Creating a Regional Public Health System

Results of Assessments to Inform the Planning Process

December 2011

New Hampshire Division of Public Health Services
New Hampshire Department of Health and Human Services

Community Health Institute/JSI

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Introduction

This report presents the findings of three assessments conducted between November 2008 and December 2010 to inform planning for a coordinated, regionalized public health system in New Hampshire. Most states around the nation have a governmental based public health system with a mix of local, county, or regional health departments. When many states talk about regionalizing public health, they generally are referring to consolidating or formalizing a relationship among existing governmental health departments. In New Hampshire when we consider regionalizing public health, we are talking about building and strengthening a regional infrastructure that is currently a mix of a few large health departments and a system of 15 regional public health networks. Before presenting the results of the assessments, a brief history of the Public Health Networks and the Public Health Regionalization Initiative is provided to offer context.

Background

In 1997, New Hampshire was one of fourteen states awarded a two-year planning grant entitled Turning Point: Collaborating for a New Century in Public Health from the Robert Wood Johnson (RWJF) and W.K. Kellogg Foundations to transform and strengthen the public health infrastructure. The work of the Turning Point Initiative resulted in a public health improvement plan to address systemic limitations that are barriers to optimal health improvement. A key recommendation of the planning process was to develop local level public health capacity to protect and promote the public's health. In 2001, the State of New Hampshire began funding four community public health partnerships, the first public health networks, with funds provided by the RWJF. These networks were local partnerships comprised of diverse community based organizations, (e.g., government, health care providers, social service agencies, schools, businesses and faith communities) which began working together to address public health issues. By 2005, there were 14 public health networks in New Hampshire, when the state received funds for avian flu pandemic planning. The 14 existing networks provided service to 56% of cities and towns, representing 70% of the state's population. Pandemic planning funds allowed the state to expand to 19 networks to assure that every municipality in the state was included in a region for the purpose of public health emergency preparedness and response. These became known as All Health Hazard Regions (AHHR). With this change in emphasis from federal funders the existing public health networks' scope of work was primarily focused on public health emergency preparedness. Some exceptions existed as certain public health networks secured additional funds for targeted public health initiatives such as obesity, tobacco, or lead poisoning prevention.

In 2007, there was recognition that maintaining 19 AHHRs that focused almost exclusively on emergency preparedness would be challenging and other important public health capabilities were not being addressed. The notion of a more broadly based regionalization of public health services was raised. A task force entitled, the *Public Health Regionalization Initiative* was convened and set forth the goal to *Develop a performance-based public health delivery system, which provides all 10 essential services throughout New Hampshire.* The task force agreed upon the need to develop a public health system based on national accreditation standards to provide the ten essential public health services (see Figure 1) and that is linked to government. There was consensus that the state would retain certain functions such as infectious disease investigation and laboratory services. The task force articulated the core staffing needs for regional public health entities to deliver public health services. To reflect this expanded vision, the AHHRs became known as Public Health Regions (PHR).

Throughout this report the term public health region will be used to denote a geographic service area and the term public health network refers to the partnership of local agencies, government entities, and other stakeholders within a region.

Since 2007 consolidation of public health regions has resulted in the current 15, with a public health network in each. As the task force began working towards the aforementioned goal, it became necessary to take stock of the current public health capacity and resources. After researching approaches taken by other states undergoing regionalization, the Division of Public Health Services (DPHS) and the Community Health Institute (CHI) partnered to conduct an assessment of public health system capacity in each of the 15 regions. DPHS also worked with consultant Jennifer Wierwille Norton to conduct a governance assessment and consultant Patrick Bernet to assess the financial assets of each of the public health regions for public health services. These assessments were jointly funded by the NH Endowment for Health and the Robert Wood Johnson Foundation, as part of the Multi-State Learning Collaborative.

Assessments of the municipal health departments in the cities of Manchester, Nashua, Portsmouth, and Berlin were conducted differently to reflect the fact that they are based in government and provide a greater range of services than health departments in other municipalities. Those assessments are described separately in another section of this report.
Both the capacity and governance assessments focus on the ten essential public health services, which are described below.

Figure 1. The Ten Essential Public Health Services

Essential Public Health Services	In Plain English
1. Monitor health status to identify health problems	*What's going on in our state/region? Do we know how healthy we are?*
2. Diagnose and investigate health problems and health hazards	*Are we ready to respond to health problems or threats? How quickly do we find out about problems? How effective is our response?*
3. Inform, educate, and empower people about health issues	*How well do we keep all people and segments of our state informed about health issues so they can make healthy choices?*
4. Mobilize partnerships to identify and solve health problems	*How well do we really get people and organizations engaged in health issues?*
5. Develop policies and plans that support individual and statewide health efforts	*What policies promote health in our state/region? How effective are we in planning and in setting health policies?*
6. Enforce laws and regulations that protect health and ensure safety	*When we enforce health regulations are we up-to-date, technically competent, fair and effective?*
7. Link people to needed health services and assure the provision of health care when otherwise unavailable	*Are people receiving the health services they need?*
8. Assure competent public and personal health care workforce	*Do we have a competent public health staff? How can we be sure that our staff stays current?*
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services	*Are we doing any good? Are we doing things right? Are we doing the right things?*
10. Research for new insights and innovative solutions to health problems	*Are we discovering and using new ways to get the job done?*

A report of each assessment follows, along with recommendations for the continued strengthening of a regional public health system.

Capacity Assessment

Method

The public health network partners in each region participated in a 4-6 hour capacity assessment process to identify regional public health assets and gaps that may lend themselves to being regionalized. The assessment employed a revised version of the National County and City Health Officials' Local Health Department Self-Assessment Tool (NACCHO – Rev.1). The original NACCHO tool was intended to assist local, government-based health departments to determine whether the existing capacity meets proposed national standards for local health departments. As we were assessing the capacity of public health networks (i.e. the public health system) rather than local health departments, the tool and the process for completing it were revised. The capacity assessment entailed a two-part process. For Part 1, the lead public health entity (the agency funded by the DPHS to coordinate preparedness-related public health network activities) scored its capacity to meet each operational indicator for each standard of the ten essential services of public health. For each indicator, the lead entity considered its own 1) planning, staffing or resources directed toward meeting the standard, 2) whether activity occurred to meet the standard, when applicable, and/or 3) whether documentation could be produced to support the capacity and/or activity. A score was assigned using the matrix in Figure 2 below.

Figure 2: Public Health Capacity Scoring Matrix

	No Capacity	Minimal Capacity	Moderate Capacity	Significant Capacity	Optimal Capacity
Score	**0**	**1**	**2**	**3**	**4**
Capacity (Planning, Staffing, Resources)	None	Minimal	Moderate	Significant	Significant
Activity (when applicable)	None	None	Minimal	Moderate	Significant
Supporting Documentation	No documentation available		If asked to produce documentation, you could produce it.		

Part 2 of the assessment occurred during a meeting of regional partners, during which they reviewed and concurred with (or adjusted) the lead entity's self-assessment scores for each essential service. Regional partners then considered whether additional expertise or services existed within the local public health system, and scored their system-wide regional capacity using the same scoring matrix. A final score was determined using the higher of the two scores. Attendance at community partners' meetings varied widely in numbers and representation with as few as nine and as many as 36 participants. Participants were asked to complete an evaluation of Part 2 for each community assessment, which informed a process of continuous improvement in our assessment method. The public health network entity within each region received a summary of the assessment findings for their region.

Findings

Assessments were completed for twelve of the fifteen regions. Aggregate capacity by essential service is displayed in Figure 3. A different assessment was conducted with the municipal health

departments within the three remaining regions of, Greater Manchester, Greater Nashua, and Greater Portsmouth. The same assessment was conducted with the Berlin Health Department, which sits within the North Country region and also participated in that regional assessment. A summary of the municipal health department assessments is presented in a separate section of this report.

Figure 3: Ranking of Aggregate Public Health Capacity Scores by Essential Service (n=12)

Capacity Ranking	ES	Description	Aggregate Mean Capacity Score	Range	SD
1	ES 7	Link People to Needed Services	2.75	1.0-3.8	0.92
2	ES 3	Inform and Educate	2.55	1.0-3.2	0.41
3	ES 2	Diagnose and Investigate	2.42	1.6-2.9	0.38
4	ES 4	Mobilize Communities	2.24	1.1-3.4	0.7
5	ES 1	Monitor Health Status	2.06	1.1-2.6	0.59
6	ES 9	Evaluate and Improve	2.05	1.0-3.0	0.49
7	ES 8	Assure a Competent Workforce	2.00	0.2-3.0	0.87
8	ES 5	Develop Policies and Plans	1.90	1.2-3.1	0.59
9	ES 10	Research	1.86	0.0-3.0	0.93
10	ES 6	Enforce Public Health Laws	1.62	0.3-2.8	0.70

In the aggregate, the networks' capacity to deliver the various essential services can be grouped as those for which they have greater than moderate capacity, moderate capacity and minimal to moderate capacity as shown in the color coding in Figure 3 and summarized below.
Greater than moderate (2.2-2.7):

- ES 7: Linking People to Services
- ES 3 Informing and Educating
- ES 2 Diagnosing and Investigating
- ES 4 Mobilizing Partnerships

Moderate (2.0-2.1):

- ES 1 Monitoring Health Status
- ES 9 Evaluation and Improvement
- ES 8 Assuring a Competent Workforce

Minimal to moderate (1.6-1.8):

- ES 5 Developing Policies and Plans
- ES 10 Research
- ES 6 Enforcing Laws

Among the highest scoring essential services (ES 7, 3, 2 and 4) there is some variation among regions. Scores for ES 4, mobilizing community partnerships vary across regions (1.1-3.4, with the lowest and highest scores reflecting capacity for newly established and well established lead public health network entities, respectively). The greatest capacity is reported for linking people to needed services (ES 7), which also showed highly varying capacity scores ranging from 1.0-3.8. Informing and educating people about health issues (ES 3) also has relatively high capacity with scores ranging from 1.9-3.2, with the lowest and highest scores reflecting capacity for newly established and very developed lead public health network entities, respectively.

The essential public health services of diagnosing and investigating health problems (ES 2), informing and educating about health issues (ES 3) and mobilizing community partners (ES 4) were identified as strengths that have developed in the context of emergency preparedness.

Capacity gaps were identified in the areas of developing region wide policies and plans (ES 5), enforcement of laws and regulations (ES 6), and evaluation and improvement (ES 9). There was widespread agreement that emergency preparedness plans were an exception to the acknowledged gap in ES 5, which resulted from a lack of regional plans for chronic or environmentally mediated diseases.

Similarities and Differences in Public Health Capacity

Scores between regions for each essential service were examined (using standard deviation) to reflect the degree to which regions scored their capacity similarly.
Essential services with scores most similar to one another across the twelve regions include:

- ES 2: Diagnosing and Investigating (SD=0.38) range (1.6-2.9)
- ES 3: Informing and educating (SD=0.41) range (1.0-3.2)

The following essential services reported capacity scores reflecting the greatest difference between regions:

- ES 8: Assuring a Competent Workforce (SD=0.87) range (0.2-3.0)
- ES 7: Linking people to services (SD=0.92) range (1.0-3.8)
- ES 10: Research (SD=0.93) range (0.0 to 3.0)

Most regions recognized rich capacity in several areas, however a lack of region-wide coordination was a consistent theme across most regions. Community partners in several regions mentioned disparate access to essential services due to geography and program-specific issues. The rural character and diversity of towns within regions were identified as common themes, and some regions mentioned a large geographic service area as a challenge. A few regions also mentioned that lack of alignment between public health regions and counties was an issue. Across regions, the siloed nature of public health funding and program development at both state and local levels was raised as a barrier to the development of regional capacity. One region used the term “funding neurosis” as a driver perpetuating programmatic silos across their local health system.

