NORTH CAROLINA PUBLIC HEALTH AGENCY ACCREDITATION AND PERFORMANCE: THE CLIMB FROM GOOD TO EXTRAORDINARY

Dorothy Cilenti

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Approved by

Edward L. Baker, MD, MPH

Suzanne Havala Hobbs, DrPH, RD, FADA

Joy F. Reed, EdD, RN

Rachel H. Stevens, EdD, RN

Bernard J. Turnock, MD, MPH

ABSTRACT

DOROTHY CILENTI: North Carolina Public Health Agency Accreditation and Performance: The Climb from Good to Extraordinary
(Under the direction of Edward Baker)

The objective of this study was to determine how local public health agency accreditation impacts public health performance. Survey data collected in October 2008 from 80 local health agencies in North Carolina compared accredited and non-accredited local public health agency performance on three domains: policy development and implementation, community engagement, and leadership behavior. Secondary data analysis using performance data from the NC State Center for Health Statistics compared North Carolina counties served by accredited and non-accredited local public health agencies on 13 performance indicators. Finally, key informant interviews with health directors and management team members from high performing local public health agencies supplemented findings from the surveys and performance indicator data.

A cross-sectional survey design was used to assess local public health agency performance on key activities associated with the NC Local Health Department Accreditation Program. Descriptive analyses were conducted consisting of question-specific frequency distributions with p-values used to determine whether there were significant differences in scores for each domain based on the accreditation status of the responding agency. Time-series comparisons of performance improvement in accredited and non-accredited local public health agencies were conducted to describe patterns of variation in performance improvement across accredited and non-accredited agencies. A thematic analysis of

transcripts from key informant interviews was conducted using across-case matrices derived from within-case summaries.

Findings indicated that accredited and non-accredited local public health agencies in North Carolina differed with respect to the degree to which they demonstrated policy development and implementation and community engagement, with accredited local public health agencies demonstrating higher scores on these domains. These findings may provide valuable information to North Carolina public health leaders and the national voluntary accreditation efforts regarding ways to ensure that local public health agency accreditation drives high performance.

DEDICATION

To my public health colleagues in North Carolina who work tirelessly everyday to protect and promote the health and well-being of everyone in this wonderful state.

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LIST OF ABBREVIATIONS

IOM	Institute of Medicine
LPHA	Local Public Health Agency
NACCHO	National Association of City and County Health Officials
NCALHD	North Carolina Association of Local Health Directors
NCDEH	North Carolina Division of Environmental Health
NCDPH	North Carolina Division of Public Health
NCIPH	North Carolina Institute for Public Health
NCLHDAP	North Carolina Local Health Department Accreditation Program
PHAB	Public Health Accreditation Board
UNC SPH	University of North Carolina at Chapel Hill Gillings School of Global Public Health

CHAPTER 1

INTRODUCTION

Statement of Issue

Public health systems and services research examines the organization, financing and delivery of public health activities at local, state, and national levels and the impact of these factors on population health. A central research question within this growing area of study is whether improvements in governmental public health, the backbone of the public health system, actually improve the public's health. Research is needed to determine whether improvements in the functioning and performance of local public health agencies contribute significantly to better public health system performance. One approach to improving local public health agency performance has been the establishment of standards for public health practice. For example, a voluntary national accreditation program for local public health agencies was initiated this past year, when the first national Public Health Accreditation Board was established (PHAB, 2007). As a result, local and state health departments will have an opportunity to pursue accreditation status by demonstrating evidence that they can meet the standards of the accreditation program. What is the impact, then, of accreditation on local public health agency (LPHA) and public health system performance? In North Carolina, in particular, is accreditation, which is now mandated by state law, an effective strategy to improve local health department performance?

Previous studies exploring which factors drive performance of local public health agencies and the public health system in general have found several factors to be relevant

to high performance. In a recent literature review of performance measurement of local health departments, Erwin (2008) found that studies on local health departments generally used one of two methodologies: 1) investigator-developed surveys of local health departments based on ten public health practices, and 2) National Public Health Performance Standards surveys of the local public health system on the basis of the ten essential public health services. With respect to local health department performance and organizational characteristics, Erwin found that better performance was generally associated with larger health departments with more funding serving jurisdictions greater than 50,000. Thus, it appears that an adequately-sized and appropriately trained workforce is essential to effectively performing public health activities, as is funding to carry out locally agreed upon community health improvement efforts. However, local health department size, public health funding and jurisdictional characteristics are factors that are not readily amenable to change and are not necessarily influenced by local health department action. Erwin's review also revealed other notable characteristics of higher-performing local health departments, including greater community interaction, leadership functioning, and workforce training and education. These factors, and others, are more likely to change based on the actions of the local public health agency. However, according to the Institute of Medicine (IOM) 2003 report, the current public health workforce nationally is unevenly prepared to meet the challenges that accompany the practice of public health today. The report estimates that nearly 80 percent of the current workforce lacks formal training in public health (IOM, 2003). As part of the performance of essential services, the workforce must be prepared to competently engage the community in effective actions to promote health improvements. Moreover, senior public health leaders must have the preparation not only to manage government programs and organizations but also to influence stakeholders outside of the local health departments' silos, which requires effective communication of health goals and priorities, positive interaction with stakeholders and constituency groups, provision of policy

direction to elected and appointed officials, and relationship building with other agencies at all levels of government whose actions and decisions affect the population's health. These tasks require individuals and organizations with the talent and professional expertise to mobilize, coordinate, and direct broad collaborative actions within a complex public health system.

For accreditation of local public health agencies to drive public health system improvement in North Carolina, the process of attaining accreditation should result in greater leadership efficacy, broader community engagement, and follow through on policies and plans that are developed to meet accreditation standards. In addition, the accreditation program in North Carolina should ultimately result in greater effectiveness of local public health practice, thus contributing to improvements in service delivery and community health outcomes.

Background

In North Carolina, local public health departments by law are responsible for health protection and promotion activities at the county or district level. While these health departments are autonomous and locally-driven, there have been recent efforts through accreditation to ensure that all local health departments have a basic capacity to provide quality public health services.

Accreditation as a tool to standardize the practice of local public health agencies has been debated for many years. Although not the only state to evaluate local health departments based on performance standards, North Carolina was the first state to enact legislation establishing mandatory accreditation of local health departments. Following a series of accreditation pilots, a legal process supporting accreditation was enacted by the legislature (S804-2005 NC Sess Laws 369). This detailed legislation specifically identified the components of the accreditation process (self-assessment, site visit, and final board

action). It requires a capacity assessment based upon the 10 essential public health services, as well as other domains to be established in administrative rules. In addition, S804 specifies an accreditation board structure with membership consisting of various stakeholders. Accreditation status is also addressed, with three categories permitted by law: accredited, conditionally accredited, and unaccredited (if an agency fails to correct findings from conditional accreditation).

Rules authorized under this statute are in 10A Admin Code 48.0100 et cet [2006]. Compared to the statute, the rules provide greater specificity for the self-assessment process and site visits. The rules also identify required benchmarks and standards for accreditation. After two years of pilot accreditation and three years of mandated accreditation, approximately 50% of 85 local health departments in the state have participated in the process (NCIPH, 2009).

The intent of the accreditation program in North Carolina is to assure the capacity of North Carolina local health departments to perform the three core functions and ten essential services of public health. The core functions of public health are assessment, assurance, and policy development (IOM, 1988). The ten essential services, as identified by the U.S. Department of Health and Human Services, are : 1) to monitor health status and understand health issues facing the community, 2) to protect people from health problems and health hazards, 3) to give people information they need to make healthy choices, 4) to engage the community to identify and solve health problems, 5) to develop public health policies and plans, 6) to enforce public health laws and regulations, 7) to help people receive health services, 8) to maintain a competent public health workforce, 9) to evaluate and improve programs and interventions, and 10) to contribute to and apply the evidence base of public health (Dyal, 1995). The program focuses on a set of minimal benchmarks that must be met to ensure the capacity to protect and promote the public's health, but it does not limit the services or activities an agency may provide to address specific

community needs. The basic standards are linked to current state statutes and administrative code, and to the many program requirements required by the consolidated agreement between state and local public health departments.

As an early adopter of public health accreditation, North Carolina is increasingly becoming a research “laboratory” for studying accreditation and its impact on local public health practice and health outcomes. The North Carolina Institute for Public Health (NCIPH), as the service and outreach arm of the University of North Carolina at Chapel Hill, Gillings School of Global Public Health (UNC SPH), has begun to conduct evaluation in this laboratory, as well as on accreditation issues of national interest. For example, NCIPH, through its involvement in the North Carolina Accreditation Learning Collaborative, a Multi-State Learning Collaborative funded project, recently conducted the evaluation of the North Carolina pilot accreditation process. NCIPH staff also recently completed an assessment of incentives likely to encourage state and local health officials to participate in the national voluntary accreditation program.

Research Aims

The purpose of this research, which was intended to complement the work currently underway at NCIPH, was to describe how local public health agency accreditation in North Carolina impacts local health department performance by answering the research question: If a local public health agency in North Carolina successfully completes the accreditation process and achieves accreditation status, will improvements in public health performance result, and if so, what factors contribute to these improvements? Moreover, the proposed research was intended to result in a tested tool and process for evaluating comparative effectiveness of local health departments with and without accreditation.

Aim 1. Determine the extent and nature of differences between accredited and non-accredited local public health agencies in North Carolina, and within accredited local public

health agencies, with respect to leadership, community engagement and implementation of public health policies and plans.

To obtain a better understanding of the relationship between accreditation and key performance domains assessed through the North Carolina accreditation program, performance of public health agencies that had sought and attained accreditation and public health agencies not yet accredited were measured using a survey instrument that described what these local health departments did and how well they did it. As of April 2009, 44 local public health entities were accredited in North Carolina, with the remaining 41 agencies not yet accredited. Comparisons of performance on selected activities provided information related to specific behaviors of health department employees, management team members, and Boards of Health. These selected activities were based on NACCHO's Operational Definition of a Functional Local Health Department which articulates the functional roles of local health departments and identifies standards for each of those functions (NACCHO, 2005). The Operational Definition of a Functional Local Health Department concepts and standards are organized around the essential public health services framework and served as the basis for the Health Department Self-Assessment Instrument used in North Carolina's accreditation program. Given that an accredited health department in North Carolina has demonstrated the capacity to perform the three core functions and ten essential services, how effectively are accredited agencies actually performing?

To document differences in performance, the research answered the following questions:

- How does leadership behavior differ among accredited health departments and health departments not yet accredited?
- To what extent do accredited health departments engage community partners differently than health departments not yet accredited?

- To what degree are policies and plans developed and implemented differently by accredited health departments compared to health departments not yet accredited?

The following hypothesis was tested under Aim 1:

Hypothesis: Accredited health departments in North Carolina will demonstrate better performance with respect to leadership, community engagement, and implementation of policies and plans than health departments not yet accredited.

Aim 2. Determine whether accredited health departments in North Carolina demonstrate greater improvement in selected service delivery outputs and health outcomes than health departments not yet accredited.

To measure improvements in service delivery and health outcomes, county-specific service delivery data and health outcome data were compared over time using existing reports routinely prepared by the North Carolina Division of Public Health (NCDPH) and the North Carolina State Center for Health Statistics. Findings answered the following questions:

- Are accredited health departments more likely to demonstrate improvements on selected service indicators compared to health departments not yet accredited?
- Are accredited health departments more likely to demonstrate improvements on selected health outcome measures compared to health departments not yet accredited?

The following hypothesis was examined under Aim 2 of this research:

Hypothesis: Accredited health departments will show greater improvement in selected service delivery outputs and health outcomes than health departments not yet accredited.

Aim 3. Identify strategies for enhancing the impact of accreditation on performance.

Results from the analysis conducted under Aims 1 and 2 of this research were used to identify four high performing health departments. Key informant interviews were conducted with the directors of these agencies and members of their leadership teams to

identify opportunities for enhancing local public health accreditation programs so as to achieve greater improvements in public health practice and health outcomes.

The public health system in North Carolina and nationally is faced with many challenges, and there is a need to understand the demands on and capacity of local health departments to respond to these challenges so that gaps can be identified and improvements made. Accreditation is one approach to ensure that local health departments meet a minimum set of standards and have the capacity to perform the core functions as outlined in the 1988 IOM report (IOM, 1988). Specifically, this research may serve to improve the North Carolina accreditation program and to better inform the national accreditation efforts. Moreover, findings and implications from the North Carolina experience may be useful to other states that choose to develop their own local public health agency accreditation system. Joly et al. assert that "the scientific base to measure, detect, and predict the nature of public health outcomes in relationship to accreditation status is in its infancy" (Joly et al., 2007). The authors further indicate that the relationship between accreditation and agency effectiveness, potentially important precursors of health outcomes, has yet to be explored. This research represented another step in exploring the relationship between agency accreditation, local health department performance and community health outcomes.

CHAPTER 2

LITERATURE REVIEW

Search Strategy

The search strategy to identify studies included electronic database searches of MEDLINE and CINAHL, which are available through the University of North Carolina online library system. Referenced articles from peer-reviewed journal articles, and hand-searched specific journals focused on public health management and practice, such as the *Journal of Public Health Management and Practice*, were identified. Key search words were: local health departments, accreditation, performance management, public health financing, and public health workforce. MeSH was also used to find other keywords that could represent these constructs. These included local public health for local health department, and public health capacity for workforce and financing. Examples of Boolean strings used included local health departments and accreditation, or public health financing and performance management.

