

Issues in Environmental Public Health Tracking: Advancing the Network Opportunities for State and Local Health Agencies



Introduction

The Centers for Disease Control and Prevention (CDC) established the National Environmental Public Health Tracking (EPHT) Program in 2002 with the purpose of “establish[ing] a nationwide tracking network to obtain integrated health and environmental data and use it to provide information to support actions that improve the health of communities.”¹ From the point of view of local health departments (LHDs) who will be important users,² along with the communities they represent, a number of issues remain unresolved as the Environmental Public Health Tracking Network nears implementation. Some are technical and some political, but all concern the practice and relationships between the designers and users of the system. The role of LHDs in tracking and a strategy for determining how the system will work for LHDs in conjunction with their states and with other local users have not been examined or well-defined.

The primary purpose of this paper is to highlight and examine some of the central issues associated with collaboration among grantee states and their local public health partners, including LHDs, and to provide preliminary recommendations and elements of a strategy that will assist program grantees and LHDs in making the most of the Network. The audience for the paper is the tracking program grantees, CDC, LHDs interested in participating in the Network, and core constituency users.

BACKGROUND

Beginning in 2004, the National Association of County and City Health Officials (NACCHO) and the Association of State and Territorial Health Officials (ASTHO), two of the national partners for the EPHT Program, hosted a series of facilitated discussions on the issues, needs, roles, and relationships between state and local governments in the development and use of the Network.³ The goal was to strengthen the collaboration between state and local health agencies in this effort and, through the discussions, learn what state and local health agencies believe is important in the design and implementation of the Network.⁴

As the Network moved into an implementation phase, NACCHO and ASTHO decided to synthesize the knowledge gained, further explore core issues as they affect state and local health departments and their constituencies, and generate a strategy for implementing recommendations. The national partners wished to ensure that local and state agencies communicated effectively with each other while the Network was still in development.

An additional vehicle for this exploration was the convening of an expert forum with participants from each of the previous facilitated discussions. Conducted on Oct. 18, 2006, the meeting’s purpose was to obtain guidance in devising an approach to ensure an accessible, user-friendly network with an effective infrastructure that meets the needs of the environmental public health system at all levels. NACCHO and ASTHO invited one state and one local representative from each of the five states that participated in facilitated discussions and representatives from CDC and UC Berkeley. The purpose was to generate an actionable series of recommendations and analysis on next steps, with an outline describing an action plan to be shared with grantees and potential users of the Network. NACCHO followed up this meeting with discussions with some of the participants for further elaboration.



Issues in Strengthening the Network for State and Local Users

NACCHO and ASTHO seek to identify core issues that would be most common among their varied constituencies, as well as potential community users. These core issues include establishing cooperation and good relationships between program grantees and LHDs, ensuring effective access and representation, health equity and environmental justice, and ensuring an open and flexible Network. NACCHO and ASTHO examine each issue's relevance and what needs to be done, assuming that: (1) the purpose of the tracking Network is to improve the health and environment of the public; (2) any Network that emerges is about informing change and practice and fulfilling responsibilities, not just data; and (3) success of the Network will depend on (a) successes at the state and local levels, not just nationally; and (b) the Network's ability to enable public health to conduct its functions effectively.

STATE-LOCAL RELATIONS, STATE-LOCAL NEEDS

The EPHT Network focuses on linking specific data sources into a more unified system that will enable larger research studies than are now possible in order to identify the relationship between particular environmental sources and potential disease effects. In all of this, however, there may be room for those at the state and local levels to use the Network for additional purposes to track environmental health issues and build their capacity for public health surveillance. The goal of most potential users at the local level is to protect and improve community health in day-to-day practice.

NACCHO and ASTHO believe that the Network can work more effectively for states if they are able to define a role for and involve LHDs more actively. Many LHDs within Network grantee states are either not aware of the Network or have very little connection to those developing the Network in any given state. It will be important to identify a strategy to inform them and design a mechanism for their participation. Accomplishing these tasks effectively will require a governance structure at the state and federal levels that allows for participation in Network design and other decisions. Program grantees will have to take an active role to inform and reach out to their LHDs. They will need a mechanism to contact and involve them.