State Contribution to Regional Capacity

After assessing the contributions of the lead public health entity and the regional network partners to the local public health system for each standard, participants considered how the New Hampshire DPHS, Department of Environmental Services (or other state agency) contributes to public health capacity at the local level. Assessment from this perspective required a different scale, which is shown in Figure 4.

Figure 4: Scoring Matrix for State Contributions to Regional Public Health Capacity

Score	Description
0	Participants have insufficient information to rate the contribution of state resources to meet this standard at the regional level
1	State planning, staff, or other resources or activities are insufficient to meet this standard at the regional level
2	State planning, staff, or other resources or activities are sufficient to meet this standard at the regional level

Using this scale, regional partners rated the adequacy of state planning, staffing, or other resources or activities applied directly at the regional level for each standard. This score referred only to those resources applied directly from the state to the region, and did not include resources or activities that are contracted by the state to regional partner entities.

Figure 5: State Contribution to Regional Public Health Capacity by Essential Service

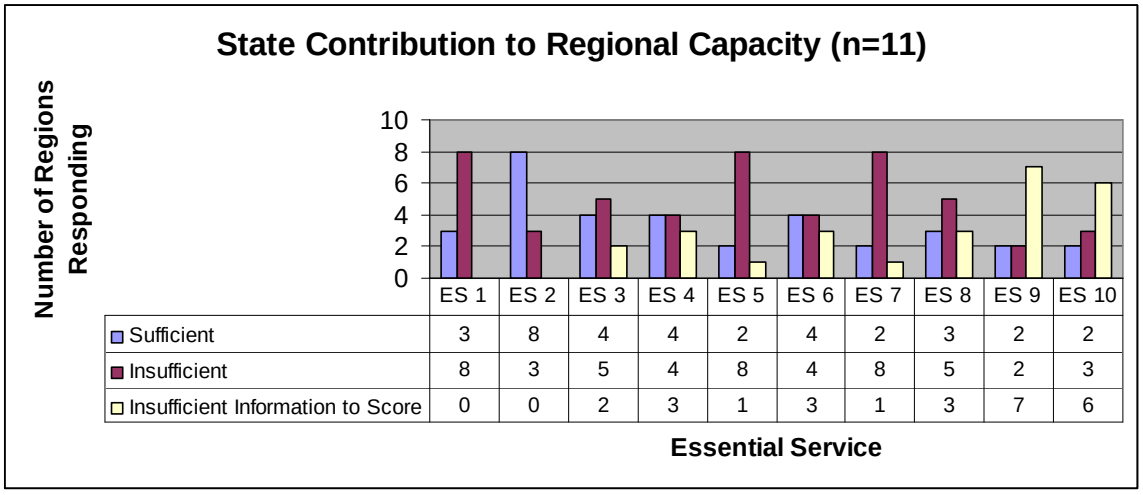

Figure 5 shows how regions scored the adequacy of state contributions to regional public health capacity. For half of the essential services, the majority of regions scored the state's contributions as insufficient to the regions' efforts. However, for diagnosing and investigating health problems (ES 2), the majority of regions (73%) scored state contributions as sufficient. The state's contribution to regional capacity was noted as being insufficient most often in the areas of: monitoring health status (ES1), developing policies and plans (ES5) and linking people to health services (ES 7). In the aggregate regions noted having greater than moderate capacity in linking people to services (ES7) and therefore may not require assistance from state agencies. However, regions noted only moderate capacity to monitor health status (ES1) and minimal to moderate capacity to develop policy and plans (ES5). These may be areas where the state should consider providing additional assistance to regions. The majority of regions (64%) felt that they had insufficient information to score the state's contribution to their regions' capacity to evaluate and improve public health service, or to engage in research. One of the twelve participating regions did not complete this component of the assessment due to time constraints, therefore the scores are reflective of eleven regions.

Benefits of Participation in the Assessment

Participants identified as benefits of participating in this capacity assessment as the opportunity to educate their community partners about the services that their agencies provide, and the opportunity to learn about the services provided by their community partners. Although a lack of capacity for coordinated policy development and planning was consistently identified, several regions noted that participation in this assessment, in itself, represented an effort toward coordinated planning and policy development. The diverse representation for the assessment demonstrated a high level of connectivity among agencies and organizations across several regions. As one participant noted, "Participants got a great sense of what public health is through their engagement in the process."

Limitations

Several limiting factors are evident to this assessment. First, this self-assessment reflects the subjective scores of each region's participating community members. Regions varied in the number and diversity of participating community partners and the extent of discussion among community members during the assessment. In addition, the assessment was completed over an 18-month period during which the public health networks responded to severe weather-related emergences including the 2008 ice storm, as well as the HIN1 flu pandemic. Each of these events highlighted the role and value of public health to communities across the state, which may have impacted capacity scores. Finally, public health network partnerships varied in their degree of development. In some cases, less developed regions (self-) scored higher than more developed regions, suggesting that the more developed regions may have a more critical sense of their capacities

Capacity Assessment Summary and Discussion

The findings of this assessment point to areas of capacity needing additional support to assure that New Hampshire has a strong local and regional public health system. Local public health entities need ongoing support to continue to work in their areas of strength which are: helping people in communities obtain health services, informing and educating people about health issues and responding to health events in their communities. They need additional support to enhance partnerships beyond emergency preparedness to address other public health issues.

Additional resources and technical assistance are needed to assist local public health entities to fulfill their critical role to coordinate data collection and analysis efforts to identify community and regional needs. Further, network partners need resources to enhance their capacity to work with diverse partners to develop community health improvement plans, sound public health policies, evaluation of and improvement of quality programs, and education about and enforcement of policies and regulations.

Future efforts should also support local public health entities to assure a competent local public health workforce, cultivate opportunities for regional engagement with research and academic facilities, and to implement evidence based practices.

In the fall of 2011 the national Public Health Accreditation Board (PHAB) began accepting applications for voluntary accreditation from state, local and regional health departments. While non-governmental entities such as the public health networks are not eligible to apply for accreditation, the standards provide a sound framework around which to build New Hampshire's public health infrastructure. The prerequisites to apply for accreditation include: a community health assessment, a community health improvement plan, and an agency strategic plan. Given the results of these assessments, it is clear that there would be tremendous benefit to the state agency providing technical assistance and resources to assist networks to complete these prerequisites.

As the state and networks seek to address key health issues in the state such as tobacco and substance use, inadequate nutrition and physical activity, the need for strong community partnerships and planning across regions is critical.

Governance Assessment

Background

The landmark publication, *The Future of the Public's Health in the 21st Century*, describes the critical role that government holds in assuring the conditions in which people can be healthy. The report states that federal, state and local governments accomplish this by assessing health status and needs, developing policies, and assuring that necessary services are provided.[1]
The regionalization task force agreed that public health is a governmental responsibility, which in many states is delivered by city or county health departments. Lacking this structure in most of New Hampshire, many public health services are delivered through a large number of private, non-profit entities. It has been proposed that regional public health councils be developed to serve in a governance role to monitor and assure the delivery of public health services to the extent resources allow. The proposed public health council would be comprised of town selectman, county delegates from the region, and public health professionals. A governance assessment process was developed to determine each region's level of readiness to take on this function.

This section of the report focuses on the governance assessment process, and draws on information gathered during assessments that were conducted across 12 of the 15 identified public health regions between January 2009 and May 2010.[2]

Method

The public health network partners in each region participated in the assessment process, in some cases working through the governance assessment process in a separate meeting following completion of the capacity assessment, and in other cases in conjunction with the capacity assessment. A facilitator led the participants through a two-part assessment.

Part I utilized a tool to guide a conversation about who is responsible or held accountable to assure that the essential public health services being delivered are based on assessments of community health, are evidence-based, and coordinated. These are responsibilities that are considered to be those of a governmental board of health. The tool was adapted from the CDC's National Public Health Performance Standards Program Governance Instrument,[3] which is intended to assess the capacity of boards of health. This assessment is in contrast to the previously described capacity assessment, which was focused on the delivery of public health services. Part I helped participants understand the role of a regional governing body or the proposed public health council in overseeing the delivery of services and programs in the region and assessed the regional partner's capacity to serve in that role. The assessment covered nine of the ten essential services. Research was omitted from the assessment to abbreviate it somewhat and as this essential service is not frequently a priority for regional entities.

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[1] The Future of the Public's Health in the 21st Century, Institute of Medicine of the National Academies, National Academies Press, Washington, DC 2003
[2] The three remaining regions not reflected in this summary are those with municipal health departments: Nashua, Portsmouth, and Manchester.
[3] http://www.cdc.gov/nphpsp/documents/governance/Gov.BookletA.pdf

Part II focused on the opportunities and challenges associated with having a certain type of entity (county or municipal government, existing nonprofit, new nonprofit, or another model) serve as the lead public health organization to deliver or coordinate services within the region. This component of the assessment assisted the DPHS to evaluate what model might work best around the state.

For Part I, participants were asked to rate the region's readiness to *oversee* the delivery of the essential public health services. For each service, participants considered a series of questions and rated them.

Examples of the types of questions asked are:

Do you have a mechanism for making sure that a comprehensive community health assessment is consistently happening, updated, and disseminated?

As health threats are identified or disease investigations take place, what mechanisms are in place to assure that information gets communicated well throughout your region?

Is there a mechanism in place for gathering public input on health issues within the region and for providing information on health issues to the public (e-mail, websites, forums, annual meetings, reports etc.)?

The following categories were used to measure readiness: [4],[5]

Figure 6. Scoring Categories for Part I of the Governance Assessment

Rating	Description
Minimal/Not Ready	≤ 25 percent of the measure described within the question is met.
Moderate/On the Way	25 to 50 percent of the measure described within the question is met.
Significant/Almost There	50 to 75 percent of the measure described within the question is met.
Optimal/Ready	> 75 percent of the measure described within the question is met

Scoring for the governance self-assessment, while quantifiable, is subjective based on the contributions of the region's partners. In answering the questions, participants tried not to focus on a single or small number of the partners within the system, but rather answered the question for the overall system. It was emphasized during the assessments that the purpose of scoring was not to obtain a high score at the end. Rather it was suggested that the results be used as a map for critical thinking about the region's strengths and weaknesses to oversee the delivery of public health

[4] Regions in which the governance assessment process was conducted separately from the capacity assessment, the terminology for the categories for measuring readiness was: not ready, on the way, almost there, and ready. For regions in which the governance assessment process was conducted separately from the capacity assessment, the terminology for the categories for measuring readiness was consistent with the capacity assessment terminology: minimal, moderate, significant, and optimal.