Abstracts of publications identified through the search were reviewed to determine whether they might describe promising articles for inclusion. Upon identification of promising abstracts, full publications were read and a data abstraction tool was used to summarize the information from the article. The tool included the names of the authors and date of publication, the type of study conducted, the unit of study, a description of the content, the outcome addressed and an assessment of study limitations. In general, there were several limitations to the studies cited in this review. First, the studies varied greatly with respect to

scientific rigor. Most of the research designs relied on cross-sectional data and could not examine directly the causal relationship between factors associated with performance improvement or decline. In addition, many of the findings were based on perceptions of respondents and were not generalizable beyond the sample of health departments under study. Also, not all questionnaires and surveys were tested for validity and reliability; thus, indicators may not have consistently measured what they sought to measure. Another challenge for some studies related to inputs and outputs from different or overlapping time periods. All of these challenges will be present in the research design described in this proposal. A summary of the literature review is included as Appendix 1.

Public Health Core Functions Performance

Several studies examined core public health functions as the performance variables. Milio (1998) found that the core function of policy development is only available to 40% of Americans, and less than one-fourth of public health spending is invested in core functions overall. Mays et al. (2004) surveyed 315 local public health jurisdictions and found that local public health performance of core functions and essential services varied with local and federal spending, with all public health services more sensitive to local spending. In a later study, Mays et al. (2006) found that in addition to funding, performance of core functions varied with the size and organization of the local public health agency, but only 28% of the variance was explained by these factors. Studnicki et al. (1994) found that primary care and communicable disease control accounted for three-quarters of public health spending among local health departments in Florida, with a much smaller fraction devoted to assessment and development of policies. Turnock et al. (1994) found that core function performance was highest for local health departments serving jurisdictions with populations greater than 50,000. In another study, Turnock (1995) surveyed local health departments in Illinois in 1992 and again in 1994 and documented improvements in performance of core

functions though how activities were performed was not described. Honore et al. (2004) studied 50 local health departments in a large state and found a relationship between per capita taxes and performance, but not local health department funding and performance. Kennedy (2003) evaluated local public health agencies in Texas and found higher performance of core functions associated with larger community size, higher socioeconomic status, higher educational levels, and greater public health agency capacity and contribution. In a study of local health departments serving a population of at least 100,000, Mays et al. (2004) found that performance of core functions varied with population size, socioeconomic status, local health department spending and presence of local Boards of Health. Effectiveness ratings were higher for the core functions of assessment and assurance than policy development.

Other Public Health Standards

Additionally, several studies were conducted using standards and indicators specific to states and/or local jurisdictions. Spain et al. (1989) examined the use of model standards specific to California which were developed to improve local health department performance. The authors found that the use of standards was linked to the commitment of the health officer, the priority given to the programs identified for performance improvement, the relationship of the standards to existing planning and evaluation tools, and the involvement of the health department in negotiating the standards. A later publication by Derose et al. (2003) described a process for developing public health quality indicators for local health departments in California that resulted in 50 acceptable indicators. A longitudinal study of 14 local health departments using indicators linked to the core public health functions and practices found that effectiveness was related to jurisdictional characteristics and practice performance (Miller, 1994).

Public Health Leadership, Community Engagement and Policy Implementation

Several studies examined the importance of leadership, community engagement and policy implementation to effective local public health performance. In a study of local health departments in North Carolina, Lovelace (2000) found that public health agency performance was associated with greater frequency of interaction with partners. A second study of North Carolina health department management team functioning and agency performance found that a more effective management team resulted in more extensive interactions with the community (Lovelace, 2001). A case study of one local Board of Health in North Carolina described a model approach to crafting reasonable health policies that protect the public's health and that diverse stakeholders can accept (Upshaw, 2002). In a study of partnerships between local health departments and faith-based organizations, Zahner et al. (2004) found that partnership effectiveness was related to funding availability and the length of the partnership. In a later study, Zahner (2005) identified four factors which impacted the local health department's ability to engage community partners: the local health department's skills in working with community groups and minority populations, the individual employee's skills in working with community groups and minority populations, the extent and frequency of agency networking, and community participation in health department planning. Scutchfield et al. (2004) collected data on local health department capacity and performance, and found that funding, leadership and partnerships were associated with higher performance scores. A longitudinal study of policy development focused on physical activity, nutrition and tobacco found that nearly 100% of local health departments in North Carolina implemented policies or plans addressing tobacco, nutrition or physical activity in 2004 compared to only half that number in 2001 following increased technical assistance from state partners (Plescia 2005).

Accreditation and Improved Performance

The available evidence concerning the impact of accreditation programs in health and social services industries remains relatively limited despite the growth of these programs in recent decades. In a review of the literature on the experiences and outcomes of existing accreditation programs, Mays (2004) found that few programs rely on evidence-based performance standards that are linked to outcomes, though some progress has been made recently in this direction. For example, a randomized experimental study designed to assess the impact of accreditation on hospital performance in South Africa showed positive effects on service quality, service outcomes, and the operations of service providers while controlling for self-selection of organizations into the accreditation program (Salmon et al., 2003). An evaluation of the North Carolina accreditation program conducted in 2007 by the North Carolina Institute for Public Health documented that among ten health departments receiving accreditation between July 2006 and June 2007, 90% reported implementing at least one policy change in order to meet the requirements for accreditation. Health directors also reported increased interaction with their Boards of Health, and improved relationships with state consultants, community partners, and policymakers (Davis, 2007). To date, an evaluation of health outcome improvements in North Carolina as a result of accreditation has not been conducted.

In the July-August 2007 issue of the *Journal of Public Health Management and Practice*, several other states' experiences with accreditation were highlighted. The local public health accreditation program in Michigan, for example, provides a mechanism for accountability that ensures local level capacity to address core functions. The requirements are based on state law, administrative rule, department policy, or best practices. Despite linking requirements to Healthy People 2010 health outcomes, Michigan has not yet demonstrated the impact of its accreditation on the achievement of desired performance and outcome goals (Kushion et al., 2007). Florida's quality improvement system, though not an

accreditation system, does incorporate community health outcomes as part of its performance measures, and publishes a Performance Report Card for each local public health agency (Beitsch et al., 2007). During the past 1990s, 11 of the 14 performance measures showed improvement, supporting the conventional wisdom that what gets measured gets done (Beitsch, 2000). Another cross-sectional study examining local public health performance and health outcomes found that agency performance affected community health status but contributions varied depending on the outcomes studied (Kanarek et al., 2006).

To guide the development of a national public health accreditation program, a consensus report was issued as a product of the Exploring Accreditation initiative. This initiative, led by a steering committee of national and state experts, developed a proposed model for a Voluntary National Accreditation Program for State and Local Public Health Departments in May 2006. A logic model was suggested by the Research and Evaluation Workgroup to serve as the framework for evaluation of this voluntary accreditation program (Exploring Accreditation, 2006). Although the national public health accreditation program is not yet fully functional and the logic model has not been comprehensively tested, this approach links accreditation activities and outputs to both short-term (changes in health department practices) and long-term outcomes (changes in health status indicators). This research examined one component of the model: improved performance of accredited agencies and corresponding improvements in community health outcomes.

CHAPTER 3

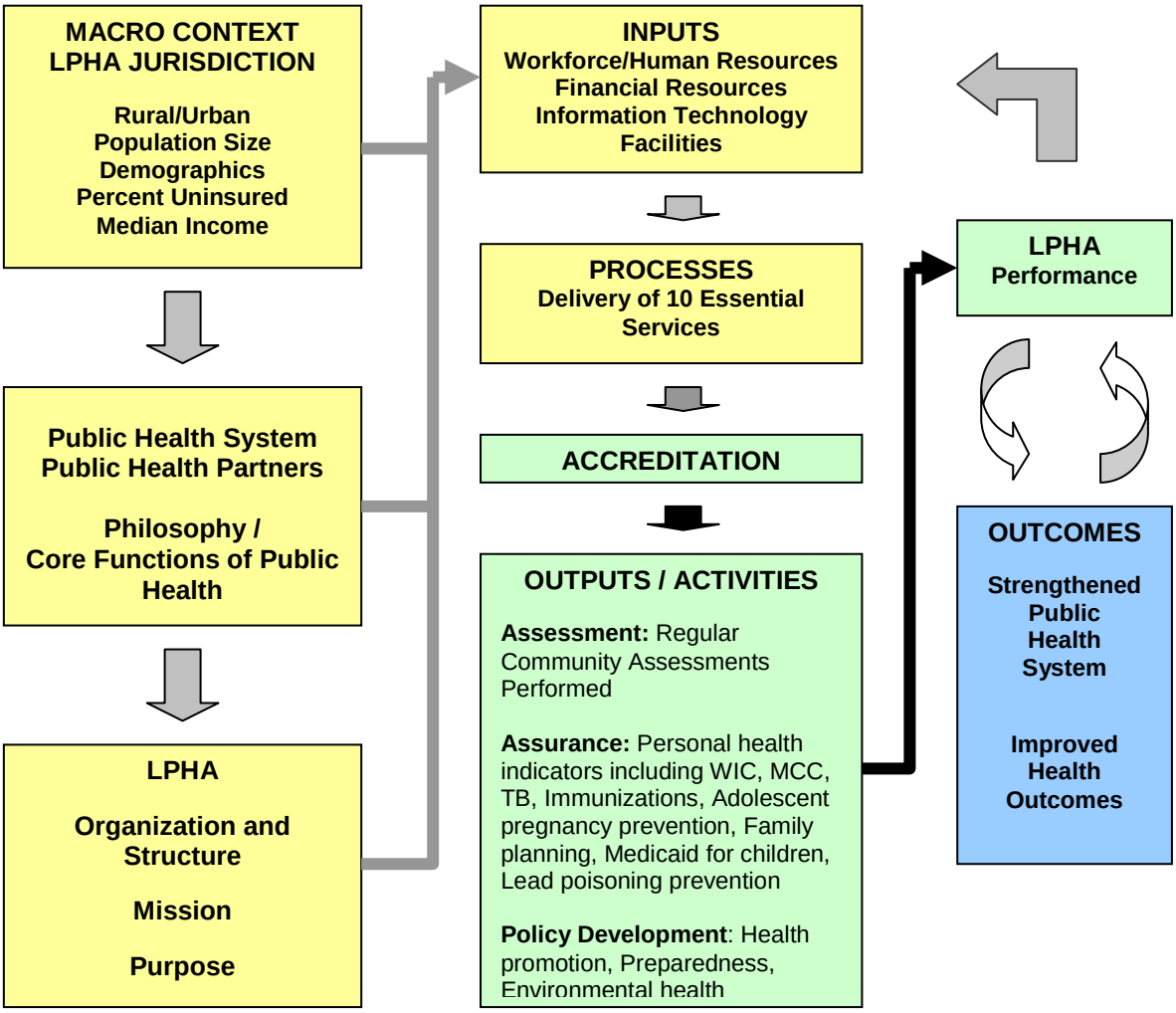
METHODS

Conceptual Framework

The conceptual model for this research was adapted from Handler, Issel, and Turnock (Handler et al., 2001) and has been used in an earlier study evaluating key factors that influence local public health agency performance in North Carolina (Hajat et al., 2009). The model supports the assertion that measurement in public health must be able to measure inputs, processes, outputs and outcomes in ways that allow for changes in one to be linked with changes in another (Turnock, 1997). The adapted framework consists of eight components that can be considered in relationship to each other: macro context, public health system, mission and purpose, inputs, processes, outputs, performance and outcomes. For the purposes of this research, the macro context included sociodemographic characteristics of the local jurisdictions. The characteristics of the public health system described public health partners and governance. The unit of analysis was the local public health agency, the mission of which is to protect and promote the public's health by creating conditions in which individuals and communities can be healthy. The mission is achieved through effective performance of the core functions of public health (assessment, assurance and policy development) as described by the Institute of Medicine (IOM, 1988). Inputs to the local public health agency, also referred to as *capacity*, included resources such as organizational relationships and collaborations, workforce composition, staffing, facilities, budget, and information resources. Processes are those activities necessary to deliver the

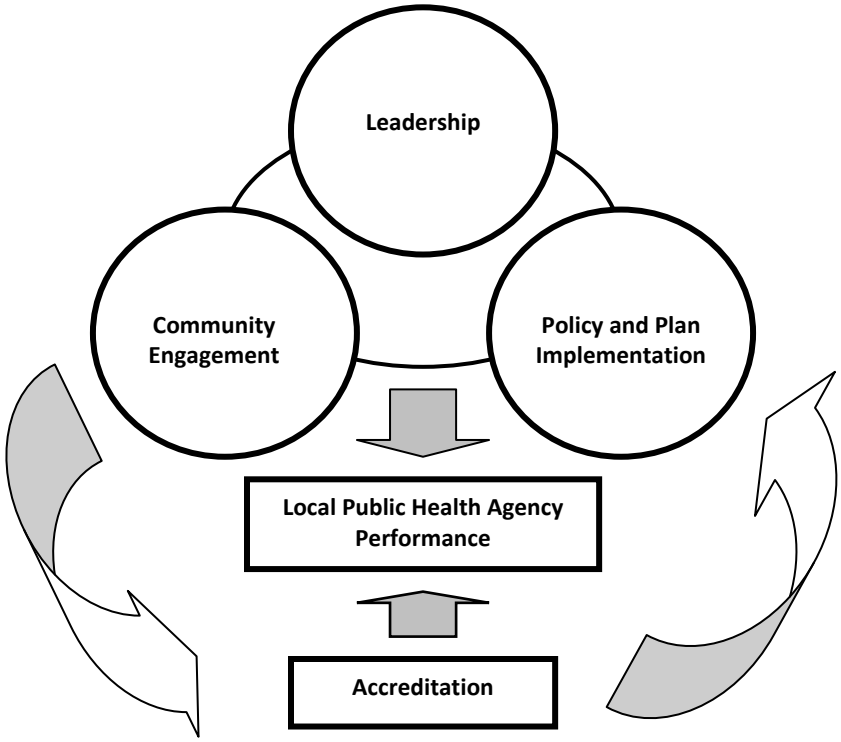
ten essential services, and for the purpose of this research, accreditation status of the local health department served as a marker for local public health agency capacity to provide core functions and essential services. Outputs that were examined included selected performance indicators monitored by NCDPH through contractual agreements with local public health departments. The influence of inputs, processes, and outputs on agency performance and outcomes is further enhanced by accreditation status. A figure of this adapted conceptual framework is provided as Figure 3.1.