USES, USERS, AND ACCESS

A strategic determination needs to be made of the key uses and users of the EPHT Network over the first five years. Few will participate in the Network's growth if it is not useful; for the Network to be useful, users will need to be able to conduct their

own analyses. Clarification of who will be able to participate in this Network, how, and for what purpose, as well as marketing its existence, are necessary steps. Criteria for access to different levels of information will need to be consistent among different states and the Network. While the language of the EPHT Program and Network imply that it will serve the many needs of local, state, and federal public health agencies, government programs, affected populations, and academics, resource and design constraints, along with confidentiality requirements, make it difficult to serve everyone. On the other hand, the Network must create sufficiently compelling information products and applications to spur future use, evolution, and growth. Increasing the user base will expand demand and support for the Network; it will become potentially more sustainable, beyond Network funding, from having a multitude of users.

A central issue for the Network is how to ensure that user needs will be met with respect to content and accessibility. The early users are people who have a need to know at the local level: health departments, community organizations, environmental organizations, academic institutions, and other health practitioners. They want to be able to share and track a variety of data types on many chronic illnesses and environmental hazards, partly based on expressed concerns from constituents. A wide range of products will therefore be required to serve a wide range of users.

Initial obstacles are that the EPHT Program is national in scope. Moreover, a tension exists in the system between the need for standardization versus flexibility. At one level, it would be important to be able to make use of and share data across jurisdictions. Many environmental issues, for example, cross geographic boundaries and affect many people. Local users are going to demand compiled data and predigested reports. Yet greater local control, desirable to track specific activities and services, means less compatibility. Local health departments, however, generally do not see their data compared and may not grasp the utility of the Network at first, except in specific content areas. That is, linking hazards, health outcomes, and exposures does not have a place yet in the structure of public health practice. Thus, issues will need to be sorted out by level—local, state, national—and an educational plan will need to be established.

Data will have to be presented in a form that captures people's imaginations so that they will use it to make decisions. This may require developing tools for the state network portals that allow for downloading local level data. NACCHO and ASTHO clearly need to work closely with early users and adopters as federal

funds may not be available to sustain the effort. Eventually, there may need to be a way for qualified local users, such as LHDs, to enter their own data temporarily into the Network. Whatever the final structure, the system must be simple at the start. Ultimately, if the Network is to serve its users, it will need to demonstrate links among data streams and engage with other sectors, such as planning, transportation, and housing.

HEALTH EQUITY AND ENVIRONMENTAL JUSTICE: ISSUES OF CLASS, RACISM, AND GENDER DISCRIMINATION

Social and economic inequalities generate severe inequities in the distribution of disease, illness, and environmental contaminants. Environmental injustice concerns the disproportionate burdens placed on some communities: factories, landfills and toxic waste dumps, and high-volume traffic arteries often exist in communities of color and those lacking resources. Pollution levels are higher. Health impacts may be worse than in more affluent communities. Tensions and distrust continue to exist between the environmental justice communities that experience inequities and health agencies. To alleviate these problems, health agencies and communities must develop mutual respect, recognition of community knowledge, quality of research, involvement in decision-making affecting communities, and sharing of data. Affected populations must be involved in all aspects of decision making from the beginning.

Tackling inequities in the distribution of disease requires tracking data that provides information about the social determinants of health inequities, e.g., location and number of landfills and toxic waste plants in a jurisdiction, proportion of housing located near highways, and neighborhood poverty level. Such data can expose the patterned conditions under which people live and work that link to their health status and consist of more than personal identifiers. Health inequities are not a pure data issue. They must be explicitly characterized and explained as demanding attention. At a minimum, the Network should contain socio-demographic data at an appropriate level of geographic resolution to allow such determinations to be made. Data on socio-economic status and race should be used where available to create summary indicators.