[5] Regions in which the governance assessment process was conducted separately from the capacity assessment, the terminology for the categories for measuring readiness was: not ready, on the way, almost there, and ready. For regions in which the governance assessment process was conducted separately from the capacity assessment, the terminology for the categories for measuring readiness was consistent with the capacity assessment terminology: minimal, moderate, significant, and optimal.

services and opportunities for improvement and strategic planning, and better understand how to utilize limited time and energy.[6]

During Part II of the assessment, the participants were guided through and contributed to a conversation on the challenges and opportunities facing the region in considering the types of entities that could serve in the role of lead public health entity including:

- County,
- Municipality,
- Existing non-profit organization, or
- New non-profit organization

DPHS requested suggestions from regional partners about any other potential models for a successful lead public health entity.

In the model as proposed by DPHS and the statewide task force, the lead public health entity will employ regional staff; enter into agreements with adjoining regions for shared staff positions; and act as the contractor/fiscal agent with the DPHS. The lead public health entity may also directly provide some or all of the essential public health services within the region, but their role relative to oversight is to be responsible for making sure the services are delivered under the leadership of the region's public health council.

The participants used questions in the following topic areas to guide their conversation about the challenges and opportunities associated with having an existing non-profit, a new non-profit, a municipality, or a county play the role of lead public health entity. The topic areas and sample questions are shown below.

Figure 7: Part II Part II Governance Assessment – Lead Public Health Entity Discussion

Topic	Sample Question
Gathering information	Is one type of lead public health entity better positioned to obtain input on health issues in the region from a broad representation of people through a variety of mediums?
Collaboration	Is one type of lead public health entity better positioned to promote collaboration among individuals and organizations providing local public health services within your region?
Evaluation	Is one type of lead public health entity better positioned to objectively review reports about the health of the region?
Workforce issues	Is one type of lead public health entity better positioned to support the region in efforts to ensure the hiring and maintaining of competent public health professionals?
Organizational capacity	Does having any one model of lead public health entity in your region ensure that the entity has the availability and resources to support the information technology needs, legal, and administrative services necessary for success?
Funding	Does having any one model of lead public health entity impact efforts of the region to apply for and provide the fiscal management for any source of public or private funds?
Policy and legal processes	If there were benefits to the passage of consistent ordinances across communities in your region, would it make a difference what type of organization was the lead public health entity, serving in a coordinating/advocacy role to work with municipal officials?

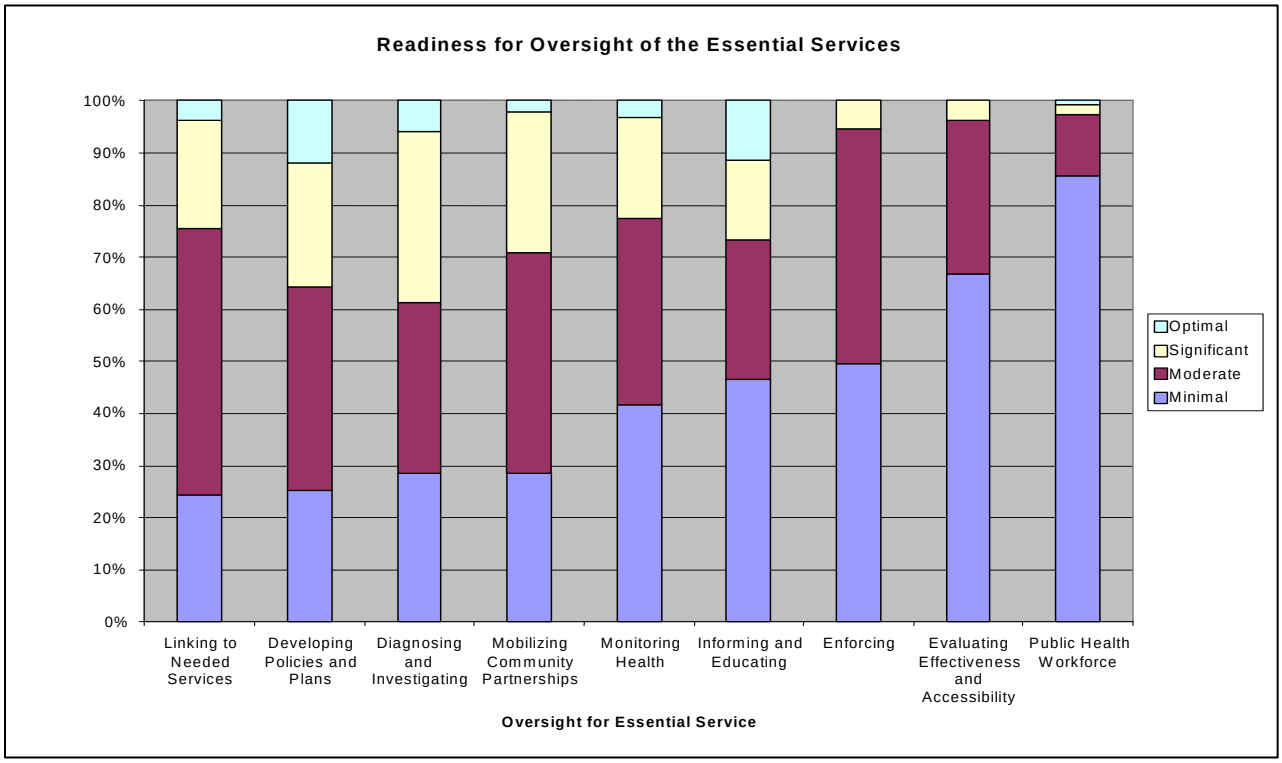
[6] In conducting the governance assessment, it was made clear to participants within each region that this was recognized as a subjective self-assessment, and that this information was gathered not to measure regions against each other but rather to: help focus prioritization within the region; and support the DPHS draw conclusions across regions. Limitations include: some questions not being scored due to time constraints or the will of the regional partners; and the composition of the regional stakeholders participating in the assessment which varied in number, professional association, and geographic representation across each region.

Findings Part I: Capacity to Provide Oversight of Public Health Services

In conducting the governance assessments, it was apparent that the public health networks are in varying states of maturation and organizational development across the regions. This certainly plays into the regional partner's comfort level with taking an oversight role. While some regions have made great strides in their capacity to provide or conduct services as evidenced by the findings of the capacity assessment, the resources, expertise, knowledge, and authority necessary for oversight is still emerging across all of the regions.

Figure 8 provides an overview of the aggregate readiness levels for each of the 12 regions included in this assessment to serve in an oversight role.

Figure 8: Readiness for Oversight of the Essential Services



In the aggregate regional partners were more likely to state that they had moderate to optimal capacity for oversight of the following services:

- Linking people to needed services
- Developing policies and plans
- Diagnosing and investigating health problems
- Mobilizing community partnerships
- Monitoring health status

Overall, regions were more likely to say they had minimal capacity to oversee:

- Informing and educating the public
- Enforcing laws and regulations
- Evaluating the effectiveness of services
- Assuring a competent workforce

It should be noted that the regions seldom considered that they had optimal oversight of the essential services.

Findings Part II: Considering the Optimal Lead Public Health Entity

As noted above, Part II of the governance assessment focused on examining the challenges and opportunities facing each region in considering the types of entities that could serve in the role of lead public health entity. The assessment focused on four models for lead public health entity including: county, municipality, existing non-profit organization, and new non-profit organization. These models were selected as they represent some of the existing models and potential models that could be based in government as exists in most other states.

Overall, no clear preference for one model over another emerged that was consistent across the regions. The idea of instituting a consistent model of lead public health entity in every region did not find support. In addition, partners in very few regions came to a conclusive decision by the close of the meeting among all of the stakeholders about one model standing out as the final choice for the region, although this was not the goal for the process. Many partners reached agreement on certain aspects or opportunities highlighted in each of the categories of lead public health entities to assist them in future planning and decision-making. All indicated that the conversation among partners was helpful to them in generating thinking and that further planning and discussion would be necessary as the next step, in addition to garnering more detailed and concrete information from the DPHS.

- **New Non-profit**: The most consistent finding of the assessment was that the concept of creating a new non-profit entity to serve in the role of lead public health entity was not a feasible option. Reasoning focused on the significant infrastructure costs associated with creating a new organization in these economic times. In one case, the Public Health Network is in the process of, or considering, becoming a 501(c) 3. In this instance, regional partners could see a new organization becoming the lead public health entity.

- **Existing Non-profit**: Regularly mentioned as a positive reason to choose an existing non-profit to play the role of lead public health entity was a non-profit organization's ability to draw upon an established track record. Non-profits were noted to be more flexible and responsive to changing needs than government entities. Concerns focused on whether the entity was large enough or had enough capacity to manage the role.

- **Municipality**: In most cases, due to the smaller size of the communities in a region, participants suggested that many municipal governments do not have sufficient infrastructure to fulfill the role of a lead public health entity. Additionally, having a municipality serve as the lead public health entity for a region would not be a good fit as it would be beyond the scope and primary interest of any one single municipality.

- **County**: Regional partners often indicated that a county's ability to accept and manage funding, as well as its infrastructure capacity for technology and communication were strengths it could bring to the role of lead public health entity. However, several participants voiced concern that their county government did not have adequate infrastructure. In the regions that considered a county as a strong fit for serving as the lead public entity, there was the confounding challenge that the region represented communities from two different counties or the region comprised only a portion of a county.

Governance Summary and Discussion

Leaders within regions worked hard to get a broad, diverse set of stakeholders assembled to participate in the governance assessment conversation. Participants in each region provided helpful critical observations, advice, and direction for improving the process, and generated useful information for both the regional partners to use in continuing their work and for DPHS as it lays the groundwork for working with local public health partners on a comprehensive, workable regional public health system for New Hampshire.

In examining the work of all of the regions, several themes emerged:

- **Every region is different**. Each of the regions in the state has unique attributes and faces unique challenges. Thus a one-size-fits-all approach to public health regionalization likely will not be the most effective or efficient model to employ. By nature of the organic manner in which the existing public health networks and regional efforts have grown up from the grassroots, the 12 regions conducting the governance assessment are in varying stages of development, from new and emerging regional entities to those with significant history and accomplishments. In particular, in considering what type of entity would be best suited to serve as the lead public health entity; all regions believed strongly that requiring them to follow a specific model would not be advantageous.

- **Build on the base**. In general, regional stakeholders were open to building a strong regional public health system. Regional partners voiced the importance of building on the groundwork that has been developed within each region. Partners repeatedly stressed that lacking a local governmental-based infrastructure, local public and private sector partners have worked together to build public health networks from the ground up. Participants encouraged DPHS to honor the work that has been done, and the working relationships and alliances that have been built.

- **Individual towns can benefit from public health regionalization**. Participants representing individual towns expressed the belief that regionalization could result in more efficient, coordinated, and additional high quality services for their residents through the connection to a larger region with more capacity and resources.

- **Regionalization can improve coordination within a region**. Participants in almost all of the regions noted that while the region had some level for oversight on a number of the essential services, there was not consistency across the whole region. For example, some partners within a region were providing oversight just for the particular population they serve or a specific health issue. These challenges were due to: geographic barriers, size of a town, community, or population and the funding sources for certain initiatives.

- **Public health regionalization can strengthen the role and linkages for health officers.** Stakeholders across the regions were very articulate about the importance of public health regionalization benefiting the role of and linkages for local health officers. As the skill and experience level of health officers varies, the opportunity for communication, training and other linkages for health officers beyond their town level and continued statewide health officers meetings would be of benefit.