Figure 3.1. Conceptual Model (Expanded from Handler, Issel, and Turnock, 2001)



An additional concept was explored as part of this research which could potentially magnify or detract from the power of the adapted Handler, Issel and Turnock model. This additional component describes accreditation and performance effectiveness of local public health agencies with respect to leadership, community engagement and how policies and plans are implemented. Based on previous research studies and the author's experiences as local health director of two accredited health departments in North Carolina, and as a site visitor to other health departments pursuing accreditation, the author asserts that the benefit of accreditation to local health department performance is highly intertwined with the leadership and community engagement skills of the health director, Board of Health, and management team. Moreover, the benefits of accreditation are optimized when policies and plans that are produced as evidence of meeting accreditation standards are actually implemented. A depiction of this concept is below in Figure 2.

Figure 3.2. Research Model for Performance Improvement Process



For the purposes of this study, leadership was defined as a set of actions taken by local health directors, health department staff, and Board of Health members that: 1) actively informs the community about public health issues, 2) actively supports community efforts to address public health priorities, 3) visibly engages policymakers in public health matters, and 4) consistently takes part in community conversations focused on improving local public health services. The leadership domain encompasses those activities important to Essential Service #3: Inform, educate, and empower people about health issues.

Community engagement was defined as a set of actions taken by local health directors, health department staff, and Board of Health members that: 1) consistently reaches out to a diverse group of public health partners to assess community health needs, set priorities, and deliver public health services, 2) enables community partners to address policymakers regarding public health matters, 3) collaborates with diverse community members to secure additional resources and leverage new and existing partnerships, and 4) reaches out to nontraditional partners to raise awareness of public health issues. The community engagement domain includes those activities necessary to carry out Essential Service #4: Mobilize community partners to identify and solve health problems.

Implementation of policies and plans included a set of actions taken by local health directors, health department staff, and Board of Health members that: 1) ensures that policies and plans that address important public health issues, such as emergency preparedness, are developed in collaboration with community partners and routinely reviewed, 2) utilizes rules and ordinances to advance public health goals, 3) sets forth strategic direction through plans and implements according to agreed upon action steps and timeframes, and 4) develops and implements plans important to organizational culture and performance (e.g. diversity plan, staff development plan, quality improvement plan). The policy domain includes those activities important to Essential Service #5: Develop policies and plans that support health.

Study Design

The research consisted of a multi-faceted investigation of the effects of public health agency accreditation on local public health system performance. A quasi-experimental research design was proposed in which local public health agencies that successfully completed the accreditation process and achieved accreditation were compared to local public health agencies not yet accredited. Output and outcome data was compared at different points in time, using data collected both before and after the implementation of the accreditation program in NC. In addition to an analysis of output and outcome data, a cross-sectional comparison of accredited and non-accredited health departments was conducted using a survey tool to document specific activities conducted within the 12 month period prior to administration of the survey. Key informant interviews and focus groups were conducted to further supplement quantitative data. The design was somewhat flawed in that local health departments self-selected to participate in the accreditation process; thus results may have been influenced by selection bias. In addition, all local health departments in North Carolina have had some exposure to accreditation due to the fact that the program is now mandated and all health departments must be accredited by 2014. Therefore, even agencies that are not yet accredited may be modifying their practices in preparation for accreditation in the future. An overview of the study design is presented in Table 3.1.

Table 3.1. Research Design

Research Question	Data Source	Analytical Methods
Do accredited local public health agencies demonstrate leadership, community engagement, and policy implementation to a greater extent than local public health agencies not yet accredited?	North Carolina accreditation data Performance survey Key informant interviews/focus groups	Cross-sectional comparisons of accredited vs. non-accredited agencies
Are accredited local public health agencies more likely to demonstrate greater performance improvement over time than LPHAs not yet accredited?	North Carolina accreditation data North Carolina Local Health Department Facilities, Staffing, and Services Survey North Carolina Local Health Department Expenditure Report U.S. Census data Health Services Information System data	Time-series comparisons of accredited vs. non-accredited agencies
What enhancements will strengthen the impact of accreditation on performance improvement?	North Carolina accreditation data Performance survey Key informant interviews/focus groups	Feasibility assessment

This study examined 40 accredited and 45 non-accredited local public health agencies in North Carolina with respect to organizational effectiveness in three domains: leadership, community engagement, and implementation of policies and plans. Though additional agencies have been accredited since the study was initiated, only 40 agencies were accredited at the time the data was collected. The research also addressed whether accreditation was associated with selected service delivery outputs and health outcome improvements. To evaluate improvements in service delivery and health outcomes, an analysis of output and outcome data prior to and after statewide accreditation implementation was conducted.

The measures of local public health agency service delivery outputs and health outcomes (dependent variables) that were used for this study consisted of 13 indicators selected and refined over the course of two years by local health directors as part of an accountability effort organized by the State Health Director and local health department administrators (see page 25). The 13 indicators were selected from existing reporting requirements in contractual agreements between the state and local agencies. These 13 were selected because they were outputs over which the local public health agency has a significant degree of control. Roper and Mays (2000), in reviewing conceptual and methodological issues in building the science base for performance measurement in public health, concluded that performance measures should reflect a process or condition that is substantially within the control or influence of the public health organization under study. Local public health agencies reported the indicator data to the state either electronically or manually. Indicator data were then assembled from agencies within the NCDPH and the NC Division of Environmental Health (NC DEH). After selection, all indicators were approved by the Policy and Planning Committee of the NC Association of Local Health Directors and NC DPH for inclusion in the recently published NC Local Public Health Performance Measurement Report (NC Office of Performance Improvement and Accountability, 2008). Data for most of these 13 indicators were available in this report for fiscal years 2002-2004 and 2005-2007. The independent variable, accreditation status, was available through administrative data stored at the North Carolina Institute for Public Health. For this study, local health departments were classified as accredited if they had attained accreditation status by the time of the survey.

To supplement the indicator data, local health directors were asked to complete a survey regarding the organizational effectiveness of the local public health agency. The survey and scoring scheme is included in Appendix 2. Survey questions elicited information regarding the effectiveness of the health department in planning and policy development,

and asked about the local health director's/department's leadership skills in working with community groups, the extent and frequency of the agency's networking capacity to leverage system partners, community participation in planning, and frequency of interaction with a variety of partners. Interviews with four local health directors and focus groups with key health department staff were conducted by two person teams following analysis of survey data to further document performance in these domains. Interview protocols for health directors and management teams are included in Appendix 3. Counties selected for interviews represented a mix of accredited agencies that were high performers with respect to leadership, community engagement, and implementation of policies and plans.

There were several limitations related to using the data sources proposed. First, it is unclear whether the 13 indicators selected for improvement measurement actually measure effective public health practice based on current professional and scientific knowledge. Additionally, while some of these indicators clearly reflect performance by the local public health agency, others appear to be more related to the performance of the public health system, which includes many partners. Moreover, these indicators may be insensitive to accreditation status as there may be a long time lag required to affect outcome, or because of other confounding influences that may impact performance, such as turnover in public health leadership. Regarding the data collected through surveys, reliability may depend on whether the appropriate people provide the information, and have sufficient knowledge, expertise, and recall of events. Also, there may be systematic differences in respondent knowledge and information across jurisdictions and over time. Despite due care in developing the survey instrument, there nevertheless may be differences in how respondents interpret questions due to ambiguity or lack of understanding. To enhance measurement reliability of primary data collected through surveys, respondents were provided with clear questions and suggested sources to pursue to answer the survey questions accurately.

Data Collection Procedures

Secondary data analysis was conducted using information from the Health Services Information System (HSIS) and the North Carolina State Center for Health Statistics. For each of the local health departments, performance data for the 13 selected indicators was summarized for the years 2002-2004 and 2005-2007. In addition, data collected by the North Carolina State Center for Health Statistics related to local health department facilities, staffing and services was described for accredited and non-accredited health departments. Public health expenditure data for each local health department was also described for accredited and non-accredited health departments. This expenditure data is routinely collected by the North Carolina Department of Health and Human Services Controller's Office and NC Department of Environment and Natural Resources. Finally, data from the U.S. Census was analyzed to document any significant differences between accredited and non-accredited health departments in population size, racial/ethnic composition, and per capita income for the jurisdictions under study.

Primary data collection occurred using a survey instrument designed to capture actual activities of local health departments and Boards of Health with respect to leadership, community engagement and implementation of policies and plans. Survey questions were fixed response. Surveys were coded by county so that data could be analyzed for each jurisdiction. The survey was vetted with accreditation consultants from the Division of Public Health and pre-tested with five diverse local public health agencies. Pre-test respondents were asked to identify items that were found to be unclear, overly subjective, or otherwise difficult to answer. The instrument was revised to clarify or eliminate problematic items based on this pre-testing.

The survey instrument was administered to all North Carolina local public health agencies (N=85) via mail, and an incentive for completing the survey was offered. Letters of invitation were sent to the local health director, with information on the study purpose and

instructions for completing the survey. Postcard and telephone reminders were sent to the agencies, and after eight weeks, members of the research team attempted to complete the survey via telephone. Response rates of at least 80 percent were expected based on the use of intensive follow-up combined with the research team's relationship with local health department directors.

For the qualitative analysis, four health departments were selected based on survey responses and performance improvement during the period of study. These health departments were a representative sample of accredited health departments with high performance scores calculated from survey responses. Interviews with health directors and other key health department staff were conducted separately using two-person teams. A structured interview guide was utilized to further explore responses to the survey and understand factors that contributed to high performing health departments. Questions addressed the following: 1) the prevalence, scope and magnitude of successes and innovations of the health director and health department, 2) the health department's use of the accreditation process to improve organizational practices, 3) the importance of accreditation to health department quality improvement efforts, 4) the health director's opinion of the accreditation program, 4) characteristics of the health department management team and Board of Health, and 5) ways in which the accreditation program or other performance improvement efforts might be strengthened to better drive public health system improvements. This analysis further described differences among health departments related to accreditation and performance.

Variables and Measures

The independent variable of interest was accreditation status. Control variables that were described in the analysis were total number of full-time employees per 1,000 population, public health expenditures per 1,000 population, percentage of uninsured

persons, population size of jurisdiction, population density, average per capita income, percentage Black/Hispanic/White, and percent uninsured.

The dependent variables used to measure performance improvement over time were: 1) percent of evidence-based environmental and policy changes related to physical activity, nutrition and tobacco that are achieved compared to those planned, 2) percent of Medicaid deliveries where maternity care coordination services were received, 3) percent of Medicaid deliveries where prenatal WIC (Women's, Infants' and Children) was received, 4) family planning caseload in ratio to previous three-year average, 5) adolescent pregnancy rate among females ages 10-17, 6) percent of Medicaid-eligible children birth to age 21 receiving HealthCheck/HealthChoice, 7) percent of Medicaid children 0-2 years of age receiving a direct blood lead screening test, 8) percent of tuberculosis (TB) cases placed on directly observed therapy, 9) percent who complete treatment for latent TB infection, 10) percent of health department clients who are two years old and have received age appropriate immunizations, 11) development of All Hazard Response plan and evidence of two exercises conducted annually, 12) percent compliance with food and lodging inspections, and 13) percent of breast and cervical cancer prevention age-specific targets achieved for mammograms. Data was collected for each of the health departments under study for the period before and after implementation of the mandated accreditation program to quantify any changes in performance.

Data collected via surveys and interviews captured organizational effectiveness beyond those measured by the 13 indicators described above. Additional dependent variables included performance scores for leadership, community engagement, and implementation of policies and plans. Scores were given based on fixed responses to survey questions, with a calculation of the total score achieved divided by the total possible points for each domain and then overall. The Health Department Self-Assessment

Instrument used for the North Carolina accreditation program served as the basis for the survey.

Analysis

The unit of analysis for this research was the local public health agency. The first part of the analysis involved time-series comparisons of performance improvement over a period of time in accredited and non-accredited local public health agencies. This analysis was not used to support causal inferences about the effects of accreditation, but rather was used to describe patterns of variation in performance improvement across accredited and non-accredited agencies. In order to use the 13 indicators as measures of performance improvement suitable for analysis, indicator data was converted to scores. Local health departments received one point each time an indicator benchmark was met and each time performance improved across the two time periods. Some benchmarks were based on prior 3 year period averages specific to each county and others came from expectations outlined in the funding agreements between specific programs in the NCDPH and the local health departments. Local public health agencies were deemed high performing if they met at least 50% of the benchmarks at Time 2 (T2) and demonstrated improvement between Time 1 and Time 2 (T2>T1) for at least 50% of the indicators.

For most of the 13 indicators, higher percentages indicated an improvement on that specific indicator, with the exception of teen pregnancy where a lower rate of teen pregnancy indicated improvement. Therefore, the change measure for teen pregnancy was calculated at T1-T2.

