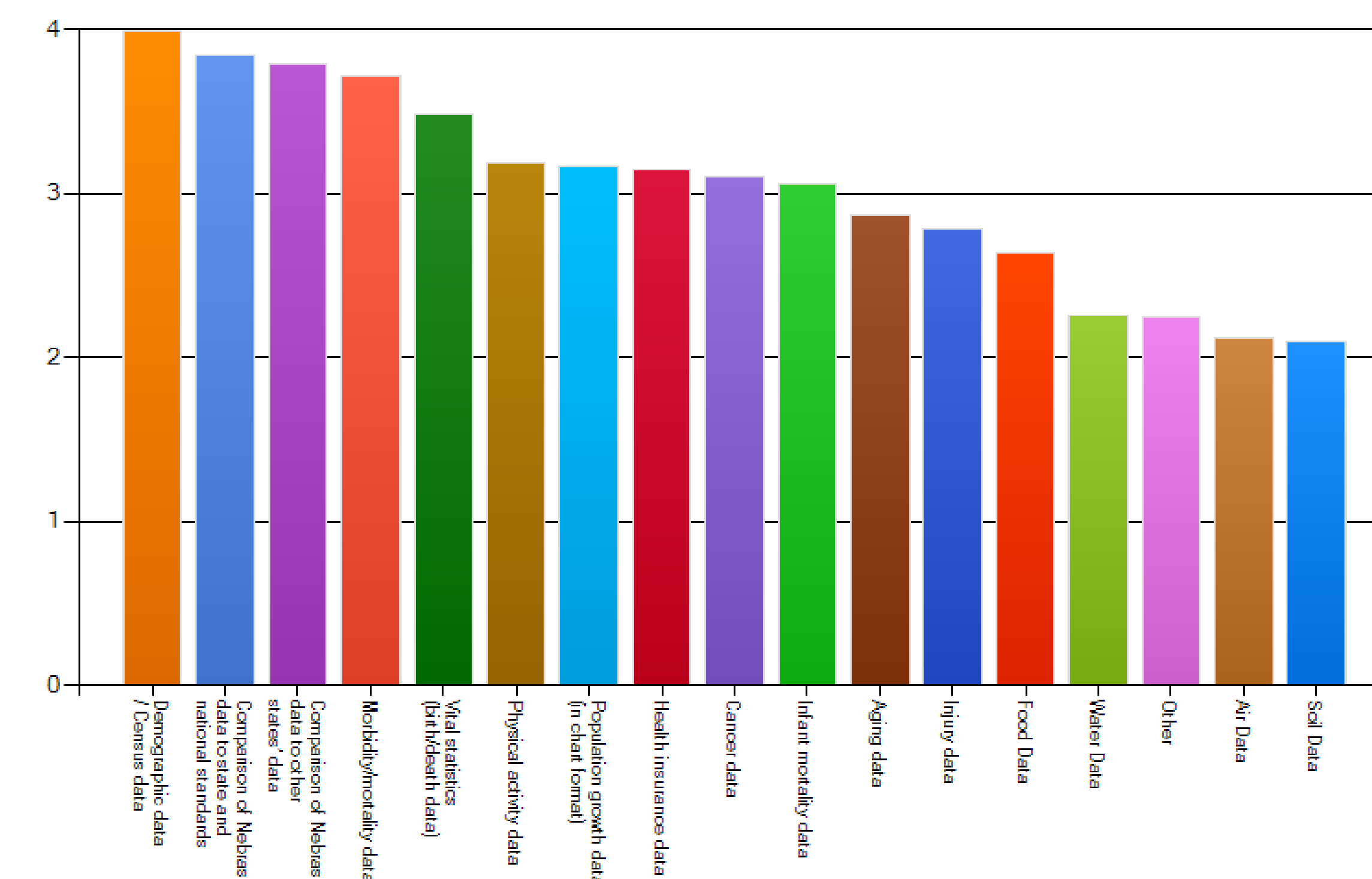


Chart 3. Importance of Local, State, and National Data sets, N=172

Name of organization	Partnering University	Mission Statement/Purpose	Funding Stream	Types of data available
Consortium for Public Health Informatics	College of Information Science and Technology, University of Nebraska at Omaha	The Goals of the Consortium for Public Health Informatics are to: -Create a Nebraska-focused information portal designed to provide real time, interactive access to public health data. -Conduct a formalized information analysis and data availability assessment to support current/emerging public health issues. -Provide access to a think tank of UNO/UNMC IT, GIS and Public Health researchers and experts.	A grant from the University of Nebraska Foundation	Census Data
Center for Health Policy Research	University of California Los Angeles	AskCHIS is a tool that allows you to quickly search for health statistics on your county, region and state. AskCHIS draws upon the responses of more than 50,000 Californians interviewed by The California Health Interview Survey (CHIS) – the largest state health survey in the United States.	AskCHIS is supported by a grant from The California Endowment. CHIS is also funded by a network of public agencies and private organizations concerned with improving the status of health care in California, as well as individual researchers and supporters who value CHIS data.	Health Status, Health Conditions (not Cancer), Cancer and Cancer Prevention, Health Behaviors, Women's Health, Oral Health, Access & Utilization, Health Insurance, Mental and Emotional Health, Public Program Participation, Demographic, Place of Residence, Injury & Violence Prevention, Child Care/Parental Involvement, Elder Health, Community Involvement
North Carolina CATCH	University of North Carolina at Charlotte	The North Carolina Comprehensive Assessment for Tracking Community Health (CATCH) portal is a collection of health-related data sets integrated into a data warehouse and presented in two primary modes: a structured report (the County Profile) and an ad-hoc query interface using a powerful On Line Analytic Processing (OLAP) model.	The North Carolina CATCH system was developed by faculty of UNCC, under a contract funded by the North Carolina Division of Public Health. Funds for the development of NC-CATCH were also provided by the Kate B. Reynolds Charitable Trust.	Adolescent Health, Chronic Diseases (respiratory, diabetes, cardiovascular, cancer, other), Communicable/ Infectious Diseases, Communicable/ STDs, Crime, Demographics, Dental Health, Disability, Economic Indicators, Health Care Access, Hospital Discharge, Infants, Children, Injury and Violence, Men's Health, Mental Health, Overall Mortality, Physical Activity Weight and Nutrition, Reproductive Health, Risk Factor for Chronic Disease, Tobacco and Substance Use