The structure of the governance assessment allowed ample opportunity for stakeholders to raise concerns that they wished to discuss. The most **common concerns** included the following:

- **Will consistent, adequate funding be available to fund a regional public health infrastructure?** Participants across most regions identified the concern that for public health regionalization to succeed, consistent, adequate funding is critical and cost shifting from the state to the regional level cannot occur. Maintaining the commitment of town policymakers, county officials, and non-profit partners, requires a level of certainty and planning about budgeting, and stakeholders identified this area as a significant concern.

- **Does public health regionalization create additional bureaucracy?** Some regional partners were concerned that the creation of a formal statewide system of regional public health networks would introduce an "extra layer of bureaucracy" for dollars to flow through, for administrative expenses to be taken out of the service system, and perhaps diluting the role of both "local control" and the responsibility of the state.

- **Will public health regionalization really benefit us?** Some participants remained unclear about the benefits of regionalization to their community. This reflects a need for the DPHS to present the benefits of regionalization based from the current literature and the economic and efficiency opportunities for improving public health service delivery and the oversight of such services.

- **What are the avenues for improving communication?** Regions broadly, and the individual towns within the regions more specifically, face an underlying challenge of consistent communication across the entire region. In addition, the ability to engage towns is challenging due to resource constraints. For example, in smaller towns, there are fewer staff and technology tools available to receive and communicate information. Informing boards of selectmen and other key leaders who assume many roles has proven challenging for both the regional network partners and town leaders.

- **Is the regional composition final?** Partners within a few regions felt strongly about the composition of the region and which towns were or were not included in the region. Participants expressed their concerns, citing historical precedence or other overlapping service systems as the rationale to add or subtract towns to or from the region. For example, regions may share towns that may be within multiple regions for different services/planning purposes, including public health, hospital service areas, human services, and emergency preparedness work and dispatch protocols. DPHS was clear to state that, for the most part, current regional boundaries would be honored as the work to determine regional composition was done with significant input.

The governance assessment process provided an opportunity for regional partners to identify the needs that they had in moving regionalization planning forward within their regions. These commonly identified needs provided very useful feedback for the DPHS to help focus decision-making on these outstanding questions and legal issues. Some of these **outstanding questions and legal issues** include:

- **Gaining additional and clarifying information**. Partners expressed a need for additional information about the state's expectations of the regions. These included more clarification of definitions, including a lead public health entity and greater detail about the extent to which each of the essential services must be provided, so that the partners within each region could further refine their regional planning.

- **What will the state's role be with respect to oversight and assurance?** Some partners questioned the role of the state in overseeing and assuring public health services at the regional level. Some participants believed that accountability is a role for state government, and that it would be challenging for a local entity to succeed in playing that regional role due to limited resources, capacity, and expertise in areas like data management and evaluation. Further it was thought that the state provides a level of objectivity related for funding decisions. Participants sought clarity as to whom the proposed regional public health councils would report. They questioned if the regional councils would report to a state level council.

- **How could it be possible for a region to span two counties?** In a few regions, the partners believed that a county would be a good fit to serve as the lead public health entity, but their region spanned two counties. There were significant questions about how they would plan and address this in terms of raising resources for services across county lines. Participants asked if there was precedence for this across regionalized service structures in other program and policy arenas.

- **How do towns and their budgets fit into the regional public health structure?** Participants noted their experience in navigating their town budget process, but expressed concern about the interplay between town budgets and the regional structure and how that process might work.

- **Regional public health councils and existing non-profits board: Who would have the authority and responsibility?** Some regions have a strong non-profit board in place providing leadership for public health activities within the region. Regional participants struggled with understanding the interplay between a regional public health council and that of a non-profit board and their respective accountabilities. Participants identified this as an area needing greater legal clarity.

- **Make the policy case for regionalization very clear for decision makers**. Each region successfully engaged local policymakers in the governance assessment process. These policymakers included: town selectmen, county leaders, elected state representatives and senators. Suggestions were made, in many cases by the policymakers themselves, for DPHS to make the case for regionalization makes in a very clear, simple and straightforward manner.

Assessment of Municipal Health Department Capacity and Governance Issues Relative to Regional Expansion

Background and Introduction

When thinking about examining the capacity and governance issues relative to the few municipal health departments in the state, DPHS staff determined that an alternate assessment methodology and approach was necessary. Further, because these health departments already function under the governance of either a board of health or city council, current governance capacity was not examined. Thus, the intent of this alternate assessment methodology was to better understand the programmatic, jurisdictional and governance issues specific to municipal government entities expanding their current role by serving as the lead public health entity in their respective regions.

Berlin, Manchester, Nashua and Portsmouth Health departments (LHD) are all situated in government as municipal health departments. Beyond that commonality, there are many differences among them. Manchester and Nashua are comprehensive health departments with extensive staffing. They provide many of the ten essential public health services and serve as the lead entity for emergency preparedness in the surrounding towns within their respective regions. Portsmouth Health Department also serves as the lead entity for emergency preparedness in their region but their municipal services are focused on environmental health. Berlin Health Department provides environmental health services and home health services.

Thus, these LHDs currently support some of the functions envisioned for the regional lead public health entities through contracts with the DPHS for several specific programs. They are all frequently looked to as experts by other local health officers, particularly relative to regulatory and enforcement activities.

Methods

The process conducted in these regions included 2 components. LHD directors first completed an abbreviated adaptation of the National Association of County and City Health Officials Local Health Department Self-Assessment Tool used in the capacity assessment previously summarized. Secondly, a focused discussion was held with senior LHD staff to ascertain the capacity of, and issues related to, the LHD providing essential public health services outside their city.

This first step in this process involved DPHS staff selecting a limited number of specific NACCHO standards across all of the ten essential services. LHD staff was asked to first describe their current level of region-wide capacity and activity for each standard/service and to answer three related questions:

- Could they envision their agencies implementing these standards/services regionally were they provided with resources to do so;

- What might the LHD role be in the region in doing so; and
- What barriers or challenges might the LHD encounter were they to provide assurance and oversight of the essential services across a region?

The format in the capacity section below departs from the previous capacity section and reflects the open-ended discussions that were held with the LHDs versus the “voting” method used in the other 12 PHRs.

Findings

Responses to the above questions are grouped below by related essential services.

Community Health Assessment, Engagement, and Planning: Essential Services 1, 4, and 5

The larger municipal health departments have or are able to secure the resources to conduct a thorough community health assessment and are looked to by other community partners such as hospitals to do so on their behalf. While one focused on the surrounding towns, the other conducted their analysis solely on the city proper. These LHDs expressed an ability and willingness to offer technical assistance to other communities interested in doing more localized health assessment planning. Smaller municipal health departments' participation in community assessments was more like that of public health networks, in that they were participants but not leaders.

A standard next step following a community health assessment is the development of a community health improvement plan. The larger LHDs are now leading efforts to complete plans for their respective cities. The smaller health departments contribute to health improvement planning similar to the public health networks. Finally, like the public health networks, three LHDs convene and coordinate a regional public health emergency preparedness planning process under a contract with the DPHS.

Protect People from Health Problems and Health Hazards and Enforce Public Health Policies and Plans Essential Services 2 & 6

Much discussion focused on these essential services, as they have a regulatory function and statutory basis that falls into the purview of municipal health departments. There are typically two components to these essential services: 1) environmentally related investigations and regulatory enforcement; and 2) infectious disease outbreak investigations.

All four LHDs were clear that their legal authority only allows them to conduct investigations or mitigate hazards within their city. All four also described a long-standing practice of providing peer-based technical assistance to other local health officers in their region around inspection and enforcement work such as food service, nuisance calls, etc. A novel approach cited by one LHD during a flood response leveraged an existing capability of another city department. The LHD staff provided technical assistance to their fire department, which then provided assistance to another town via an existing mutual aid agreement. These commendable activities result in the LHDs providing valuable support to other towns in the region.

With respect to infectious disease investigations, two LHDs receive funds from the DPHS to conduct disease surveillance and outbreak investigations within their cities. Under this arrangement, one LHD also assisted with a 2010 outbreak in a neighboring town. One LHD noted that during the H1N1 pandemic they received authorization from the city to conduct cluster-related investigations in other towns. However limited, these examples provide insights on how these services can be expanded regionally on a routine basis. That said striking differences came to light regarding the guidance LHDs received from their municipal legal counsel during the regional response to H1N1 as to their ability to work regionally. Finally, concerns were voiced that other legal issues may arise from providing direct health care services during public health emergencies.

Issues related to revenues and fees were raised when thinking about a regional environmental health enforcement role. If, for example, LHDs were to assume responsibility for permitting of restaurants outside their city, they would expect to receive the associated revenue. This would need to be applied to both "self-

inspecting" communities and the towns where DPHS inspectors currently do inspections. It is clear that all fees and revenues would need to be shifted to the LHDs.
Significant discussion pointed out the need for the DPHS to improve its partnerships with cities around regulatory issues. An example was the proposed changes to state regulations about mobile food vendors, where one LHD was able to identify several unintended consequences in the proposed regulation. Other barriers include: uniformity of rules, codes and enforcement mechanisms between towns. One challenge identified is that because laws differ across towns it would be hard to provide a uniform message with the intent to educate the public of the benefits of laws, regulation and ordinances for the region.

Giving People Information to Make Healthy Choices - Essential Service 3

Unlike any regional expansion of enforcement services, all LHDs agreed there are not the jurisdictional issues related to expanding disease prevention/health promotion services regionally. One LHD conducts routine health screenings and vaccination programs at locations in adjoining towns demonstrating that clinical services can be provided regionally.

Three LHDs offer ongoing educational programs to provide information to the residents in their cities, while the other LHD looks to community based health entities to provide this service. On occasion, health information is provided to residents in other towns, but it tends to be relative to acute situations such as a school-based meningitis outbreak. The LHDs confirmed that further expansion of education programs regionally is dependent on additional funding support.

Help People Receive Health Services- Essential Service 7

Three of the four LHDs described a key role in initiatives to improve residents' access to health services. This included a mix of initiatives that are both city-specific and region-wide. The other LHD's role is providing referral information to residents. There was also a general belief that other agencies have strong existing systems linking people to services, especially for clinical services. LHDs stated that there are no statutory limitations to expanding this work regionally.

Maintain a Competent Public Health Workforce Essential Service 8

Consistent with the findings in all of the regional assessments, all four LHDs agreed that this function is currently employer-based with no regional oversight. The LHDs provide competency-based educational opportunities for their staff. Through a contract with the DPHS the Manchester Health Department provides substantial training to public health practitioners statewide through the Institute for Local Public Health Practice and at statewide meetings of local health officers.

Two LHDs serve as models with respect to their internship and mentoring programs through multiple efforts: long-standing relationships with academic nursing programs to serve as a practice site for interns and students; hosting of CDC apprentices; physician internships; and serving as a regional training site for sexually transmitted disease treatment and prevention. The LHDs with intern programs did see opportunities to place nursing interns in other towns to expand the reach of their program.

Evaluate and Improve Programs Essential Services 9

All of the LHDs evaluate their own work through a mix of evaluating evidence-based practices and monitoring progress toward meeting objectives identified in specific work plans. Two LHDs are also increasing their internal quality improvement initiatives. Similar to the workforce discussion above, there is no current effort to evaluate regional public health programs implemented by other agencies.

Contribute to and Apply the Evidence Base of Public Health Essential Service 10

LHDs capacity to participate in research to improve public health practice is variable; one has ongoing links to both UNH and Dartmouth and another two look to strengthen their work in this area. One potential concern voiced from a regional perspective is that LHD involvement regionally may raise perceptions that towns were being compared to one another and that the profile of specific health issues could be raised at the local level with unintended consequences.