Survey responses were compiled in an EpiInfo database, verified and cleaned, and then analyzed using the EpiInfo 2002 statistical software package. EpiInfo is a series of programs used by public health and other professionals to compile and analyze information from surveys, intake forms and other data collection instruments. This public domain

software was developed at the U.S. Centers for Disease Control and Prevention (CDC). Initial analysis consisted of question-specific frequency distributions which were used to both validate responses and produce tables that were used for more in-depth analysis. Scores were calculated from the survey by summing items for the key domain areas (leadership, community engagement, and implementation of policies and plans).

Cronbach's alphas were applied to assess the degree to which each set of items measured a single unidimensional latent construct. Two items within the policy domain were dropped from the analysis because the values for these variables were negatively correlated with the sum index. T-tests were used to determine whether there were significant differences in scores for each domain based on the accreditation status of the responding agency.

Interviews and focus groups conducted as part of the qualitative analysis were audiotaped and fully transcribed verbatim by a professional transcription service. A thematic analysis of transcripts was conducted using across-case matrices derived from within-case summaries. A coding scheme was developed based on repeated readings of the materials (Miles and Huberman, 1994). Transcripts were coded using open coding in which the coder identified all possible content and thematic areas raised by respondents.

The analysis aimed to assess the statistical significance of any observed differences in dependent measures between accredited and non-accredited agencies. In addition, full consideration was given to issues of practical significance. As Roper and Mays (2000) note, researchers often must go beyond statistical tests to evaluate whether observed findings represent a meaningful difference in public health practice and whether the finding is likely to be associated with a meaningful difference in population health status.

IRB and Confidentiality Issues

Local health directors were contacted via letter and asked to participate in a survey regarding the local health department. Those who agreed to participate were asked to give informed consent and were assured that their confidentiality would be protected. Respondents were asked to complete the survey in paper format and return via U.S. mail. All survey and interview materials were submitted for expedited review and approval by the Public Health-Nursing Institutional Review Board (IRB). The IRB determined that this research was exempt from further review. Based on survey responses, selected health directors were asked to participate in interviews.

Data derived from respondents were secured in a locked file cabinet. Confidentiality of respondents was maintained by reporting data in the aggregate and not identifying the local health department or jurisdiction. In presenting results, direct quotations or descriptions that might inadvertently identify respondents were not printed without consent from the respondent.

Timeline

The timeline below in Table 3.2 highlights project tasks and target dates from completion and defense of the dissertation proposal through the dissertation defense.

Table 3.2. Project Timeline

Task	Completion Date
File Committee Forms	March 2008
Draft Proposal to Chair	Early April 2008
Draft Revised Proposal to Committee	Late April 2008
Develop Data Collection Instruments	Mid May 2008
Defend Proposal	Late May 2008
Submit IRB forms	June 2008
Pilot Test Data Collection Instruments	July 2008
Data Collection	August-October 2008
Data Cleaning and Entry	November-December 2008
Data Analysis	January-February 2009
Key Informant Interviews	February 2009
Draft to Chair for Review	April 10, 2009
Draft to Committee for Review	May 1, 2009
Revised Draft to Committee	May 29, 2009
Dissertation Defense	June 5, 2009
Final Approved Dissertation to Graduate School	June 12, 2009
Graduation	August 2009

CHAPTER 4

RESULTS

Survey Responses

Eighty of 85 health departments returned completed surveys, for a response rate of 94%. Of the 80 returned surveys, 37 (46%) were received from accredited public health agencies, and 43 (54%) were received from local public health agencies that had not yet received accreditation. Table 4.1 describes selected characteristics of responding agencies by accreditation status.

Table 4.1. Description of Survey Respondent Agencies and Jurisdictions, by Accreditation Status

Selected Characteristics	Accreditation Status	
	Accredited at time of survey (N=37)	Not Accredited at time of survey (N=43)
Avg. Population (2007)	124,599	87,801
Avg. Public Health Expenditures (SY 2007)	$7,556,895	$5,568,467
Avg. Number FTEs (2007)	134	97
Avg. Number of Residents per Health Department Employee (2007)	904	896
Percent Rural (2007) *	53%	69%
Percent Uninsured (2007) *	19.5 %	20.6%
Percent African American (2007)	19%	24%
Percent Hispanic (non-white) (2007)	5%	6%
Avg. Per Capita Income (2007) *	$29,472	$27,306
Public Health Expenditures Per Capita	$79.16	$73.85

*p<0.05

In general, accredited local public health agencies at the time of survey administration tended to serve larger jurisdictions and employ more staff, with the average number of residents per health department employee higher in accredited agencies. The accredited agencies also had larger public health budgets and reported spending more per capita on public health than non-accredited counterparts. There were significant differences between accredited and non-accredited public health agencies with respect to average per capita income, percentage of residents uninsured, and percentage of population living in rural communities. Non-accredited agencies were more likely to serve low-income, uninsured rural residents ($p<.05$).

Table 4.2 depicts differences in domain scores for accredited and non-accredited agencies. Accredited agencies were much more likely to report that they had developed and implemented policies and plans than those agencies not yet accredited ($p<.05$). In addition, accredited agencies reported community engagement activities to a significantly greater extent than non-accredited agencies ($p<.05$). There were no significant differences in leadership behavior between accredited and non-accredited agencies. Overall, total scores for policy development and implementation, community engagement, and leadership behavior were significantly higher for accredited agencies compared to non-accredited agencies ($p<.05$).

Table 4.2. Survey Scores on Selected Domains, by Accreditation Status

Domain	Accreditation Status		
	Accredited at time of survey (N=37)	Not Accredited at time of survey (N=43)	P-value
Policy Development and Implementation	21.8/37 (58.9%)	17.2/37 (46.5%)	.0008
Community Engagement	22.5/48 (46.9%)	18.8/48 (39.2%)	.02
Leadership Behavior	28.2/55 (51.3%)	28.2/55 (51.3%)	.99
Total	72.5%/140 (51.8%)	64.2/140 (45.9%)	.03

Tables 4.3 through 4.11 present differences in responses to selected items on the survey by the accreditation status of the participating agency. When asked about the number of public health presentations made by the health director to the general public in the past 12 months, health directors from accredited agencies were significantly more likely to report more frequent presentations than their counterparts in non-accredited agencies (Table 4.3). More than two-thirds of health directors from accredited agencies reported giving at least 7 presentations to the general public; conversely, more than one-half of non-accredited agencies reported giving 6 or fewer presentations ($p<.05$).

Table 4.3. Number of Public Health Presentations Made by the Local Health Director to the General Public in the Past 12 Months, by Accreditation Status (P=0.02).

Number of Presentations	Number of Agencies	
	Accredited	Not Accredited
Three or less	1 (2.8%)	8 (18.6%)
4-6	10 (27.0%)	15 (34.8%)
7-10	12 (32.4%)	9 (20.9%)
More than 10	14 (37.8%)	11 (25.7%)
Total	37 (100%)	43 (100%)

Moreover, as shown in Table 4.4, in the 12 months prior to the survey, health directors from accredited agencies were two times more likely to give 6 or more public health presentations to their local Boards of Health than health directors from non-accredited agencies ($p<.05$).

Table 4.4. Number of Public Health Presentations Made by the Local Health Director to the Board of Health in the Past 12 Months, by Accreditation Status (P=0.008).

Number of Presentations	Number of Agencies	
	Accredited	Not Accredited
1-2	2 (5.4%)	6 (13.9%)
3-4	4 (10.8%)	10 (23.2%)
5-6	10 (27.0%)	15 (34.8%)
More than 6	21 (56.8%)	12 (28.1%)
Total	37 (100%)	43 (100%)

With respect to community engagement, accredited public health agencies reported involving significantly more community partners in activities related to the most recent community health assessment process than local public health agencies that had not yet been accredited ($p<.05$). Table 4.5 demonstrates that nearly 50% of accredited health departments reported involving more than 10 community partners, compared to only 25% of non-accredited health departments involving more than 10 community partners.

Table 4.5. Number of Community Partners Involved with the Most Recent Community Health Assessment, by Accreditation Status (P=0.04).

Number of Partners	Number of Agencies	
	Accredited	Not Accredited
Less than 5	6 (16.2%)	16 (37.2%)
5-10	13 (35.2%)	16 (37.2%)
11-15	9 (24.3%)	3 (7.0%)
More than 15	9 (24.3%)	8 (18.6%)
Total	37 (100%)	43 (100%)

Table 4.6 shows that accredited health departments also held significantly more community health steering committee meetings than those not yet accredited. More than one-third of non-accredited agencies reported holding 4 or fewer meetings in the 12 months prior to the survey whereas less than 15% of accredited agencies reported holding 4 or fewer meetings ($p<.05$).

Table 4.6. Number of Community Health Steering Committee Meetings in the Past 12 Months, by Accreditation Status (P=0.04)

Number of Meetings	Number of Agencies	
	Accredited	Not Accredited
Two or less	2 (5.4%)	10 (23.2%)
3-4	3 (8.1%)	6 (13.9%)
5-6	10 (27.0%)	5 (11.6%)
More than 6	22 (59.5%)	22 (51.3%)
Total	37 (100%)	43 (100%)

Respondents were also asked about the number of public health presentations given by community partners to the local Board of Health (Table 4.7). More than 50% of non-accredited agencies reported that no community presentations to the Board of Health had been given in the 12 months prior to the survey, compared to more than 50% of accredited agencies who reported one or more community presentations to the Board of Health during this time period ($p<.05$).

Table 4.7. Number of Health Presentations Made by Community Partners to the Board of Health in the Past 12 Months, by Accreditation Status (P=0.04)

Number of Presentations	Number of Agencies	
	Accredited	Not Accredited
None	14 (37.8%)	28 (65.1%)
1-2 times	18 (48.6%)	12 (27.9%)
3 times or more	5 (13.6%)	3 (7.0%)
Total	37 (100%)	43 (100%)

Health directors were also asked to report on the degree to which strategic planning activities had been implemented during the 12 months prior to the survey (Table 4.8). Nearly 40% of directors from non-accredited agencies reported that they did not have a strategic plan and/or that no strategic planning activities had been implemented. Significantly more health directors from accredited agencies reported that their agencies had strategic plans, with nearly 50% reporting that more than 50% of strategic plan activities had been implemented during the year prior to the survey ($p<.05$).

Table 4.8. Percentage of Proposed Activities Implemented in the Most Recent Strategic Plan, by Accreditation Status (P=0.0002).

Percentage of Activities Implemented	Number of Agencies	
	Accredited	Not Accredited
None/Do not have strategic plan	1 (2.8%)	16 (37.2%)
Less than 25%	7 (18.9%)	9 (20.9%)
More than 25% but less than 50%	11 (29.7%)	7 (16.3%)
More than 50% but less than 75%	12 (32.4%)	9 (20.9%)
More than 75%	6 (16.2%)	2 (4.7%)
Total	37 (100%)	43 (100%)

There were also significant differences between accredited and non-accredited agencies with respect to the development and implementation of organizational policies and plans, such as a workforce training plan, a diversity plan, and a quality improvement plan. Health directors from accredited agencies were much more likely to report that these plans were in place and had been largely carried out during the 12 months prior to the survey ($p<.05$). This finding was particularly true for diversity plans and quality improvement plans, with more than 50% of non-accredited agencies reporting that they did not have and/or had not substantially implemented a diversity plan or a quality improvement plan during the past year. Tables 4.9 through 4.11 describe these findings for the various plans mentioned above.

Table 4.9. Percentage of Workforce Training Plan Implemented in the Past 12 Months, by Accreditation Status (P=0.04)

Percentage of Training Plan Implemented	Number of Agencies	
	Accredited	Not Accredited
None/Do not have workforce training plan	3 (8.1%)	11 (26.1%)
Less than 25%	6 (16.2%)	9 (21.4%)
More than 25% but less than 50%	9 (24.3%)	5 (12.0%)
More than 50% but less than 75%	4 (10.8%)	7 (16.7%)
More than 75%	15 (40.6%)	10 (23.8%)
Total	37 (100%)	42 (100%)

Table 4.10. Percentage of Diversity Plan Implemented in the Past 12 Months, by Accreditation Status (P=0.001).

Percentage of Diversity Plan Implemented	Number of Agencies	
	Accredited	Not Accredited
None/Do not have diversity plan	6 (16.2%)	22 (52.4%)
Less than 25%	7 (18.9%)	4 (9.7%)
More than 25% but less than 50%	3 (8.1%)	6 (14.1%)
More than 50% but less than 75%	5 (13.6%)	2 (4.8%)
More than 75%	16 (43.2%)	8 (19.0%)
Total	37 (100%)	42 (100%)

Table 4.11. Percentage of Quality Improvement Plan Implemented in the Past 12 Months, by Accreditation Status (P=0.002).

Percentage of QI Plan Implemented	Number of Agencies	
	Accredited	Not Accredited
None/Do not have quality improvement plan	0 (0.0%)	9 (21.4%)
Less than 25%	3 (8.1%)	4 (9.7%)
More than 25% but less than 50%	8 (21.6%)	9 (21.4%)
More than 50% but less than 75%	7 (18.9%)	9 (21.4%)
More than 75%	19 (51.4%)	11 (26.1%)
Total	37 (100%)	42 (100%)

Since the survey was administered in October 2008, there were several accredited counties that were accredited during the 12 months prior to the survey. Of the 37 accredited agencies that completed the survey, 18 (48.6%) received initial accreditation status in 2004, 2005 or 2006. Nineteen (51.4%) accredited agencies received initial accreditation status in 2007 or 2008. An analysis was performed to determine whether there were significant differences in survey responses between agencies that were early adopters of accreditation and those agencies more recently accredited. Early adopters were those accredited prior to 2007 (this group includes those counties reaccredited in 2008). Later adopters were those accredited in 2007 or 2008 (excludes counties receiving reaccreditation status in 2008). Tables 4.12 through 4.15 present the results of the survey among accredited agencies according to whether accreditation was adopted earlier or later.