New Hampshire HealthWRQS	NH Institute for Health Policy and Practice, University of New Hampshire	NH HealthWRQS has been developed to provide information about health indicators for New Hampshire communities, through automated reporting capability not previously available in the state of New Hampshire.	Funded by the Endowment for Health	BRFSS, Cancer, Birth, Death, ER visits, Inpatient hospital discharge

Chart 4. Matrix of organizational profiles

The purpose of the organizational comparison scan (chart 4) was to identify factors that may impact CPHI now and in the future. To summarize these factors, two central themes were identified in the results and relevant to CPHI:

• **Funding stream-** is essential to any organization. A robust and diverse funding stream allows an organization to maximize its capacity and meet its goals. As observed during the environmental scan, the similar organizations that were included all were supported by a variety of funding sources including grants and contracts, public endowments, nonprofit foundations, and state funds. In the state of Nebraska, all of these funding streams are present and available for solicitation by CPHI.

• **Availability of useful data-** is defined as an organization's ability to provide a wide variety of current data. This is data that confirms and/or contributes to the current body of knowledge in a particular area and aids in informed decision-making. Because *useful* is a subjective concept, and there are many potential consumers, CPHI should ensure that the data and information provided is of significant value to the end users of its web portal.

Conclusions

Directory and contact information for Nebraska DHHS and published literature where the two most commonly accessed sources of public health information, while DHHS data sets, the Centers for Disease Control and Prevention, and general internet searches were among the most needed health data resources. Among the data sets, demographic/census data, mortality/morbidity and a state comparison with other states and national benchmarks were regarded as the most important health data among survey respondents. Last, results from the needs assessment indicate the county-level and health department service area are the only two statistically meaningful (>50% of survey respondents found these to be important) data aggregates.

The respondents of the needs assessment identified the above-mentioned data and information as most important and most frequently needed and it can be generalized that these resources are considered to be of highest priority among all public health stakeholders in Nebraska. The organizational comparison points to interagency collaboration and strong, diverse funding streams as best practices in facilitating access to public health data and information. In facilitating access to public health data and information, CPHI should ensure reliable access to these basic sources of data and essential organizational resources.

Lee, P., Giuse, N., & Sathe, N. (2003). Benchmarking information needs and use in the Tennessee public health community. J Med Libr Assoc 91(3) July.