Regional Governance and Oversight

This series of structured discussions generated an enhanced level of understanding about the specific capacity and programs each LHD currently provides within their respective cities and throughout their public health region. To a large extent the findings confirmed the DPHS' existing knowledge and reinforced what the opportunities and challenges might be in having a LHD serve in a lead role with respect to governance and oversight of a regional public health system. Perhaps most informative was the opportunity to hear the LHDs differing perspectives on their perceived role within the overall public health system. Some themes did emerge.

- **Some essential services could be readily expanded beyond city limits with resources.** In sum, the LHDs overall described current activities at the regional level in the areas of: health assessments; some community health planning, with public health emergency preparedness cited as a uniformly strong area; participating in community-based partnerships to improve health; and offering selected health promotion and education programs. Two of the four LHDs expressed a strong desire to expand these services regionally were additional resources available to do so. Another LHD expressed satisfaction with public health services being currently coordinated in their region by a private, non-profit entity. The fourth LHD did not see a significant role for their agency in these areas. However, all felt that a hypothetical expansion of these types of services regionally would likely not present major challenges from a statutory or regulatory perspective.

The challenges described were: the availability of financial and staffing resources; consent from local elected officials for an expanded regional role; and whether this model would gain acceptance from the wide range of officials from surrounding municipalities and other agencies that make up the public health system. The likely need for changes to some human resources policies and revisions to position descriptions to clearly specify the regional nature of an employee's work was noted. Notwithstanding these issues, there were several examples given of other towns and agencies already being supportive of the LHDs implementing these types of services regionally, so the political will to do so does exist to some extent.

Having LHD staff perform any work in adjoining towns brings up time-tracking and risk management related questions. Since workers' compensation coverage is in effect during all work hours, it applies regardless of where a worker is at the time of an accident or injury. It was noted, however, that concerns about workers' compensation claims might lead to cities having differing perspectives on the cost/benefit of having city employee's work in other towns.

- **More complex issues surfaced when discussing the LHDs provision of investigative, regulatory and enforcement services.** Having LHD staffs provide these services regionally would require statutory changes giving lead public health entities in each region this authority. Another model discussed was that of city health department staff providing oversight of health officers in other towns throughout a region. For this to be successful, several LHDs expressed a strong need to ensure that town governments appointed health

officers with the appropriate education, training and credentials. A strategy to accomplish this might be to encourage agreements initiated by towns to appoint individuals as health officers or deputy health officers in a number of communities so that towns could cost-share the services of a highly trained, well-qualified, full-time position. This leverages existing statutes that allow for appointment of the same person by several towns. Finally, there was agreement among LHDs that the current informal practice of providing technical assistance to other local health officers does not present statutory issues, since it is solely advisory in nature.

Liability was a major point of discussion relative to city staff working in adjoining towns and/or providing oversight to health officers in other towns. A key influence may be whether the city is self-insured or purchases insurance in the marketplace. It was noted by a city risk manager that self-insured cities might be more conservative in assuming what could be perceived as any additional risk.

- **Questions were raised around governance roles among respective governing bodies.** Perhaps the most critical governance and oversight issue to address is to clearly define the roles, responsibilities and relationships between the respective LHD Board of Health, Board of Aldermen/City Council and a regional advisory or oversight council. For example, there is the potential for the local elected officials questioning the breadth of activities being provided in other towns by a municipal agency. Issues might also arise when the public health priorities of a city's governing body differ from those of a regional council.

Summary and Recommendations

The larger local health departments possess broad and diverse expertise, particularly in the areas of disease investigation, environmental inspection and enforcement, emergency preparedness and community health assessment and planning. LHDs frequently provide technical assistance to surrounding towns and local health officers relative to environmental and food investigations, mitigation and other regulatory issues, but actually conducting these activities exceeds their current legal authority. The perceived risk associated with expansion of regulatory or direct service work may be related to the type of insurance held by the municipality with self-insured cities likely being more conservative.

There is a willingness on the part of these LHDs to consider expanding services beyond their municipal borders. Expansion could occur with additional funding and within the confines of current statutes for non-regulatory functions such as community assessment and planning, and informing the public relative to health issues so long as resources are provided.

The DPHS and public health partners should explore regional health officer models that utilize the existing expertise of credentialed, professional health officers to oversee the work of local health officers. Training, credentialing, statutes and fees all would need to be explored.

Financial Assessment Background and Introduction

When the DPHS set out to assess New Hampshire's public health capacity and governance issues through the previously described assessments to plan for a regionalized public health infrastructure, it was determined that a thorough assessment of local and regional public health financial resources in the state was another key element. Throughout the regionalization assessment process, public health partners asked DPHS, *"How will you fund a regional public health structure in New Hampshire?"* Our response was that we first needed as complete a picture as possible of all existing resources for public health to inform future planning. That includes an inventory of resources deployed by the state, or allocated at the local and regional levels.

DPHS enlisted the advice of academic researchers and public health partners to aid in the design of their study. To capture the full breadth of public health funding sources available at the local and regional level, New Hampshire public health officials documented funds contracted by the state; state staff resources employed at the local level (such as disease investigation nurses, and restaurant inspectors), and surveyed municipalities. Further, they asked all contracted agencies to complete a survey of all funds they received beyond those contracted by the DPHS or town funds. Hospital spending on community health education or health promotion was also counted.

Method

Data Collection

Data collection was done from 2009 to 2010 and was collected from four distinct sources:

- **State Contracts-** includes funds (federal and state) contracted by the DPHS to contracted agencies for the provision of public health services. This was for the time period of state fiscal year 2007. These funds **do not** include contracts that are not focused regionally (such as evaluation, marketing, laboratory equipment, training etc).

- **State Resources** -includes services provided by state employees at the local level including food inspection, disease investigation and childhood lead poisoning prevention services. These funds were also for the time period of 2007. These funds **do not** include public health funds that support public health staff and administration providing services at the state level.

- **Municipal spending -** is that money spent by cities and towns on public health services utilizing a few defined categories, such as staff salaries and benefits, restaurant inspection, immunizations, and emergency preparedness. Every city and town was sent a survey to complete and asked to report on the time period of either calendar of fiscal year 2007.

- **Non-Municipal Spending** – recognizing that local contracted public health partners organizations bring in significant funds from other sources, substantial effort was made to collect this data. All contracted DPHS agencies were asked to complete a spreadsheet indicating funds they received in state fiscal year or 2007 (or the most current year available) to provide public health services. Funds were categorized by type or service (e.g. tobacco prevention, primary care, etc) and by source of funds including: federal – direct to the agency; donations, private, state funds other than DPHS and other. Also in this category public health networks were asked to provide data on hospital community education funds in their respective regions.

Service and Activity Categories- Data from all sources were collected using specific categories and activities. For the purpose of analysis, several categories were combined. For example, direct services are comprised of cancer prevention, primary care, family planning, WIC (Women, Infants and Children nutrition program) and oral health. Preventing the spread of disease includes disease control, food inspection, immunizations, mosquito spraying, and STD investigation. Promoting healthy behaviors is inclusive of abstinence education, home visiting and HIV prevention. Protecting against environmental hazards includes lead poisoning prevention. The remaining categories are fairly self-explanatory.

Data Caveats and Limitations

Data collection was hampered by two significant public health events, a major ice storm and the H1N1 epidemic. Despite these events, significant effort was made by DPHS staff to enhance the return rate of the data from municipalities, particularly larger municipalities, and contract agencies. There was a 67.5% return rate for the municipal data. Some towns did not provide responses. To prepare a full picture of statewide spending, estimates for missing towns, were calculated based on similar towns. Statistical regression was used to build these estimates basing 'similarity' on the following:

- population
- poverty
- land area
- age
- education
- income
- home value
- unemployment
- inequality of income distribution

It should also be stated that for the municipal survey, the larger health departments primarily reported staff salaries and benefits. While the work of staff cuts across many of the categories, breaking out funds by types of service or activity would have required substantial analysis. Therefore the majority of their funds are reported as salaries and administration.

DPHS contracted with 113 agencies resulting in 187 contracts for the provision of public health services in state fiscal year 2007. Fifty-one non–municipal survey forms were returned from these agencies, some submitting more than one for different contracts or services. So while New Hampshire may be one of the first states to provide an expanded picture of public health spending and resources, the results likely under represent the total spending on local public health in the state.

Each public health network lead agency that returned a non-municipal survey form was asked to contact the hospitals in their region to ascertain dollars spent on community education. Ten of the fifteen regions provided this information representing 14 of the 26 hospitals. Thus while the reported contribution of the hospitals is quite large, it under represents the total spending for community education in the state.

Analysis and Discussion

This report provides an overview of spending patterns.

- Where do public health funds come from?
- Are there regional differences in spending?
- Do regions each use a different mix of public services?
- How much does each region spend on a per capita basis?

Spending patterns are further dichotomized in several ways in this study:

- Is the amount or proportion of spending in urban areas different from rural areas?
- Do poorer towns spend more or less on public health?

The sections below discuss initial findings in more detail.

Sources of Funds

The sources of funds and patterns of spending are found in Figure 9.

- Most local public health funding comes from state contracts (41%) and non-municipal funds (42%).
- Municipalities contribute 13% of all local public health spending in the state. The two larger cities spending comprise 77% of municipal spending.
- State resources or staff deployed at the local or regional level makes up 4% of local funding.
- Most local public health spending goes towards direct services (46%).
- Direct services are supported roughly equally from state contract funds ($10,035,454) and non-municipal funds ($11,354,489).
- Fourteen percent of funds are spent locally on promoting healthy behaviors ($1,210,923 or 18% from state contracts and $5,385,941 or 82% from non-municipal funds).
- Over two-thirds of the $5,385,941 in local funds spent on promoting healthy behaviors is hospital community education spending (with just over half of hospitals reporting).
- Eight percent of public health funds spent locally is for emergency preparedness.

Figure 9. Funds by source (total dollars).

	Source					
Service	State Contract	State Resources	Municipal	Non-municipal	Total	Service % of total
Direct Services	10,035,454	0	0	11,354,489	21,389,943	46%
Emergency Preparedness	3,567,874	0	64,159	80,632	3,712,665	8%
Injury Prevention	286,128	0	0	363,696	649,824	1%
Tobacco Prevention	698,113	0	0	418,061	1,116,174	2%
Substance Abuse Prevention	2,624,972	0	0	799,941	3,424,913	7%
Preventing the Spread of Disease	234,452	1,573,752	1,031,705	19,997	2,859,906	6%
Promoting Healthy Behaviors	1,210,923	0	0	5,385,941	6,596,864	14%
Protecting Against Environmental Hazards	95,674	415,130	0	70,133	580,937	1%
Salaries / Administrations	0	0	4,301,286	0	4,301,286	9%
Other	0	0	657,349	997,062	1,654,411	4%
Total	18,753,591	1,988,882	6,054,499	19,489,952	46,286,924	
Source % of total	41%	4%	13%	42%		

Figure 10 breaks down the non-municipal funds into additional categories.

- Of note is that substantial funding is leveraged for public health from sources outside of state public health contract funds (42% of all local funding). The majority of these funds (37%) come from federal funds, which go directly to the agencies. Most of these funds are for the provision of direct services (87%), primarily for primary care and WIC services.