Agencies from the early accreditation group were more likely to report a greater number of community partners involved with the most recent community health assessment process than agencies from the later accreditation group ($p<.05$). More than 50% of agencies in the early group reported involving more than 20 community partners in their assessment activities, whereas more than 75% of agencies in the later accreditation group reporting 20 or fewer community partners involved with the most recent community health assessment ($p<.05$) (Table 4.12).

Table 4.12. Number of Community Partners Involved with the Most Recent Community Health Assessment, by Timing of Accreditation (P=0.01).

Number of Partners	Timing of Accreditation	
	Early	Late
Less than 10	1 (5.5%)	7 (36.8%)
11-20	7 (38.9%)	8 (42.2%)
21-30	5 (27.8%)	2 (10.5%)
More than 30	5 (27.8%)	2 (10.5%)
Total	18 (100%)	19 (100%)

Agencies from the early accreditation group were also more likely to hold significantly more community health steering committee meetings in the 12 months prior to the survey than agencies from the later accreditation group. One-hundred percent of early adopters reported holding at least five meetings, compared to only three-fourths of the agencies accredited later holding at least five meetings ($p<.05$) (Table 4.13).

Table 4.13. Number of Community Health Steering Committee Meetings in the Past 12 Months, by Timing of Accreditation (P=0.03).

Number of Meetings	Timing of Accreditation	
	Early	Late
Less than 2	0 (0%)	2 (10.5%)
3-4	0 (0%)	3 (15.8%)
5-6	5 (27.8%)	5 (26.3%)
More than 6	13 (72.2%)	9 (47.4%)
Total	18 (100%)	19 (100%)

Consistent with findings from the previous two survey items, accredited agencies from the early group reported having significantly more community partners represented on their community health steering committees than agencies accredited later ($p<.05$). Greater than 60% of early adopters reported more than 10 community partners represented on their community health steering committees, compared to more than two-thirds from the later group reporting 10 or fewer partners represented on their community health steering committees ($p<.05$) (Table 4.14).

Table 4.14. Number of Community Partners Represented on the Community Health Steering Committee in the Past 12 Months, by Timing of Accreditation (P=0.01).

Number of Partners	Timing of Accreditation	
	Early	Late
Less than 5	0 (0%)	4 (21.1%)
5-10	7 (38.9%)	9 (47.4%)
11-15	4 (22.2%)	4 (21.0%)
More than 15	7 (38.9%)	2 (10.5%)
Total	18 (100%)	19 (100%)

With respect to policy and plan development and implementation, the agencies that were accredited later reported a significantly greater percentage of activities implemented in their workforce training plans than those agencies accredited earlier ($p<.05$). More than two-thirds of agencies in the latter group stated that at least 50% of their plans were implemented in the 12 months prior to the survey, compared to only one-third of agencies in the early group reporting that they had implemented at least 50% of their training plans. There were no significant differences in the two groups with respect to the percentage of activities implemented in the other plans asked about in the survey, i.e. the strategic plan, the diversity plan, and the quality improvement plan (Table 4.15).

Table 4.15. Percentage of Workforce Training Plan Implemented in the Past 12 Months (P=0.037).

Percentage of Training Plan Implemented	Timing of Accreditation	
	Early	Late
Less than 25%	6 (33.3%)	3 (15.8%)
More than 25% but less than 50%	6 (33.3%)	3 (15.8%)
More than 50% but less than 75%	2 (11.2%)	2 (10.5%)
More than 75%	4 (22.2%)	11 (57.9%)
Total	18 (100%)	19 (100%)

Performance Data

Table 4.16 summarizes findings from a descriptive analysis of indicator data for accredited and non-accredited counties. Only local public health agencies with completed surveys were included in this part of the analysis, though performance data is available for all 85 health departments and 100 counties.

Accredited public health agencies, on average, met 6.32 of 13 performance indicator benchmarks prior to implementation of the accreditation program in North Carolina (2002-2004). Local public health agencies not yet accredited met a similar number of benchmarks during the same time period. However, for the data period following implementation of the accreditation program (2005-2007), accredited agencies were significantly more likely to meet more performance indicator benchmarks than non-accredited agencies (5.68 compared to 4.81). Both groups were similar with respect to the number of indicators demonstrating improvement in the right direction across the two time periods. The accredited group, though, met 2005-2007 targets to a greater extent than the non-accredited group.

Table 4.16. Performance Measurement by Accreditation Status

Measurement	Accreditation Status	
	Accredited (N=37)	Not Accredited (N=43)
Met Benchmark 2002-2004 (Avg.)	6.32	6.72
Met Benchmark 2005-2007 (Avg.)*	5.68	4.81
Moving in Right Direction (Avg.)	5.84	5.40

*p<.05

Overall performance scores were calculated by summing scores for the number of benchmarks met during the time period following implementation of the accreditation program (Time 2) and scores for the number of indicators moving in the right direction. High performance was designated if agencies met at least 50% of benchmarks during Time 2 and

showed improvement in at least 50% of the indicators between the two time periods. Table 4.17 demonstrates that accredited agencies were more likely to be high performing than agencies not yet accredited.

Table 4.17. Performance Designation by Accreditation Status

Improvement Scores	Accreditation Status	
	Accredited (N=37)	Not Accredited (N=43)
High Performance on Indicators (>50% on T2 and T2 > T1)	7(18.9%)	3 (7.0%)
Low Performance on Indicators (<50% on T2 and T2 < T1)	30(81.1%)	40(93.0%)

In order to supplement the survey data and performance indicator data, key informant interview and focus groups were conducted with four accredited local health departments. The four health departments were selected from a group of accredited health departments that had demonstrated leadership, community engagement and policy implementation to a significant extent as determined by survey responses. In addition, performance on the 13 indicators was also taken into consideration. Lastly, the selection of counties considered other factors, such as size, location, and year of accreditation. Table 4.18 describes the agencies selected for interviews based on their survey scores and performance on the 13 indicators.

Table 4.18. Performance and Survey Scores for Accredited Local Public Health Agencies Selected for Interviews.

Indictor Performance	Survey Scores	
	Low	High
Low Performance on Indicators	No	Yes (N=1)
High Performance on Indicators	Yes (N=1)	Yes (N=2)

Key Informant Interviews and Focus Groups

In order to supplement findings from the descriptive analysis of the indicator data and the survey regarding leadership, community engagement, policy development, and local public health agency performance in general, interviews and focus groups were conducted with select public health leaders using structured interview guides.

Table 4.19 describes the local health departments that were selected for interviews and focus groups and the jurisdictions they serve. Health departments selected for the qualitative analysis represented four distinct regions of the state and ranged in size from 64 to 484 employees. One agency was accredited in 2004 and reaccredited in 2008. Two agencies were accredited for the first time in 2006 and the fourth in 2008.

Table 4.19. Characteristics of Local Public Health Agencies Selected for Interviews

Characteristic	Agency A	Agency B	Agency C	Agency D
Year accredited	2008	2004, 2008	2006	2006
Population size	63,294	164,384	460,780	67,182
Agency employees (FTEs)	73	209	484	64
Public health expenditures	$3,340,311	$16,206,204	$33,095,495	$5,118,136
Average public health expenditure per capita	52.56	103.11	73.70	76.48
Per capita income	32,086	33,161	35,658	29,466
Percent uninsured	18%	17.9%	17.7%	17.9%
Percent rural	38%	28%	16%	74%
Percent African American	7.4%	14.6%	31.9%	4.3%
Percent Hispanic/Latino	2.3%	8.5%	6.1%	5.3%
Percent White	88.9%	74.3%	59.3%	88.9%

Health directors were interviewed individually regarding a number of subject areas related to accreditation. Topic areas included policy development activities, strategic planning, community engagement activities, leveraging community resources, leadership behavior, and communication with elected officials, the Board of Health, and the general public. In addition, they were asked to share their thoughts about the current accreditation program and offer suggestions for reaccreditation. There were also a number of questions related to the performance of their agencies and whether accreditation improved the health status of the communities served. Appendix 4 presents the health directors' responses by agency and interview question; Appendix 5 provides a thematic overview of health director responses across agencies.

Management team members participated in a separate focus group and were asked similar, yet more operational, questions. Issues addressed by the focus groups included describing the main impacts and successes of the current accreditation program in North Carolina, quality improvement efforts of the agency, how accreditation has impacted the health department's work in the community, and thoughts about improving the accreditation program to achieve better community health outcomes. Appendix 6 presents the management teams' responses by agency and interview questions; Appendix 7 provides a thematic overview of management team responses across agencies.

The responses for health directors and management team members are described separately for each agency in the summary that follows. (For a reminder of interview methodology, please refer to pages 23-24.)

Agency A

Agency A received initial accreditation status in 2008 and as such represented the agency with the most recent data of accreditation. The agency is a small to midsize health department serving a population of approximately 60,000 residents. The health director

reported having served in that position for the past ten years. This health director was in general highly enthusiastic about the benefits of the accreditation program to the agency and community.

When asked about policy development and implementation activities related to accreditation, the health director stated that many policies were not in place prior to accreditation that should have been in place. This respondent also emphasized that as a result of accreditation Board of Health meeting agendas had been changed so that every month the board had time to review and comment on policies as needed. This health director further described agency strategic planning improvements, noting that as a result of accreditation, three major priorities were included in the agency's strategic plan: cultural diversity training for staff, policy development, and partner relationships.

> Before accreditation, we had 15 agreements in place, now those could be MOAs, MOUs, just a letter in some cases … Now look at how many I've got. I think at one time I counted 54 … so there's a clear understanding of what they say they're going to do and what we say we're going to do.

The health director further shared a personal belief that the community had benefitted from these partnerships with the health department by attaining grants that perhaps would not otherwise have been attained, for example new funding for walking trails and funds to Healthy Carolinians. When asked if accreditation was a factor in developing these collaborative proposals, the health director responded that:

> …accreditation encouraged me to be a little more open as a health director. Somewhere along the way I kind of got the idea that I should be a little more open, 'cause otherwise I'm … kind of shy. I don't really like going out and meeting the public that much. When I started going out and trying to develop these agreements, and worked a little more with partnerships in the community, it opened all kinds of doors for us. And I think before accreditation my assumption was I don't want them to open up another door because I don't want any more work to do, I don't want to put any more on my staff. It hasn't happened that way.

When asked about whether personal leadership effectiveness with policymakers, such as the Board of County Commissioners and Board of Health, had improved as a result of accreditation, this respondent stated a preference for generally avoiding politics as much as

possible, noting that when asked to attend Board of County Commissioner meetings, others from the agency leadership team also attended unless an invitation to others was not possible. The health director noted playing several additional leadership roles in the community, but that these roles had existed prior to accreditation.

In response to questions about how the accreditation program improves the performance of the agency specifically and community health generally, this respondent said that accreditation had moved the agency further along in terms of participation in the community and having more organization and structure in business operations than it would have without accreditation. This health director also noted more team involvement in quality improvement activities within the agency. With respect to community health, this respondent stated a personal belief that the required community health assessment process was improved by accreditation.

> Instead of just collecting data and putting it in a data file, and producing a document of some kind with those data, I think what we're doing now is we're really making it a tool, a useful tool in the community, and the community is using that tool as well. Instead of having a Health Educator, we changed the position and went to a Community Health Educator, that person is out … not in the clinic.

The management team of Agency A was similarly very positive about the accreditation program, though in general emphasized different benefits related to accreditation than the health director did. The team described accreditation status as a "good housekeeping seal of approval". They felt it was not something that every public health agency has, and was a "nice little feather in your cap." They further stated that the process of accreditation helped staff learn each other's roles and brought the staff closer together. They were particularly enthusiastic about a newly formed communication committee that consists of a representative from each section of the health department. The committee meets regularly and sponsors activities to enable staff to mingle and learn about happenings in other areas of the agency.

With respect to policy development, they agreed with the health director that standardizing processes and developing policies was highly beneficial to the organization. They were particularly appreciative of the orientation requirement for new hires, noting that "it gives everybody…a chance to see exactly what the health department's all about." In addition to clarifying expectations, they also noted that there was greater accountability as a result of policy development. Specifically, they felt there was better management oversight of the requirements in the Agreement Addenda between the agency and NCDPH, and that supervisors understood better the need to review policies with employees. They stated that as a result of accreditation, employees receive regular training on policies, and policies are emailed to staff and stored in a shared folder for easy access.

They also appreciated the opportunity to identify areas in the department needing improvement, including ways that they needed to work more with the community. One member stated that:

> … we've had to look at a lot more partnering and outreach to the community and to other organizations to accomplish some of the goals and objectives that we had … We certainly recognized that for a long time we were just a stand-alone agency: we do this, and the hospital does that … it was just the realization that you can get more accomplished, and you can get the word out, and you can provide better service if you are partnering …

When asked how they thought accreditation improved the performance of the agency, management team members stated that the required benchmarks and activities raised expectations for performance. They felt they were more effective with the faith-based and Hispanic/Latino communities as a result of more strategic outreach, and that adding more diverse partners to the community health assessment process could possibly improve their assessment.

The team offered several suggestions to enhance the impact of the accreditation program on performance, including providing more education to county commissioners on the importance of accreditation to public health. One member noted that the attorney to the

Board of Commissioners specifically asked what the public would gain from accreditation of the health department. "A lot of our own staff said that…..other than a lot of work going into making sure you got your policies and everything, what's the big deal?"