The EPHT Network must express its commitment on this issue more directly. This means taking an active role in educating the public, gaining media attention, and presenting the issue with solid documentation. The Network must contain data and analyses that can draw attention to the systematic sources of health inequities. The EPHT Program would thereby recognize community vulnerabilities, bring them into focus, and find a way to incorporate what is learned into the work of public

health, particularly because these inequities have a cumulative impact over the life course, based on multiple factors. If these actions are not taken, the environmental justice communities may be further alienated.

On the technical side, it will be critical to identify data types and summary indicators that can reveal inequity. Criteria for evaluating conditions that are associated with environmental justice should be a part of the logic used in selecting measures and indicators. Those indicators should include available data about conditions like housing, transportation, poverty, and unemployment and also include guidance on evaluating the display of such indicators. Also important is moving qualitative concepts, such as class, racial discrimination, and quality of life into quantitative measures. Small-area geographic scale may be necessary to illuminate inequity but may not always be available for health outcomes because of federal privacy requirements in the Health Insurance Portability and Accountability Act (HIPAA).

Equally critical is to make use of appropriate census data on race, income, and poverty. For example, lead poisoning should be presented by the percentage of the population in poverty and by race and ethnicity. With respect to water quality, the percentage of the population exposed to given contaminants by race and income strata should be explored. The state could provide this data to the national Network. Continuous measures of segregation should also be correlated. Overall, the data architecture needs to be designed to support “seeing” inequity and make it salient. This means that the Network design and its data sources enable the identification of health inequities and the ability to address them. Effective analysis and display, too, will be critical to create products that clarify the sources of health inequities.

A way must be found to involve environmental justice constituencies, but no standardized structure exists to do so. Some of the states have been working with their communities to provide training and otherwise assist with assessments. At a minimum, the cooperative agreements should demonstrate the value of this type of approach and public intervention to deal with it. In addition, the issue must move outside of the Program Marketing and Outreach workgroup into other workgroups.

REPRESENTATION WITHIN THE PROGRAM

NACCHO and ASTHO believe it is necessary to ensure a role for user constituencies in the planning and design of the Network. Local constituencies, including LHDs, should be represented within the EPHT Program. The choice of data and hypotheses is a value judgment requiring multiple voices. EPHT Program grantees should provide assurance that representation will be given to community organizations on the relevant national workgroups and state advisory groups. Neighborhood and environmental justice organizations, for example, have generally not been represented or heard, nor have tribes and many rural communities. Such groups and organizations should be notified of public meetings or hearings, the establishment of special task forces in which they might participate, and alerted by e-mail or newsletter to upcoming decisions relevant to their interests.

BUILDING UPON THE NETWORK TO MEET SPECIFIC NEEDS

A successful Network will depend upon an open environment, sharing, comparison, and analysis of more and different measures, including those not traditionally controlled by public health agencies, such as housing, land use and transportation data. Local health departments must be able to enter their own data. Based on the assumption that the Network can and should be expanded, allowing it to raise and respond to more questions, consensus must be established among health officials and residents about what needs to be done in environmental health to link with public health. The result could be a system with more users, more tools for data collection and analysis, more data sets, and more jurisdictions. A marketing plan designed to demonstrate how the Network makes a difference is especially crucial for building a constituency. Functionality for users should be sensitive to the needs of specific groups and their familiarity with (or lack thereof) with data bases.

The flexibility to meet any or all of these expanded forms would demand an open source structure, by county, city, or state, rather than a predesigned system. A goal of flexibility, for example, would allow for using data in novel ways to shape policy and programs in different jurisdictions. Apart from the structure, it is necessary to consider what kind of indicators will be needed and how they will be interpreted and disseminated. Indicators would need to be expanded to include more comprehensive and appropriate local measures.