- Other funds comprise 31% of the non-municipal funds with the majority of these being hospital community education funds (which do not go to public health agencies but are available to community members.)

Figure 10. Source of non-municipal (total dollars).

Service	Federal	Donations	Private	Non-DPHS State	Other Funds	Total	Service % of total
Direct Services	6,346,542	2,017,242	1,450,706	123,439	1,416,560	11,354,489	58%
Emergency Preparedness	5,000	0	55,420	1,060	19,152	80,632	0%
Injury Prevention	0	1,990	101,341	249,503	10,862	363,696	2%
Tobacco Prevention	63,000	0	315,062	0	39,999	418,061	2%
Substance Abuse Prevention	424,260	7,745	63,097	200,122	104,717	799,941	4%
Preventing the Spread of Disease	0	0	0	500	19,497	19,997	0%
Promoting Healthy Behaviors	168,270	155,894	356,070	265,926	4,439,781	5,385,941	28%
Protecting Against Environmental Hazards	60,133	0	10,000	0	0	70,133	0%
Salaries / Administrations	0	0	0	0	0	0	0%
Other	200,063	192,599	413,531	135,022	55,847	997,062	5%
Total	7,267,268	2,375,470	2,765,227	975,572	6,106,415	19,489,952	
Source % of total	37%	12%	14%	5%	31%		

Funds from each funding source are spent in a different way. The "spending profile" (Figure 11) shows the proportion service mix by funding source:

- Direct services comprise 54% of state contract funds and 58 % of non-municipal funds.
- State resources deployed at the local level are spent entirely on preventing the spread of disease (79%) and protecting against environmental hazards (21%).
- Municipal spending is reported mostly to cover salaries and administrative costs (71%). However as noted in the data caveats above, the larger health departments were unable to report their funds by service category, but rather reported most of their city funds as salaries and administration.

Figure 11. Funds by source (percent of source total).

	Source State Contract	State Resources	Municipal	Non-municipal	Total
Direct Services	54%	0%	0%	58%	46%
Emergency Preparedness	19%	0%	1%	0%	8%
Injury Prevention	2%	0%	0%	2%	1%
Tobacco Prevention	4%	0%	0%	2%	2%
Substance Abuse Prevention	14%	0%	0%	4%	7%
Preventing the Spread of Disease	1%	79%	17%	0%	6%
Promoting Healthy Behaviors	6%	0%	0%	28%	14%
Protecting Against Environmental Hazards	1%	21%	0%	0%	1%
Salaries / Administrations	0%	0%	71%	0%	9%
Other	0%	0%	11%	5%	4%

Figures computed as percent of column total from Figure 8

Spending by Region

Figure 12 shows spending by region, by service category. Before reviewing the funds by region, it is important to state how funds were apportioned to each region.

- We first compute per person spending for all participating towns (by contract, by service).
- Town-level spending by service is summed to the region level to produce these figures. For example, the towns in the Capital area region spent a total of $80,608 on tobacco prevention.

Figure 12. Funds by region (total dollars).

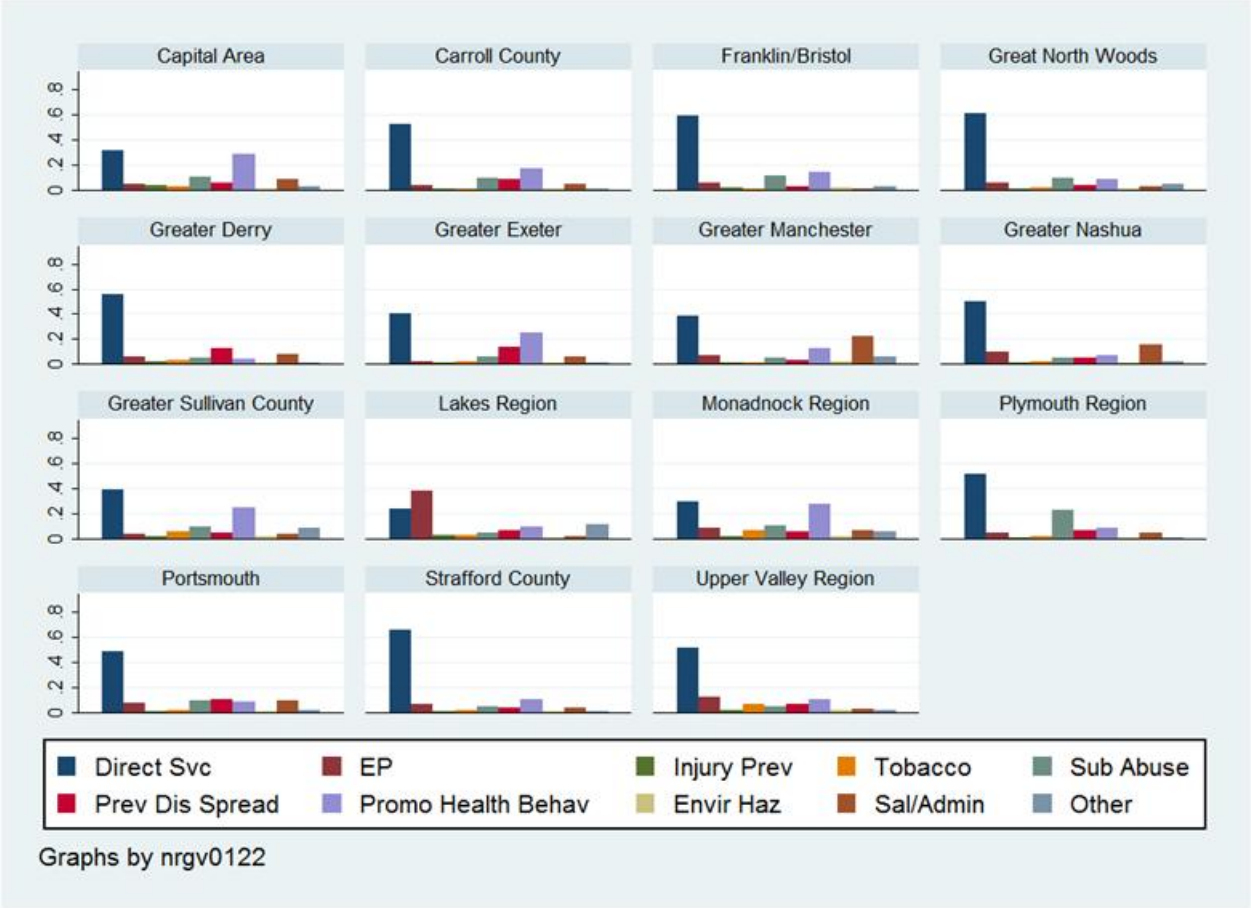
Region	Direct Services	Emergency Preparedness	Injury Prevention	Tobacco Prevention	Substance Abuse Prevention	Preventing the Spread of Disease
Capital Area	1,058,107	171,991	118,562	80,608	344,311	179,838
Carroll County	673,086	51,747	16,149	15,115	123,112	108,806
Franklin/Bristol	1,180,925	108,055	30,649	12,682	229,498	55,884
Great North Woods	2,808,161	283,158	19,953	84,676	449,298	185,322
Greater Derry	1,709,431	190,381	54,626	98,635	153,166	398,087
Greater Exeter	1,648,961	97,987	39,883	93,910	257,160	556,531
Greater Manchester	3,061,580	587,333	92,883	101,993	408,595	267,976
Greater Nashua	2,727,740	512,970	81,388	109,681	257,686	280,471
Portsmouth	620,139	100,345	14,143	25,756	125,052	134,937
Greater Sullivan County	518,620	40,790	23,102	76,276	116,786	57,678
Lakes Region	520,954	838,831	46,563	49,631	102,788	144,568
Monadnock Region	1,011,953	289,405	39,401	207,812	343,571	201,079
Plymouth Region	603,521	54,021	8,361	17,140	262,757	71,249
Strafford County	2,715,318	257,368	46,751	78,516	205,389	151,430
Upper Valley Region	531,448	128,282	17,409	63,742	45,744	66,052
Total	21,389,943	3,712,665	649,824	1,116,174	3,424,913	2,859,907

Region	Promoting Healthy Behaviors	Protecting Against Environmental Hazards	Salaries / Administration	Other	Total	% of Total
Capital Area	959,250	48,330	304,569	102,884	3,368,450	7%
Carroll County	221,026	15,203	60,286	6,248	1,290,778	3%
Franklin/Bristol	280,325	30,255	26,176	48,271	2,002,721	4%
Great North Woods	373,753	18,784	113,967	232,446	4,569,519	10%
Greater Derry	134,966	51,426	258,287	37,987	3,086,992	7%
Greater Exeter	1,032,829	37,546	231,009	43,165	4,038,979	9%
Greater Manchester	1,006,304	146,682	1,774,881	445,549	7,893,774	17%
Greater Nashua	385,063	77,439	871,786	127,865	5,432,087	12%
Portsmouth	105,262	13,315	115,758	21,802	1,276,508	3%
Greater Sullivan County	332,373	16,326	40,749	107,534	1,330,233	3%
Lakes Region	198,921	20,265	42,099	250,397	2,215,017	5%
Monadnock Region	956,415	37,093	224,326	173,116	3,484,172	8%
Plymouth Region	95,302	7,871	50,796	10,228	1,181,246	3%
Strafford County	409,683	44,012	154,622	28,644	4,091,733	9%
Upper Valley Region	105,393	16,389	31,976	18,276	1,024,711	2%
Total	6,596,863	580,937	4,301,286	1,654,411	46,286,923	

Spending Profile

- Direct services dominate the spending in most regions (left-most blue bar in Figure 13).
  - Although direct services are extremely expensive, they offer the lowest 'public' benefit. A clinic visit benefits just the patient and perhaps their family. But a restaurant inspection benefits thousands of patrons.
- Notable regions:
  - Lower direct service spending in Capital Area, Lakes and Monadnock regions.
  - Higher direct service spending in Strafford, Franklin and the Great North Woods.

Figure 13. Spending by Region, by Service - Percent of total



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These figures computed for each region: = spending on service category/ total spending on all service categories

- It is important not to confuse percent spent with the actual dollars spent. For example, Strafford may be spending a greater percent of total on direct services, but the actual dollar cost may be less than Great North Woods (which spends a lower percentage but has a higher budget.) Practically speaking, 50% of $30 ($15) is less than 40% of $50 ($20).

- To see past the dominance of direct spending, Figure 14 drops that category, allowing a better look at other services.
    - Several regions spend a large share of their non-direct funds on promoting healthy behaviors: Capital area, Greater Exeter, Greater Sullivan and Monadnock.
    - Emergency preparedness spending is extremely high in the Lakes Region.
    - Salaries and administrative costs take up a larger share of total spending in Greater Manchester and Greater Nashua.
    - The Plymouth Region spends a large percent of their funding on substance abuse prevention.