Agency B

Agency B received initial accreditation during the two-year pilot phase in 2004 and received reaccreditation status in 2008. The agency serves approximately 160,000 residents. The agency employs more than 200 people and the average public health expenditure per capita is well above the state average. The health director has served as agency head for 20 years. Note that this health director's responses to the interview questions were informed from participation in two accreditation cycles.

When asked about policy development and implementation activities related to accreditation, the health director acknowledged that prior to accreditation several policies were not written down, and stated also that in preparing for reaccreditation, the requirements had tightened up a bit and they had to create new policies.

> That's probably one of the best things about accreditation … that it makes you revisit and revisit and revisit the policies and make sure you have them up to date, you actually have them in place, and people can find them.

With respect to strategic planning, the health director felt the accreditation process had not influenced the agency's strategic plan, in that the organization had developed a strategic plan prior to the pilot accreditation. This respondent did say that the strategic plan is now reviewed annually with the Board of Health, rather than every three to five years as was the case prior to accreditation.

Regarding the impact of accreditation on community engagement activities, the health director felt community partnerships had not changed as a result of accreditation.

> This is a very collaborative community where the hospital is always the strong financial contributor … they kicked in half the money to start the school nurse

> program, and physicians have always been active in the health department either in volunteering here or working.

The health director did feel, though, that the accreditation process served to validate the importance of the health department in the community.

> I often think that they don't think public health is that important but when [the site visit team] went and talked to community folks they found that [the community] thinks there's a great value in the health department and what it does in the community which was heartening.

Beyond the actual interviews, though, this health director did not think the general public understands the importance of accreditation, and whether a local public health agency is accredited or not does not make much difference to community residents.

With respect to enhancing leadership effectiveness and communication, the health director noted that requirements for reaccreditation did lead to extensive dialogue with the Board of Health concerning tobacco rules. The health director related holding several leadership positions on community boards but that these roles had not been changed as a result of accreditation. This respondent did state a belief that accreditation could drive greater leadership effectiveness if health directors were required as a part of accreditation to demonstrate leadership competency through continuing education, leadership training, and public health activity in their communities. "I think [health directors] do have probably the most significant impact in the community than anybody on the staff by far …"

When asked about whether accreditation drives performance improvement in local public health agencies, the health director stated:

> … there might be fleeting, marginal improvement because it does bring attention … to what you should be doing, the way you should be doing it, for a short period of time … and at the end of that time I think people sometimes just go back to business as usual especially in the quality improvement areas. It's hard to keep spending the resources or the money to do all the quality improvement we need to be doing in every area.

The health director further explained that it wasn't possible to justify "getting really bogged down in this stuff until somebody tells me there's an impact". The health director stated a

personal belief that local public health agencies in NC *should* fail the accreditation requirements if they are not able to meet the benchmarks. “If a health department does not meet the criteria in a clear way, they should fail and get a period of time to fix the problems.” Moreover, this respondent stated that accreditation should be driving local public health organizations to consolidate, given that public health indicators in the state are worsening, rather than improving.

> If I were designing an accreditation system that I thought would work for the real goal, which is to do something about the performance of public health in North Carolina, I would design it around … standards including performance.

This respondent further stated that if performance standards are not met, then the agency should lose a percentage of their state funding.

The health director felt that In order for accreditation to have greater impact on community health goals, accreditation should require evidence of accomplishments within the community that go beyond the local public health agency. The health director was of the opinion that the health department needs to demonstrate community accomplishments through partnerships with the health department, and gave the example of a new transportation system in the agency’s county that was funded in part as a result of the facilitative and leadership efforts of the health department.

Members of the Agency B management team identified, in general, different attributes of the accreditation process that they perceived beneficial to their organization and the public health system in North Carolina compared to their health director. They stated they were interested in pursuing accreditation as a pilot county because they wanted to have a significant part in shaping the accreditation program in North Carolina. They desired the opportunities that accreditation presented and were interested in being at the “top of their game”. They described good will across health departments and the NCDPH in preparing for and attaining accreditation. They saw consistency of public health practice and standardization of processes as a way to “prove to legislators what public health can do.”

They felt that as a result of accreditation public health is better known, and there has been an opportunity to talk about public health, help others understand the public health mission, and explain the business of public health to others. The aspects of accreditation valued most by the management team included opportunities to identify areas needing improvement, recognition of the contributions made by the local Healthy Carolinians task force, better teamwork within the health department, and continuous quality improvement efforts.

With respect to enhancements in policy development and implementation, they found the initial accreditation process helped them put their personnel records in “perfect order”. All policies were put on the agency intranet, and organized in an accessible manner. They were particularly pleased with the improvements to their employee safety policies and procedures, noting that for reaccreditation they revamped all their safety policies and procedures, added a full-time safety officer, and implemented better training and worker’s compensation protocols. They stated that managers are responsible for reviewing and revising policies, and making sure policies are implemented. The Board of Health never used to review policies but since accreditation, the Board reviews policies annually. They also noted that the Board of Health conducted a self-assessment for the first time in preparation for reaccreditation.

The management team further shared that the accreditation process resulted in better documentation of activities, with a broader appreciation for agency-wide quality improvement. They noted that in Environmental Health in particular there was improvement in responding to complaints as a result of better documentation.

The management team members did not feel the accreditation program changed the way the health department worked in the community. Similar to their health director, they shared that firm collaborations existed prior to accreditation, and that the health department placed high value on being a community player. They also stated that accreditation

validated what people felt about the public health agency, and that the agency was already well-respected in the community prior to accreditation.

They noted that the accreditation process benefitted from the health director's leadership in communicating high expectations for the agency. They also thought the health director gained a better understanding and appreciation of staff roles and responsibilities.

When asked how accreditation could drive public health performance to a greater extent, members of the management team suggested that accreditation could assess how well the community needs identified through the assessment process are being addressed. In addition, they felt the accreditation program needs to recognize excellence. In their experience, the "stretch was not doing the work but finding the documentation to support it." While they acknowledged that reaccreditation was more challenging than the pilot, they would like to see future accreditation cycles link accreditation with best practices and performance indicators.

Agency C

Agency C pursued accreditation in 2006, which was the first year of mandated accreditation following two pilot cycles of the program. The health department serves a large, urban county of nearly 500,000 residents. The department employs approximately 500 public health workers and has one of the largest public health budgets in the state. More than one-third of residents are African American and Hispanic/Latino. At the time of the interview, the agency was in the process of preparing for reaccreditation in 2010. The health director reported having served as director of the agency for approximately five years.

When asked to describe the agency's policy development activities in order to prepare for initial accreditation, the health director stated that while the department had policies in place, staff needed to review existing policies to ensure they were relevant and updated. They also put all policies on the county intranet to ensure that employees would

have easy access to them. The health director further reported that the department's executive team reviews all policies annually, makes necessary changes, and then forwards them for review by the Chair and Vice-Chair of the Board of Health on an annual basis. With respect to the agency's strategic plan, the health director stated that accreditation had no effect on their strategic planning work, since the department had maintained a strategic plan for many years.

The Health Director was then asked about the impact of accreditation on community engagement activities, and in response stated that the accreditation process resulted in better documentation of community work, but that the health department was already partnering with every local health and human service agency in the county.

> We started making a list of our partners, and when we got to about page seven or eight single-spaced, we said 'This is enough.' Even our board members said, 'Okay, okay; we get the message.'

The health director also felt that accreditation had not impacted the agency's ability to leverage community resources or other outside funding. This respondent did state, however, that the agency was in the process of renovating one of their buildings while preparing for accreditation, and that perhaps the county manager may have been more motivated to complete the renovation in order for the health department to meet accreditation requirements.

Regarding personal leadership effectiveness in the community, the health director described serving on several community boards, but did not believe these external relationships were changed or strengthened as a result of accreditation. The health director did acknowledge that *internal* relationships within the health department had improved since the accreditation process.

> Our staff say over and over that they had never had a reason to work with the lead nurse in Child Health, for example, if they were in Environmental Health, so the Environmental Health people got to work more closely with clinical people than they had before, because before they hadn't had a reason to, and being on the accreditation teams forced them to work together.

The health director added that better informed staff has resulted in better customer service, because staff is now able to provide general information about health department services and make appropriate referrals regardless of their specific roles in the health department.

When asked how accreditation has improved the performance of the health department, the health director noted that the process of accreditation has made the agency more organized and helped them to plan better, also adding that as a result of automation improvements put in place for accreditation, the agency is much more efficient and operates more professionally.

With respect to community health outcomes, the health director felt that the accreditation program did contribute to overall community health improvements by leveraging the health department's power and influence.

> [Accreditation can] help us leverage power to have our community help us, or partner with us, on major events. We can leverage power to influence our commissioners to do things such as pay for building upgrades, and signage, or whatever. We could also use it positively as leverage for more automation, because it helps us pass accreditation if we are more automated and can find documentation more easily.

When asked how the accreditation program could drive community health improvements even more, the health director suggested that agencies could identify one or two community health goals needing improvement and demonstrate improvement in those areas as part of reaccreditation requirements. This respondent also suggested that each health department could be required to identify a Healthy Carolinians coordinator for the county in order to meet accreditation requirements.

Responses from Agency C's management team were generally consistent with the health director's responses. Similar to Agency B's management team, the management team of Agency C shared that they had pursued accreditation in order to be one of the first health departments in the state to be involved with the process. They also saw accreditation as an opportunity to move ahead and make progress. They stated that they had initiated discussions about accreditation in the early 2000s.

The management team identified several major impacts of the accreditation program to their agency and the public health system statewide. They felt NCDPH was communicating requirements of the Agreement Addenda more clearly to local health departments in response to accreditation. As one respondent noted:

> I think we're more 'in sync' with what's expected of us and what we're supposed to be doing here, which I think impacts us a lot in that we aren't doing a lot of things that we probably don't need to be doing, or we're able to be more efficient and effective in what we're doing.

As a result of clearer guidance and greater attention to internal audits, they believe they are submitting fewer corrective action plans to the state. In addition, they shared that they use their accreditation status when applying for grants, and when advertising health department services, since they feel this raises the credibility of the organization with funders and the general public.

They also expressed appreciation for an evaluation tool that they can implement for self-evaluation, that is, the health department self-assessment instrument. They shared that they have continued to evaluate their programs using the tool which has been helpful in their preparation for reaccreditation.

When asked what they valued most about the accreditation program, they noted that accreditation had led them to be more organized. They also found preparing for accreditation to be an excellent way to orient new managers to their responsibilities, and provided a great learning opportunity for staff in general

> … for any health department person, frontline staff, all the way up to the director, the more you know about all the health department services, the better service you give to the community.

With respect to improvements in Board of Health relations, they reported that since accreditation the Board of Health members seemed more aware of the Board's responsibilities and the responsibilities of health department staff. In order to meet accreditation requirements, the Board of Health had developed bylaws. One member of the

management team emphasized that requirements related to fiscal reporting to the governing board had enhanced communications on fiscal matters between staff and the Board of Health. The management team also noted that since accreditation community members attend Board of Health meetings more often and present their thoughts and ideas.

The management team also felt that the accreditation process gave their existing quality improvement committee "more substance and more of a goal. It gave them a lot more power, I think, to tell us when we need to get back on track, and when we were off track." They shared that the committee membership now includes representation from the entire department, whereas before accreditation the membership was generally limited to clinical staff. This committee plays a greater role in keeping up with staff training requirements and reviewing client satisfaction surveys.

When asked how accreditation had improved health department performance, the management team felt that accreditation provided operational guidance and helped the agency stay focused. Preparing for accreditation had led them to look at their processes and redesign their practices.

> It really forced us to look at what we were doing, as we were writing and reviewing our guidelines, and I think as a result of that we have been able to streamline things, and maybe do away with things that … were nice but weren't needed.

Supervisors have greater accountability for making sure staff review policies and implement them accordingly. They also shared that having a site visit team independently review the health department's programs and processes, and share how other health departments carry out their functions, has been very helpful.

> We get caught up in what we're doing; we may not see the error of our ways. Somebody coming in with fresh eyes – they've been to other places, they know what's working and what's not working – they can head us off before we head down the wrong path.

The management team of Agency C made several suggestions for enhancing the impact of the accreditation program on public health performance. They stated that elected

officials need to be better educated about the accreditation program as one way to avoid budget cuts to local public health agencies. They felt that more funding is needed for re-accreditation and quality improvement, since accreditation adds more stress to an already taxed staff. They suggested that Medicaid consider paying more for health department services if a health department is accredited as an incentive to maintain and exceed benchmarks over time.

With respect to community health improvements, the management team responded that accreditation had not really changed how the agency worked in the community but the requirements had made them more conscientious about documenting their work. They did think the accreditation program, in addition to requiring a community health assessment every four years, needed to evaluate how well the assessment was done, whether the assessment involved the community, what action plan was developed, what resources were leveraged, and the impact of the activity. They had concerns about holding health departments accountable for improvement in health outcomes, however:

> I think measuring the outcome is kind of harder to measure during an accreditation process, because outcomes may not be realized 'til several years later and are affected by a lot of other things.

Agency D

Agency D was accredited in 2006, and at the time of the interview was preparing for reaccreditation in 2010. The health department is a small to mid-size local public health agency serving approximately 67,000 residents. Three-fourths of the population in the jurisdiction lives in rural communities. The health director stated having been director of the agency for nine years.

When asked about the health department's policy development and implementation activities related to accreditation, the health director responded that accreditation had made the agency much more organized around policies. Prior to accreditation, the focus was

primarily on clinical policies, but the agency now has an administrative policy manual with policies that apply to everyone in the department. In preparing for reaccreditation, the agency has followed its policy of annual review and update, and has scheduled an annual meeting with the Board of Health focused on policy review. The policies are stored electronically so that they are accessible to employees, and supervisors are responsible for seeing that policies are implemented.

