Strategic Directions in the Access and Use of Public Health Data Sets

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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 entries 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 assess available information and make decisions that affects health policy and program. Some promising fields 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 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 this 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 Lai, Glaso & Sathe. The brand 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.

Results

As shown in Chart 1, a large majority of the 191 research subjects who provided responses to the needs assessment report state governments (53.1%) and academic (38.0%) work settings. Other work settings contributing to the remaining number of respondents include local city and county government (13.7%), health care (9.9%), and nonprofits (7.9%).

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 (20.5%) and 36 respondents (18.1%) identified themselves as either an educator or health administrator/programmer respectively. Other job functions contributing to the remaining number of respondents include:

- health department administrator/programmer (12.5%)
- data analyst (10.5%)
- epidemiologist (9.5%)
- nurse (8.5%)

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, or never. Respondents were asked to rate each variable 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
- National database
- Substance abuse data

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 in 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
- National database
- Substance abuse data

Chart 4 illustrates the responses from 'Information Use Needs', question 8: How often do you use the following resources to find public health information? 127 survey respondents indicated their responses with options of daily, weekly, monthly, yearly, and never. Respondents were asked to rate each variable 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
- National database
- Substance abuse data

Chart 5 illustrates the responses from 'Information Use Needs', question 10: How important are each of the following data in your work? 127 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:

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Conclusions

Discoveries and common 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 accessed health data resources. Among the data sets, demographic/census data, mortality/morbidity, and crime rate were used most by those organizations that were included in a variety of funding sources including grants and contracts, public endorsements, nonprofit foundations, and state funds. In the state of Nebraska, all of those funding streams are present and available for selection by CPHI.

Availability of useful data - is defined as an organization's ability to provide a wide range 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 this is a subjective concept, and data are many potential consumers, CPHI should ensure that the data and information provided is of significant value to the end users of the web portal.

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 streams - is essential to any organization. A robust and diverse funding stream allows an organization to maximize its capacity and impact to 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 endorsements, nonprofit foundations, and state funds. In the state of Nebraska, all of these funding streams are present and available for selection by CPHI.
- Availability of useful data - is defined as an organization's ability to provide a wide range 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 this is a subjective concept, and data are many potential consumers, CPHI should ensure that the data and information provided is of significant value to the end users of the web portal.


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