Figure 14. Spending by Region, by Service - Percent of total (Direct services excluded)
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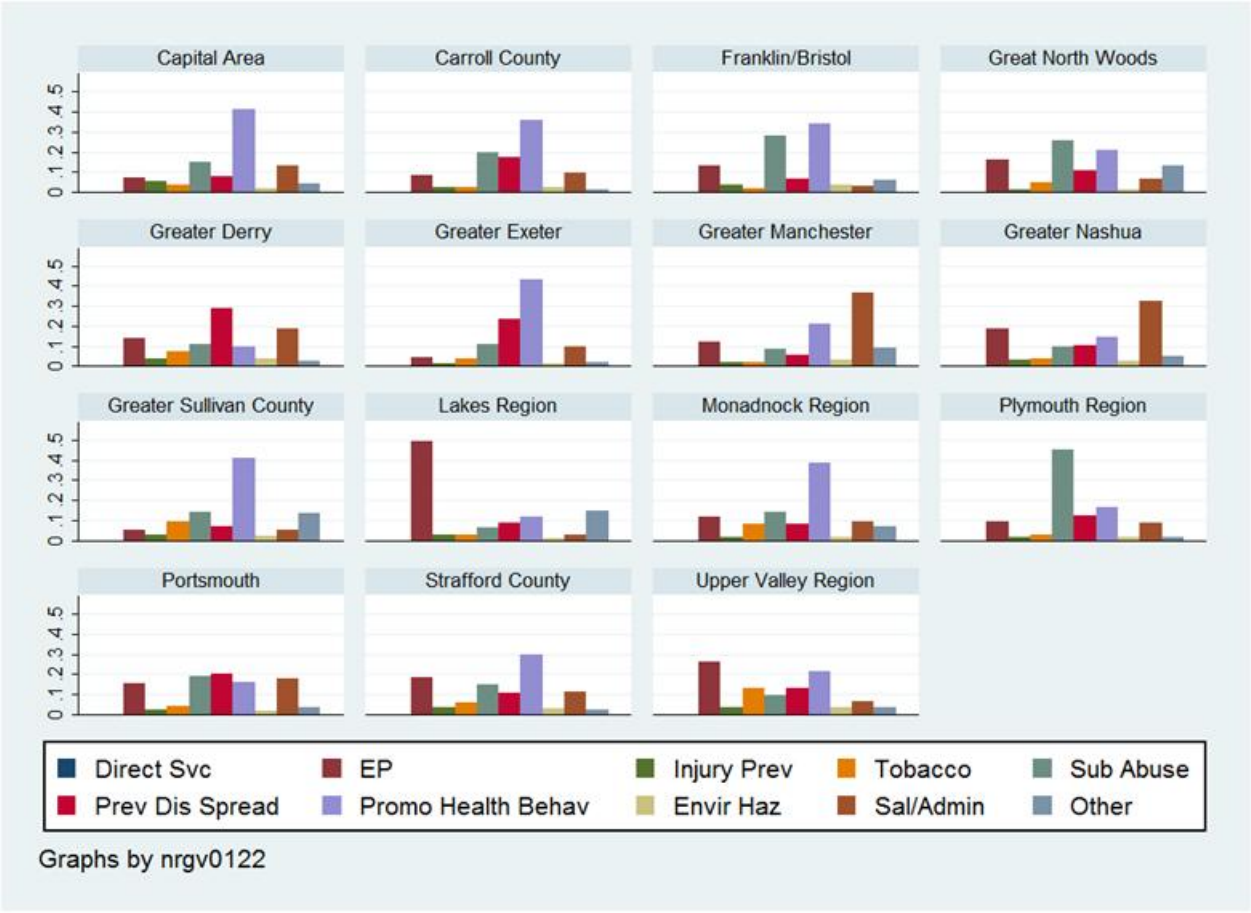
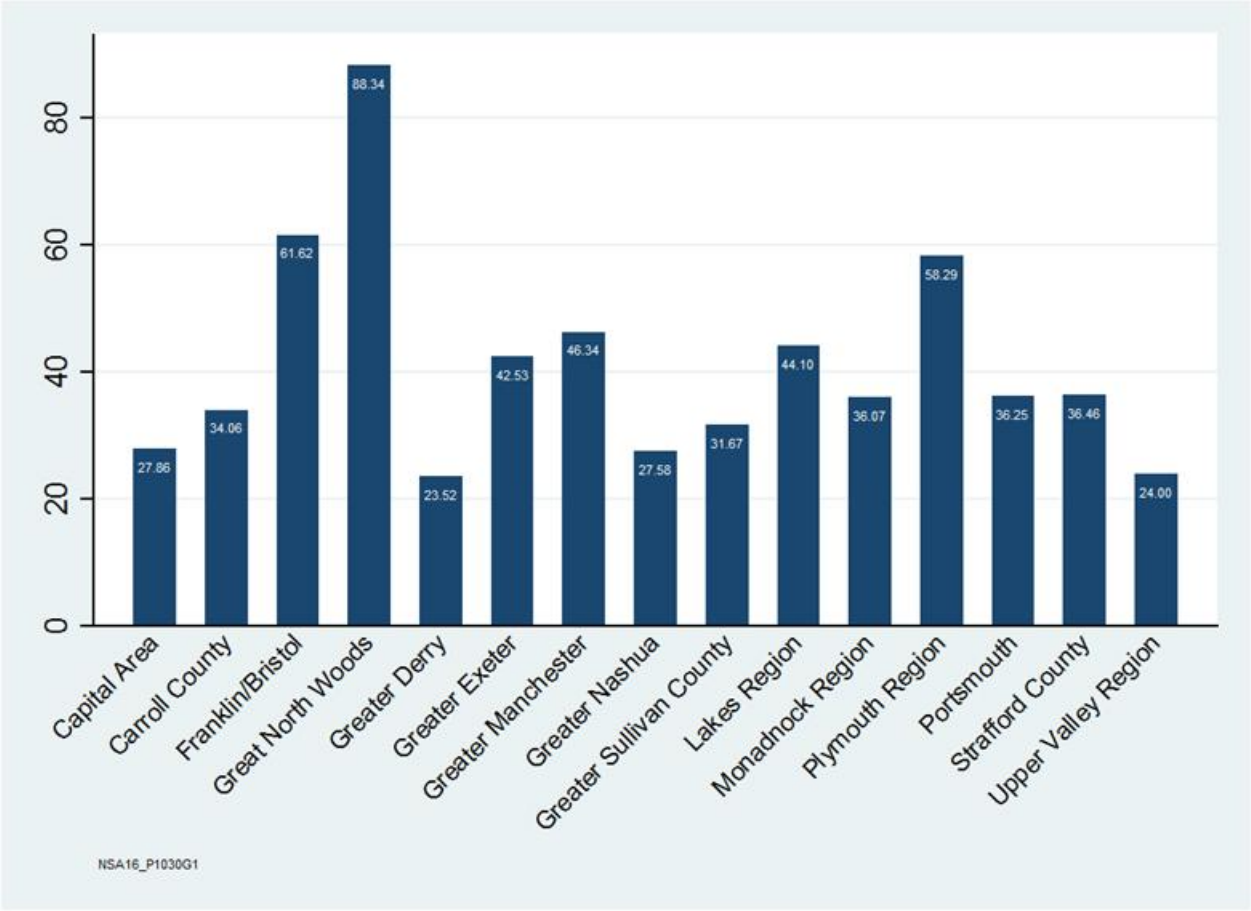
These figures computed for each region: = spending on service category / total spending on all service categories (except direct services)



Total Per Capita Spending

- Per capita spending varies from $24 to $88 as shown in Figure 15.
  - Greater Derry and Upper Valley have low per capita spending.
  - Franklin/Bristol, Great North Woods and Plymouth regions have high per capita spending.

Figure 15. Total per capita spending by region.

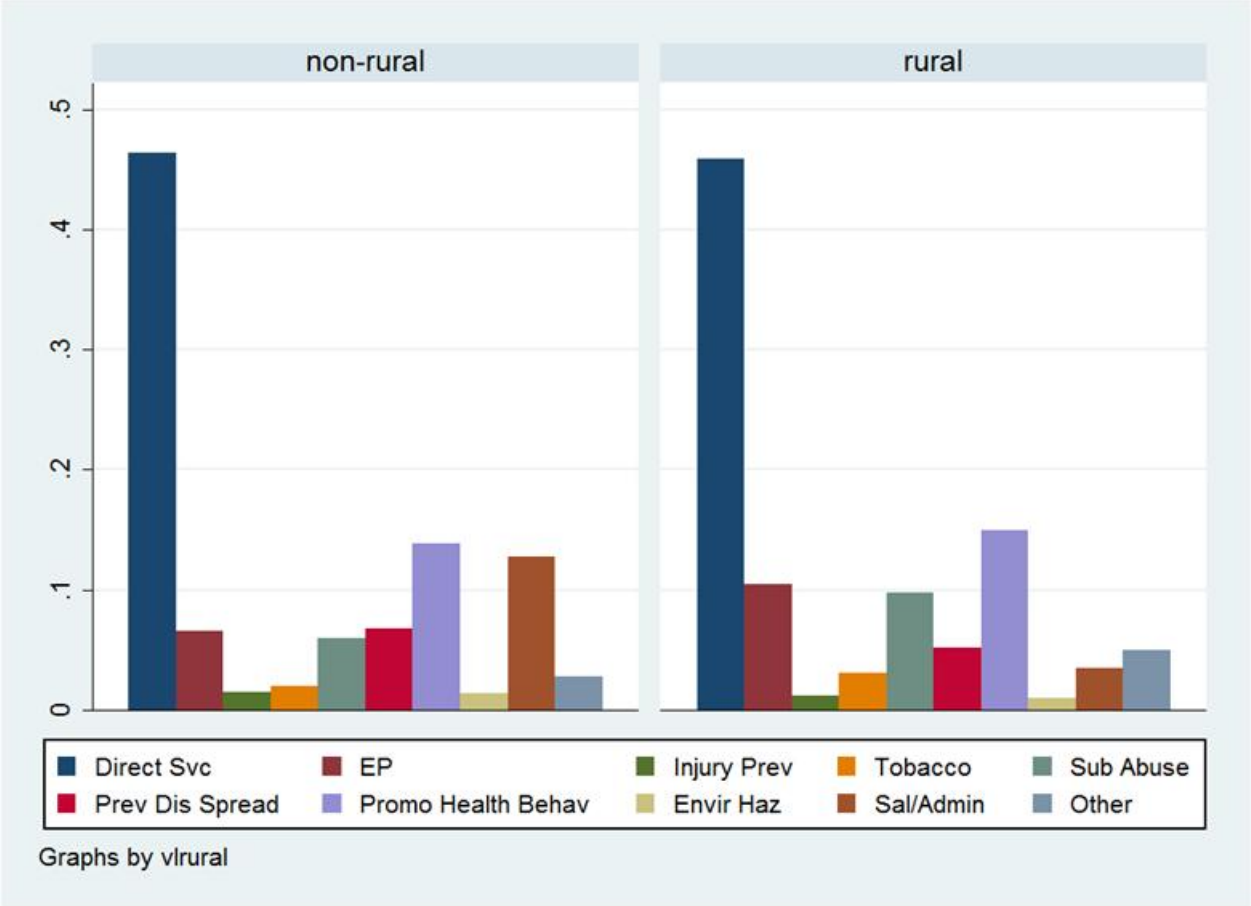


These figures computed for each region: = total public health spending (for all service categories) / total region population.

Rural-Urban Differences

- The general spending profile is similar for rural and non-rural regions. Figure 16 shows the service category percentage breakdown for both types. The only minor differences:
  - Rural areas spend a higher proportion on substance abuse and emergency preparedness.
  - Non-rural areas spend more on salaries and administration.