The health director also felt the department's strategic plan was better as a result of accreditation. The strategic plan is now framed by the ten essential services, which serves as a reminder to staff and the Board of Health of the responsibilities of the agency. The management team reviews the strategic plan quarterly, and it is reviewed with the whole staff and the Board of Health annually.

The health director stated that accreditation also improved documentation of community engagement activities, but noted that the health department had already had the vision "to be the health resource of the community" so the extent to which the health department worked with community partners was really not changed by accreditation. This respondent did state, however, that accreditation had improved their responsiveness to users of health department services:

> We do ongoing patient satisfaction [assessments], but the accreditation standards around the people you serve is a little more challenging. We've stepped that up … we are now open 'til 7:00 on Mondays and Tuesdays. Accreditation has made us be more thoughtful and more prescriptive in our approach to trying to get feedback from people we serve.

When asked if achieving accreditation status had helped the department leverage additional resources, the health director responded that the improved documentation of need helped them "pull together a compelling case to get grant money". The health director also felt that improved reporting, such as through the annual report, quality improvement report, etc., may have increased the agency's visibility and accountability, thus enhancing its ability to leverage tax dollars for public health.

The health director described holding several leadership positions on community boards which were important to raising the visibility of public health, but did not feel that leadership effectiveness in these roles was impacted by accreditation. This respondent did acknowledge needing to do a lot of work around relationships with the Board of Commissioners. Accreditation did change the way this health director approached the Board of Health.

> It's helped me so much to do a schedule of annual business for the Board of Health so that I don't have a year roll by and go, 'Oops, we forgot to review policies' or whatever.

Regarding ways accreditation improves health department performance, the health director shared that accreditation brings focus to health departments and may identify a few areas needing improvement. This respondent did not think, though, that the process makes a good health department a lot better. "I think it probably makes a good health department able to express how good they are a lot better in definitive ways." The health director did think that accreditation probably did "raise the bar" for a number of health departments in North Carolina. "I guess for more marginal or less-than-average performing health departments it would make a considerable difference."

The health director further shared a personal belief that accountability related to accreditation benchmarks and activities is a driver in itself for continuous improvement. This health director's agency is already reviewing and updating policies in anticipation of reaccreditation in 2010.

> Our county policy does not require performance appraisals … we don't have merit increases, and so … accreditation is helping me help all of our supervisors continue to do annual performance appraisals even though there's no [county] incentive to get it done.

When asked whether accreditation improves community health, the health director reported that the community health assessment process prior to accreditation was not as comprehensive as the one conducted to meet accreditation standards. This respondent felt

that the accreditation program had standardized the community assessment process across the state, and if community action plans and strategic plans are aligned with the assessment, community health should improve. Moreover, the health director stated that health departments needed to focus on process improvement in order to address one or two priority health indicators that need to improve statewide as opposed to 13 indicators.

The management team for Agency D felt that their health director's leadership was highly influential in the department's decision to pursue accreditation. The team also felt that accreditation provided an opportunity to enhance the quality of health department services and to assess areas needing improvement. Similar to other accredited agencies, the team viewed accreditation as a "Good Housekeeping seal of approval". Team members further stated that all materials distributed to the public contain the accreditation "seal", though the team was not sure that the general public appreciated the importance of local public health accreditation. They felt the leadership at the health department "has an impact on how receptive the community is to the accreditation process, and how it is accepted in the community." They cited the importance of the health director, in particular, in helping the community understand what the accreditation process means.

When asked to describe the main impacts of the accreditation program, the team cited standardization of health department activities using the ten essential services as most beneficial. They felt accreditation offered an opportunity to define local public health, acknowledge agency strengths, and help staff see the "big picture" of public health. They also felt that accreditation helped their Board of Health and community partners understand the role of the health department, and cited the interviews conducted by the review team as bringing "to the forefront the work that you are doing within the community." One member of the team said she was able to value the work of her coworkers as a result of accreditation.

> I learned a lot about Health Promotion, and Environmental Health, and all of those other departments within the Health Department…Wow! I didn't realize they did all that.

With respect to policy development and implementation, the team thought that policy development and review was more uniform as a result of accreditation. They identified improvements in personnel processes as highly beneficial. Employee training was better organized, and supervisors improved review of job descriptions and employee evaluations. They also described the new staff orientation process as:

> … great, because when you come into public health, you do not realize all that public health involves, and by going through the orientation process, it gives you a taste of the entire picture.

The management team identified several ways in which the health department culture was changed by accreditation. They cited an environment where employees "have a healthy respect for one another and the work that we do in the health department." One member of the team was also pleased to share that staff were beginning to understand that "public health doesn't happen inside this health department, public health happens outside of the walls of the health department." Another team member thought the cultural diversity training had improved, and had helped employees "think outside the box". They also felt accreditation had made the management team closer and more focused on shared goals.

Regarding changes to community work as a result of accreditation, the team felt that the health department had always been very involved with the community, and that accreditation had not really impacted community partnerships. One member did note, though, that since accreditation more staff people are involved at a community level in addition to managers.

> We make an effort to allow our employees to sit on some other committees outside the Health Department, councils, and participate in those, and give them the time to do that, to be a representative from the Health Department, but also to be a representative from the community.

They also felt accreditation affirmed that the work they were doing in the community was the right thing to do. Moreover, they noted that since accreditation, community partners are more involved in identifying problems to address:

> In the past I think we would have picked the problem and brought them in and said, 'Okay, we're going to do this, and do y'all think this will work?' Whereas now we allow them to look at the data and help us define what we need to do.

When asked how accreditation had improved the performance of the health department, the team described efforts to improve customer satisfaction and reward employee performance. Their expanded customer satisfaction program results in program reports that are reviewed by the agency's quality council, and specific areas needing improvement are identified and addressed. Employees who go "above and beyond" customer expectations may be recognized by customers or other staff members. Specifically, the Environmental Health supervisor felt the response to environmental health complaints had improved as a result of accreditation. The team described accreditation as a continual process that enables an agency to improve beyond the "minimally meets" requirements.

The team offered several suggestions for modifying the current accreditation program so as to further drive public health performance improvement. One member felt the program needed to recognize health departments that exceeded requirements by using, for example, grades or rankings. "I do think there should be some level of recognition for those outstanding health departments." The team also noted that some health departments have done well with the accreditation process due in large part to the work of the state nurse consultant assigned to that department.

> So I do think that there has to be a way of looking at how much help is too much help, and how much is just enough, because … it will have to be the health department's accreditation, the responsibility is theirs.

A summary of key findings from in-depth interviews and focus groups is provided in the following chapter. In addition, Appendices 5 and 7 provide a thematic overview of responses from health directors and management team members, respectively.

CHAPTER 5

ANALYSIS

Research Aim 1

The first aim of the research was to determine the extent and nature of differences between accredited and non-accredited local public health agencies in North Carolina with respect to leadership, community engagement, and policy development and implementation. Of specific interest was whether leadership behavior differed among accredited and non-accredited health departments, whether accredited health departments engaged community partners differently than health departments not yet accredited, and whether the degree of policy development and implementation differed among accredited health departments compared to non-accredited health departments. The proposed hypothesis was that accredited health departments in North Carolina would demonstrate better performance with respect to these three domains than health departments not yet accredited. The research tested this hypothesis using a survey instrument developed to capture specific activities related to the requirements for accreditation as written in the self-assessment tool used by health departments to prepare for accreditation. Based on the results from these surveys, it appears that this hypothesis is true for the specific domains of community engagement and policy development and implementation. The research did not detect any significant differences in leadership behavior with the exception of two activities: the number of public health presentations delivered by the health director to the general public, and the number of public health presentations given by the health director to the Board of Health. The other

items included in the leadership domain did not differ significantly across accredited and non-accredited health departments.

The research further tested the hypothesis by comparing responses from early adopters of accreditation with those from agencies that were more recently accredited. Within this group of accredited health departments, there were significant differences in the degree to which agencies demonstrated community engagement and policy development and implementation activities. The early accreditation group scored higher on items assessing community engagement; interviews with health directors corroborated this finding, with three of the four directors stating that their agencies were heavily engaged with the community prior to accreditation. The group accredited later seemed to have higher scores for implementation of policies and plans. The fact that the later group of accredited counties seemed to perform better on implementation of policies and plans suggests that there may be some decline in policy implementation activity by health departments as they move beyond the data of accreditation.

In order to explore some of the findings from the surveys, health directors and other health department leaders were interviewed and asked about policy development activities, strategic planning, partnerships, and leadership related to accreditation. Both the health directors and management team members from all four agencies stated that accreditation had led them to create, review and update policies and plans that were either in place but not written down, or were not in place. They all stated that since accreditation their Boards of Health were much more involved with policy review. The management team members, in particular, felt that the process of accreditation made supervisors more accountable for policy review and revisions, and that staff had much better training on and access to policies since accreditation. The teams also reported that their quality improvement efforts were significantly strengthened as a result of accreditation, which is consistent with responses to the survey related to quality improvement policies and plans. All accredited agencies

responding to the survey stated that they had a quality improvement plan in place, compared to only 80% of non-accredited agencies. Quality improvement enhancements attributable to accreditation, as shared by the health directors and management teams, included establishing quality improvement teams and moving towards an agency-wide quality improvement culture.

Survey findings support the influence of accreditation on the development of workforce training plans and diversity plans, with accredited health departments much more likely to report that these plans were in place and implemented. Three of the four health department management teams cited significant improvements in orientation training for new employees and thought this training was instrumental in helping staff gain a better understand of their own and others' roles. Management team members from two of the agencies also noted that accreditation had been a factor in the department's focus on cultural diversity training.

While two of the four health directors interviewed did not feel accreditation impacted their agencies' strategic plans, the remaining two shared that their strategic planning process and document were significantly improved as a result of accreditation. These comments are consistent with findings from the survey related to implementation of strategic planning activities. Survey responses demonstrated that nearly 40% of health departments not yet accredited did not have a strategic plan whereas all accredited health departments, with the exception of one, were currently implementing their strategic plans. Even health directors who said they had not changed their strategic plans for accreditation did make procedural changes to the strategic planning process, such as reviewing the plan with the Board of Health on an annual basis.

The hypothesis that accredited health departments would engage partners differently than non-accredited health departments was supported both by the survey data and the interviews. Survey responses supported the finding that accredited local public health

agencies were more likely to involve more community partners in the community health assessment process, hold more community health steering committee meetings with partners, and engage community partners to make presentations to the Board of Health on public health matters. It is not as clear, however, whether preparing for accreditation enhanced community engagement activities, or whether health departments that were accredited were already collaborating significantly with community partners. Three of the four health directors interviewed stated that their departments were already heavily focused on community partnerships prior to accreditation, and that the process of accreditation merely resulted in better documentation of community efforts. One health director, however, described the accreditation experience as almost transformational in that the agency established many new partnerships and formalized existing partnerships in order to meet accreditation requirements. The management team from this health department agreed that more community outreach to diverse partners had resulted from accreditation, and that the department had included more diverse partners in their community health assessment process.

There was no difference in the overall leadership behavior scores for the accredited and non-accredited health departments. Only two items contained in this domain showed significant differences in responses from health directors: 1) health directors of accredited agencies were more likely to deliver more public health presentations to the general public, and 2) health directors of accredited agencies were more likely to make more frequent presentations to the Board of Health on matters of public health importance. Survey findings were supported with responses from health directors and management team members who participated in interviews. Three of the four health directors felt the accreditation process really had no impact on their leadership behavior, and all four health directors already held several important positions on community boards prior to accreditation. Three of the four health directors, however, did feel the accreditation process led them to increase

communication with their Boards of Health on policy matters. Two of the health directors felt they were doing a better job of tracking communication to policymakers, physicians and the general public, and one felt that health director-to-staff communication within the agency had improved.

When asked if accreditation helped the health director and management team become better leaders, the management team members from all health departments stated there were no changes in the department's leadership activities in the community as a result of accreditation. In two health departments, though, members noted that the management team communicated better as a result of accreditation, and that health director communication to staff had improved. They also thought that as a result of accreditation the Board of Health was better informed and engaged, and that increased communication with the Board of Health facilitated greater leadership on the part of the Board. Responses to questions on the survey related to Board of Health leadership did not differ significantly among accredited and non-accredited agencies.

Research Aim 2

A second research aim was to determine whether accredited health departments in North Carolina demonstrate greater improvement in selected service delivery outputs and health outcomes than health departments not yet accredited. Of specific interest was how county-specific service delivery data and health outcome data changes over time differed according to the accreditation status of the local public health agency. The hypothesis related to this research aim was that accredited health departments would show greater improvement in selected service delivery outputs and health outcomes than health departments not yet accredited.

Existing data available from NCDPH and NCDEH was used to answer this question. Data was available for the 13 selected indicators for the time period prior to the initiation of the accreditation program (2002-2004) and the time period following the first accreditation pilot program (2005-2007). Benchmarks were available for each indicator, with some based on prior three-year averages specific to each county and others from expectations delineated in the Consolidated Agreement between the state and each local health department.