Summary of Recommendations for Program Grantees

- Identify the needs of local users, e.g., who will use the Network, for what purpose, and for what kinds of data and analysis, with what expectation for training, and ensure that the Network will meet those needs.
- Develop participation mechanisms, e.g., meetings or workgroups, which will enable local users from LHDs and affected communities to play an effective, influential role in the design and operation of the Network at the state level, including the development of tools.
- Select an accumulation of measures and indicators, in collaboration with community and LHD partners, which include issues of social inequity, e.g., neighborhoods with disproportionate burden of hazard, lack of affordable housing, absence of mass transit, and poor health outcome as a major consideration.
- Develop tools for the Network and build in locally relevant Analysis Visualization and Reporting functionality, particularly at the state level, that will immediately enable local communities to use and understand the system.
- Express EPHT Network commitment to environmental justice more directly by (a) ensuring the potential for incorporating non-traditional data associated with social determinants of health; (b) partnering with the regional environmental justice organizations;⁵ and (c) partnering with other agencies that influence health such as transportation, planning, and housing.
- Maintain an open-source structure, and share, compare and analyze more and different measures by LHDs, including those not traditionally controlled by public health agencies, so that data may be used in novel ways to shape policy and programs in different jurisdictions.
- Explicitly state and explain how the Network will be useful so that it can make a difference for LHDs and for handling specific environmental health issues.⁶
- Encourage program grantees to engage in more extensive outreach efforts and engage with their public health partners, including LHD representation on the various workgroups, so that data and tools are available to answer local questions.

[4] White Paper: Issues in Environmental Public Health Tracking: Advancing the Network Opportunities for State and Local Health Agencies

Notes

¹ CDC. CDC's National Environmental Public Health Tracking Program: National Network Implementation Plan (NNIP), version 1.0 (Atlanta, GA, August 2006).

² The term “users” refers broadly to institutions such as local health departments, community organizations, and academic researchers, as well as to health practitioners and members of the public.

³ The states included New York, Wisconsin, Maryland, Oregon, and California. As a result of these discussions, a number of themes emerged, including linkage, coordination, integration, and compatibility among data systems; consistent rules for accuracy in entering data; the ability to find, share, and communicate data in a user-friendly format; how the Network would tailor the system to local needs; how the Network would prioritize the use of resources; the quality of data and the need for it to be timely, updated, robust, and capable of being collected from all jurisdictions; the importance of socio-economic status data, useful for informing public policy; flexibility, linked to the local level, and driven by community values and questions; and usability of the Network—the importance of focusing on the end user to ensure the Network is user friendly, particularly in explaining the uses of data.

⁴ Questions included the following: What features would you like to see in the Network? What do you expect the network to do when completed? How will you use it? What are the challenges? What sources of data, if available from other local agencies and linked to yours (housing, planning/zoning, education, transportation, social welfare, etc), would inform policy, priority, and resource decisions of your agency? In what ways do you think the EPHT should assist you in accessing these data bases where available?

⁵ Some of the regional organizations: The Asian Pacific Environmental Network; the Deep South Center for Environmental Justice; The Indigenous Environmental Network; The Southwest Network for Environmental and Economic Justice; Alternatives for Community and the Environment; Northeast Environmental Justice Network; and the Southern Organizing Committee for Economic and Social Justice.

⁶ NACCHO administered a questionnaire to LHDs to assess their knowledge and interest in EPHT and how they would like to receive information. Of about 205 respondents, approximately 60 percent indicated that the value of the Network for them would involve the ability to compare data at local, state, regional, and federal levels; 70 percent stressed the ability to link environmental and public health data; and 43 percent stated their concern for increased advocacy with decision-makers about environmental health program needs.

WHITE PAPER

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NACCHO

National Association of County & City Health Officials

The National Connection for Local Public Health



NACCHO is the national organization representing local health departments. NACCHO supports efforts that protect and improve the health of all people and all communities by promoting national policy, developing resources and programs, seeking health equity, and supporting effective local public health practice and systems.

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