Figure 16. Spending by category, by rural-indicator (percent of total)



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These figures computed for each grouping of regions (rural and non-rural): = spending on service category (for all regions in grouping) / total spending on all service categories (for all regions in grouping)

Rural areas defined as: Carroll County, Franklin/Bristol, Great North Woods, Greater Sullivan County, Lakes Region, Monadnock Region, Plymouth Region, and Upper Valley Region.

- Although the spending profiles are similar based on share of spending, the per capita allocations are much higher in rural areas. Non-rural total spending is about $33 per capita but rural spending per capita is closer to $45 (approximately one-third higher).
- Combining the similar spending profile with the higher per capita spending, it appears that either everything costs more in a rural setting or rural areas require more services per capita.

Relationship Between Spending and Income

- Lower income levels are associated with higher per capita spending both at the town and regional levels.
- Since many public health issues are more associated with poverty, this inverse relationship seems to indicate that money is going towards need.

Financial Assessment Summary and Conclusions

For the study time period a total of over $46 million dollars was spent in New Hampshire for public health at the regional and local levels, which represents $36.46 per capita. As previously noted this does not include state level funding for staff and administration and any statewide contracts. While 41% of funds come from DPHS state contracts, another 42% come from funds that are directly available to the communities in the form of direct federal funds, other funds including hospital community education funds, private funds, donations and other state agency funds. Municipal contributions to public health is just 13% of all local public health funding with the majority of that (77%) spent in the two major cities of Nashua and Manchester.

The majority of funds from all sources (46%) are spent on direct services such as primary care in community health centers, WIC services and family planning. The next largest spending category is promoting healthy behaviors at 14%, with hospital community education funds contributing substantially to this effort. It would seem prudent to meet with hospitals and discuss targeting community education efforts to known public health issues such as obesity, substance use and tobacco.

There are regional variations for per capita spending, with greater per capita expenditures in rural areas and in lower income areas. It does appear that funds are going to areas of greatest financial need. Variations also exist for expenditure by type of service.

As funding for public health decreases at both the state and federal levels it becomes more crucial to understand where funds are being spent and compare this to the need as determined by documents such as the 2011 New Hampshire State Profile.

Final Summary Conclusions and Recommendations

This report presents the findings of three comprehensive assessments of New Hampshire's fifteen public health regions undertaken during the period of 2008 to 2010 to inform the regionalization of New Hampshire's public health infrastructure. Those assessments examined by region: the capacity to carry out the ten essential public health services; the capacity to serve in a governance role, and the financial public health resources available by region. An additional assessment was conducted with four municipal health departments to explore options for expansion from municipal to regional health departments.

The original model proposed a regional primary public health entity and called for core staff of a public health administrator, nurse or health educator, environmental specialist, and support staff. Further it called for shared staff across multiple regions including an epidemiologist, emergency preparedness coordinator and medical consultant.

The proposed model suggested a public health entity coordinate with local health officers, house state food inspectors, provide or assure for the provision of the essential services and coordinate with the state on services such as disease investigation. It was proposed that this work be carried out under the auspices of a governmental public health council. All of these components were touched upon through the assessments. Recommendations presented below suggest strategies for strengthening current efforts to develop a regional public health system in New Hampshire.

Recommendations

Recommendations for moving forward relative to public health regionalization in New Hampshire are presented below as Tier One and Tier Two priorities. Tier One priorities represent those that were selected by participants at a September 1, 2011 meeting of over 90 state, regional and local public health stakeholders. Additionally, the **Public Health Improvement Services Council,** comprised of a broad array of public health professionals and established to develop and monitor public health improvement plans, advised the DPHS in finalizing and prioritizing the recommendations. Tier One recommendations will receive priority attention for implementation. Tier Two priorities will be addressed once gains are made on Tier One priorities, recognizing that there may be some overlap.

Following each recommendation is a rationale drawn from the results of the assessments presented in this report. The rationale for many of the recommendations is similar based on repeated themes that emerged from the assessments.

- The public health networks throughout the state differ in their capacity to carry out essential public health services in their respective regions due to variation in factors such as funding, length of existence, areas of focus, and regional support. Resources and support for the existing public health infrastructure would enable network partners throughout the state to provide essential public health services.

- The relationship between the DPHS and local and regional public health partners is key. There is a need to clearly delineate the roles and responsibilities of each component of the public health system in delivering essential public health services. There are opportunities for the DPHS to provide technical assistance to regional partners to enhance their capacity to deliver essential services.

- During the assessments, several challenges related to the geographic composition (or alignment) of regions and the delivery of services across jurisdictions surfaced. The exploration of aligned geographic boundaries, potential statutory and ordinance changes, and other models of regional collaboration would be beneficial for more efficient delivery of services.

The Public Health Improvement Services Council should continue to serve in an advisory capacity to public health regionalization efforts and public health improvement planning as this group represents key facets of the public health system, possesses tremendous public health expertise, and understands the history, evolution, and importance of the public health regionalization initiative and a strong public health infrastructure.

Tier One Priorities

Recommendation #1

DPHS and public health partners across the state should continue to seek and direct funding and other resources towards the public health regions as appropriate to build local public health infrastructure to meet the identified health priorities in the state and the capacity needs identified through these assessments. DPHS should also advocate that other public and private funders utilize this regional alignment as appropriate when funding public health services.

Rationale

- Directing funds in this way continues to build on existing infrastructure, enabling regions to address additional public health essential services and priority health issues.
- It is acknowledged there is a range of existing public health capacity across the public health regions which should be considered when providing financial support.

Recommendation #2

A regional public health system in New Hampshire should be built upon existing public health networks and the infrastructure that has been established, recognizing the unique characteristics and structures of various regions.

- DPHS and the Bureau of Drug and Alcohol Services should continue to work to align their respective regional initiatives to create efficiencies, eliminate duplication, and build upon the strengths of the two systems.
- There should be clear delineations of roles and responsibilities of the DPHS, Public Health Networks, and health officers with respect to their relative contributions to providing the essential services of public health at the regional and municipal level.

Rationale

Many services are not provided to all communities in a public health region. There is no consistent geographic area (i.e. the public health region) used by the DPHS and other funders across various funding streams. This leads to confusion and fragmentation of service delivery; reduces access to public health services; and creates logistical and administrative burdens for local agencies.

Recommendation #3

DPHS should explore alternatives to the concept of regional public health councils as a link to government for regional public health networks and more fully explore the structure and attributes of existing, successful regional oversight collaboratives that mimic the public health council model.

- DPHS should consider pursuing enabling legislation for governmental link/public health authority

Rationale

- Many questions were raised in response to the proposed regional public health council. For example, "What is the relationship between a public health council and existing board of directors of a non-profit public health network?" It may be that until and unless there is financial support at the state and local levels to create government-based health departments that the link between private, not-for-profits and a governmentally linked public health council is not a sound fit.

- Partners in several regions have developed high-level leadership councils that provide oversight and coordination of public health efforts. While these are not formally linked to government, they do carry out some of the same functions through a voluntary, grassroots, collaborative system. DPHS should develop processes to share successful oversight models.

- There is strong support for statutory recognition and authority for public health emergency preparedness and response.

Recommendation #4

DPHS and public health partners across the state should facilitate the coordination of community health assessments and community health improvement plans among public health partners and support model practices within the public health regions in accordance with state and federal laws.

- DPHS and/or public health network partners should broker/engage in conversations with hospitals regarding the use of community education funds to target high priority community health needs.

Rationale

- Community health assessments and community health improvement plans should be prioritized to assure key community health issues are addressed. These are considered foundations of public health practice.

- Charitable Trusts in New Hampshire are required by law to develop community health needs assessments and plans. Federal laws also require non-profit hospitals to do the same and work together with community partners including public health. There are efficiencies and benefits for community partners to conduct these assessments in partnership.

- Hospital community education funds contribute substantially to health promotion activities in communities and should be based on needs identified through community health assessments. This is an area with tremendous potential for community collaboration.

- DPHS and other partners should provide opportunities for successful community health assessment and planning stories to be shared.

- The development of standardized regional health profiles will support common community health assessment data across regions and promote efficient use of resources.

Tier Two Priorities

Recommendation # 5

The Division of Public Health Services should work with other state level and regional level entities to assist regional partners to strengthen and diversify regional partnerships.

Rationale

While all public health networks have experience and have built extensive collaborations with emergency preparedness partners, fewer have established such relationships with partners to address broader public health issues. Existing efforts are also not well coordinated across various health issues or populations. The NH Center for Excellence provides technical assistance to support development of the regional network system established through the Bureau of Drug and Alcohol Services. DPHS should explore how these resources (or this approach) can be expanded to public health networks.

- The 2008 Public Health Improvement Action Plan initiative called for assistance in evaluating broad based community partnerships which should be further explored.

- As public health partners work towards the prevention of chronic disease, they need to think about new partnerships and strategies to address policy, system, and environmental change.

- Lessons around regional structures and cross- jurisdictional agreements could be learned from other regional models such as: Fish and Game; Regional Planning Councils; HAZMAT; and the NH Solid Waste Districts.

Recommendation # 6

The DPHS should build epidemiological[7] capacity to provide support and technical assistance to regions.

Rationale

- Public health regional partners would benefit from additional DPHS resources and technical assistance to collect and analyze data to develop comprehensive and coordinated community health assessments in collaboration with other partners.

- Public health regional partners would benefit from DPHS resources and technical assistance to develop and monitor community health improvement plans in partnerships.

[7] An epidemiologist is "An investigator who studies the occurrence of disease or other health-related conditions or events in defined populations. The control of disease in populations is often also considered to be a task for the epidemiologist". Last J, Spasoff R, Harris S. A dictionary of epidemiology. Oxford University Press, New York, 2000.

Recommendation #7

The Public Health Improvement Services Council should explore how to maximize existing training resources available in the state to assure a competent public health workforce including but not limited to the Masters in Public Health Programs at the University of New Hampshire and Dartmouth Medical School, the Institute for Local Public Health Practice, the New Hampshire Public Health Association, the two New Hampshire Area Health Education Centers, the Community Health Institute, DPHS, and the Public Health Training Centers at Dartmouth Medical School and Boston University.

- The DPHS should utilize resources available through the National Public Health Improvement Initiative to provide training to regional public health partners in quality improvement methods**.**

Rationale

- Most public health regional partners lack the capacity to provide professional development opportunities to assure a competent workforce and to engage with academic institutions to benefit from and contribute to evidenced based practice.

- Limited resources call for assuring that all public health services provided are quality services. Training regional public health partners in quality improvement methods and providing support to carry out quality improvement methods can assist to improve services.

Recommendation # 8

DPHS should continue to work with municipal health departments to expand their reach into their respective regions, especially in the areas of health assessment and planning, mobilizing partnerships, and educating the public.

Rationale

- Established municipal health departments have tremendous expertise that could be shared beyond municipal boundaries for a number of essential services with resources. The expansion of services related to inspection and enforcement raises legal issues that require additional exploration.

Recommendation # 9

DPHS should continue to explore mechanisms to develop professional and credentialed health officers who can carry out inspection and enforcement activities at the regional and local level.

Rationale

- Local health officers participating in the regionalization assessments frequently expressed the need for a more formalized system to assure a higher level of professionalism and support.
- There is interest on the part of the Health Officers Association to pursue this.
- There should be continuing education for health officers relative to the public health regionalization initiative.