A descriptive analysis of performance improvement by accreditation status demonstrated that there were no significant differences in the number of benchmarks met by accredited and non-accredited agencies prior to implementation of the accreditation program. Both groups met an average of six to seven benchmarks for the 13 indicators under study. For the second time period, however, it appears that accredited agencies at the time of this research met significantly more benchmarks than their non-accredited counterparts, though both groups met fewer benchmarks than the time period prior to accreditation. This decline in performance for both groups may be due to a number of factors specific to the various programs for which the indicator data is captured. For example, almost all health departments failed to meet the benchmark for Time Period 2 which measured the percentage of Medicaid deliveries where maternity care coordination services were received. Explanations for this worsening performance include changes in Medicaid policy which resulted in discontinuation of referrals to health departments of newly enrolled pregnant women from the local Department of Social Services, which administers the county Medicaid program. Reimbursement rates from Medicaid for the services were also lowered, making it difficult for health departments to maintain adequate staff.

Accredited and non-accredited health departments were similar with respect to the number of indicators showing improvement between the two time periods (approximately six of the 13 indicators showed improvement in both groups). Thus, the hypothesis was

somewhat true in that accredited health departments did show greater improvement than non-accredited health departments; however, both groups saw decline in performance on these 13 indicators overall.

As part of the interview process health directors and management team members were asked about the impact of accreditation on public health performance improvement. Two health directors felt there was no significant impact on the quality of health department services, and one health director thought that any improvement was “fleeting and marginal.” In general, health directors felt both resources and time for quality improvement work related to accreditation was lacking, and that incentives for performance improvement were absent. When management team members were asked about components of the accreditation process that were important to performance improvement, three of the four teams stated that accreditation raised expectations for performance. Two teams stated that the accreditation self-assessment tool helped identify areas needing improvement, and one department said they had used accreditation as an opportunity to do business process analysis and re-engineering. Two health departments specifically cited improvements in their Environmental Health programs as a result of accreditation. Although one department did cite improved knowledge of and compliance with the agreement addenda requirements as a benefit of accreditation, achieving targets on the 13 indicators included in the performance measurement report for the state is not currently required to achieve accreditation status.

Research Aim 3

The third research aim was to identify ways to enhance the impact of accreditation on performance. Of specific interest was hearing ideas from local public health leaders who had experience with the North Carolina accreditation program. Health directors and management team members who participated in interviews were asked to identify

opportunities to use accreditation as a tool to achieve greater improvements in public health practice and health outcomes. One health director suggested that accreditation should drive health director leadership effectiveness by assessing health director competencies. Three of the four health directors thought accreditation requirements should include achieving performance targets for health indicators identified by the local health department and measured in between accreditation cycles. One health director felt funding should be linked to performance, with incentives used to recognize excellence. Two teams suggested a tiered system of accreditation so that outstanding health departments could be recognized for exceeding minimal requirements. Two teams suggested that accreditation be tied to financial incentives, such as higher Medicaid reimbursement rates for services provided by an accredited public health agency. Each of the four management teams suggested that in order to improve community health, accreditation should assess whether the local health department is identifying and meeting the needs of the community using best practices.

CHAPTER 6

DISCUSSION

The accreditation program in North Carolina was developed to assess whether local health departments have a basic capacity to provide the three core functions and 10 essential public health services. This research sought to enumerate the degree to which accredited and non-accredited local public health agencies were actually carrying out core functions and essential services specific to three domains: policy development and implementation, community engagement, and leadership. The survey attempted to document the nature and extent of differences between accredited and non-accredited local health departments in North Carolina with respect to activities associated with these three domains. Use of the performance indicator data was a first step in attempting to describe the relationship between accreditation and service delivery and health outcomes. The data collected through interviews and focus groups further supplemented the quantitative data and helped to understand the strengths of the accreditation program, its relevance and application to local public health, and opportunities for improvement.

The results from this research suggest that the accreditation program in North Carolina has significantly influenced local public health activities over the past five years. Accreditation has been a useful tool to standardize the capacity to deliver public health services across the state using the core functions and essential public health services as a framework. Specifically, accreditation has been a driver for organizational improvements, such as the development and implementation of policy and plans, and in some cases,

greater community engagement. There is limited evidence, though, that the accreditation program has led to increased leadership effectiveness of local health directors and Boards of Health. Moreover, there is only anecdotal evidence that health department service delivery and health outcomes have benefitted from the accreditation program.

Limitations of the Research

Future research can help improve on several limitations of the research presented here. First, this research presents a cross-sectional investigation of the impact of accreditation on performance. Studies utilizing a longitudinal approach are needed to better describe this relationship. In addition, results may be influenced by selection bias, in that accredited health departments volunteered to participate in the accreditation process. Moreover, all health departments in North Carolina have had some exposure to accreditation since the program was first piloted in 2004. Therefore, even agencies that are not yet accredited may be improving their practices in preparation for accreditation. Lastly, the findings from this research are limited to North Carolina health departments which are not representative of all local health departments in the nation.

There were also limitations to the data sources used in this research. Specifically, the indicators used to measure performance improvement related most directly to the assurance function of public health, therefore, giving less attention to the critical assessment and policy development functions of local public health agencies. In addition, the survey data was collected by health director self-reports and not verified by source documentation. While the survey was carefully constructed and pretested to minimize systematic differences in respondent interpretation, there may have been differences in how respondents interpreted questions.

In addition, interviews and focus groups were limited to health directors and management team members from four high performing health departments. Future research

efforts should include a broader representation of health departments in the qualitative part of the analysis, such as low performing health departments and local public health agencies not yet accredited.

Benefits of the Research

One benefit of this research has been the development and implementation of a new tool to measure health department activities related to accreditation. Since survey data is now available for 80 health departments in North Carolina, including baseline data for 43 health departments not yet accredited, it will be interesting to track how the activities of health departments change with changes in the accreditation program.

In addition, these research findings contribute to the current body of evidence within public health systems and services research in that the author was able to comparatively study selected activities of accredited and non-accredited local health departments in one state based on the ten public health practices. Clearly, local public health agencies in North Carolina that had successfully completed the accreditation process and achieved accreditation status by the time of this study demonstrated better performance in several areas compared to their counterparts that had not yet achieved accreditation. Some of this high performance was driven by the accreditation process. Conversely, some health departments were high performing before they sought accreditation, and used accreditation as a way to document their high performance.

Using personal experience as local health director for two accredited health departments in North Carolina, and the findings from this research, the author has developed several recommendations to enhance the impact of the accreditation program on public health performance and community health outcomes in North Carolina. The author vetted these recommendations with several key stakeholders, including the Accreditation Administrator, the Accreditation Liaison Committee of the NCALHD, and nurse consultants

from the NCDPH. The author acknowledges that these recommendations need to be further studied given the limitations of the research.

The following discussion, though, summarizes the author's recommendations as well as some of the challenges associated with implementing these recommendations.

Recommendations

Leadership

Since the results from the survey and interviews with key health department staff found that leadership activity was essentially the same for accredited and non-accredited agencies, there may be opportunities to strengthen health director leadership effectiveness through the accreditation process.

The current accreditation benchmarks and activities require that the local health director receive an annual performance appraisal by the Board of Health. These performance appraisals may not assess some of the key competency areas for local health directors, and they may not require that the health director identify areas needing improvement and develop an appropriate leadership improvement plan.

> **Recommendation 1. The NC Local Health Department Accreditation Board and the Accreditation Administrator should assure that accreditation requirements assess health director leadership effectiveness and evaluate health director competency, and review the health director's leadership development plan to ensure that the plan includes continuing education, training, and leadership improvement activities.**

Moreover, the accreditation requirements could assess how well the health director is monitoring public health issues, such as proposed land use plans, and alerting stakeholders of public health impacts. Documentation could also be required to enumerate

the degree to which the local health director serves as a primary resource to governing boards and elected officials on public health matters, so as to ensure that policies and regulations are based on sound science and effective public health practice. The health director could also be required to document that s/he routinely provides ongoing education to the governing board and Board of Commissioners regarding the responsibilities of the local public health agency in general and public health accreditation in particular. In addition, the health director could be held accountable for the degree to which technical assistance and support is provided to community partners who are committing resources that could advance public health goals.

Challenges to implementing this change include resistance from local health directors who have previously expressed concerns that the accreditation process should not be an evaluation of the local health director. There may also be disagreements regarding what to measure in terms of health director competency and how to measure performance in these areas. The North Carolina Public Health Academy within the North Carolina Institute for Public Health has attempted to address these concerns through the development of a Public Health Leadership and Management self-assessment tool. The tool was developed using recommendations from the National Public Health Leadership and Development Network. As part of the requirements for reaccreditation, health directors could be required to take this self-assessment, or a similar one, and develop a leadership development plan to address areas needing improvement. They would then need to provide evidence that they had implemented the activities included in the plan. Strengthening the leadership capacity and effectiveness of North Carolina's public health leaders in this way could help drive improvements in community health.

An important approach to mitigating resistance should include involving key stakeholders, such as members of the Accreditation Liaison Committee of the NCALHD, in

developing acceptable activities by which to measure health director leadership behavior and improvement.

Community Engagement

The three core functions and 10 essential services of public health are not currently assessed to the same degree in the current accreditation program. Consistent with how health departments are staffed and funded in North Carolina, there is a greater emphasis on assurance functions and the corresponding essential services. While the health department self-assessment tool does require evidence for a broad range of benchmarks and activities, there is not enough emphasis on the need to work with community partners on prevention and health promotion goals. The survey data did document greater community engagement among accredited health departments, but there was no evidence that the priority health areas identified in collaboration with community health partners were necessarily prevention and health promotion goals. As the number of residents in North Carolina with no health insurance continues to increase, there will be pressure on health departments to redirect resources to provide clinical care for the indigent. Without an expectation that health departments continue to invest a similar level of effort in prevention activities, there will likely be minimal gains in population health indicators.

Three of the four health directors interviewed shared that their highest hopes for their public health agencies included a greater focus on prevention, with more prevention education and fewer clinical services in the future. The accreditation program needs to drive improvements in these areas if local public health is to contribute in a significant way to better health for their communities.

Recommendation 2. The NC Local Health Department Accreditation Board and the Accreditation Administrator should assure that there is increased

emphasis within the accreditation program on the local health department's work with community partners to advance prevention and health promotion goals.

One option for addressing this recommendation is to include documentation requirements that demonstrate that the local public health agency is partnering with Community Care of North Carolina (CCNC) in their counties to direct resources and activities towards prevention. The local community care networks have been successful in reducing costs for the Medicaid population through a number of improvements including disease management, identifying a primary care medical home for members, and lowering prescription drug costs. These savings could potentially be directed to public health interventions addressing physical inactivity, poor nutrition, and tobacco use. There is currently a subcommittee of local health directors working with the NCDPH to draft recommendations that might be effective in leveraging CCNC resources to address prevention and health promotion. These recommendations could serve as the basis for activities required for accreditation.

Most of the management team members interviewed felt that community health improvements could be realized if the accreditation process evaluated the degree to which the community assessment findings are addressed in agency strategic plans, community assessment plans, and/or action plans required by the agreement addenda for state and federal funding. Currently, meeting accreditation benchmarks requires that a community health assessment is conducted every four years, and a State of the County's Health Report (SOTCH) is released each year. The report currently must demonstrate that the local health department is tracking priority issues identified in the community health assessment and identifying emerging issues. The activity does not require that the report track progress on

action steps as outlined in plans, nor does the health department have to provide a performance report on strategy implementation to the community.

Recommendation 3. The NC Local Health Department Accreditation Board and the Accreditation Administrator should assure that accreditation requirements assess how well the local public health agency is addressing the health needs of the community and should establish ways to track progress on strategies developed in response to the most recent community health assessment.

In order to implement this recommendation, there could be a requirement that the agency's strategic plan links to findings from the community needs assessment. There could be an expectation that interventions or strategies are based on best practices. Additional documentation requirements could include a performance report or balanced scorecard available to the community documenting the degree to which the health department has implemented activities included in the strategic plan.

Challenges to implementing this recommendation include resistance from health directors who may not be supportive of publishing a publicly available performance report on their track record for implementing the agency's strategic plan. Also, site visit team members would need to perform a more qualitative review of the community health assessment and strategic plan in order to determine whether there was appropriate linkage between the two. Working with the Office of Healthy Carolinians/Health Education and the NCDPH Office of Performance Improvement and Accountability, the Accreditation Administrator should explore ways to better dovetail the requirements of these offices with the requirements of the accreditation program.

Performance Improvement

An analysis of the 13 performance indicators demonstrated that despite the implementation of an accreditation program in North Carolina, there has been little progress made in improving these service delivery outputs and health outcomes. Reasons for this lack of progress are numerous. The current accreditation program requires that the local public health agency employ a quality assurance and improvement process to assess the effectiveness of services and improve health outcomes. The evidence required includes a quality improvement policy and documentation of at least two improvements as a result of the agency's quality improvement process. There is no expectation, though, that the improvement process focus on a community health indicator or problem i.e. the quality improvement activity may focus on a business process within the health department that has limited impact on broader community health goals.

> **Recommendation 4. The NC Local Health Department Accreditation Board and the Accreditation Administrator should assure that the local public health agency demonstrates improvement between accreditation cycles on one or two community health indicators selected by the local health department in collaboration with the NC Division of Public Health and North Carolina Division of Environmental Health.**

The recommendation proposed here specifically cites the need to use the accreditation program to drive a quality improvement focus on population health indicators, such as immunization rates among two-year olds. These types of indicators typically require that the health department collaborate with other community partners to analyze a population health problem and design solutions using quality improvement approaches to address the problem. The health department would be able to identify one or two performance indicators to tackle based on the specific needs of the community. However, in

order for North Carolina to achieve its goal of being the healthiest state in the nation by 2020, the NCDPH and NCDEH would need to identify three to five key priority health indicators statewide that would be important problems for most counties to address. With multiple local public health agencies applying quality improvement approaches to a few priority health problems simultaneously, the accreditation of local public health agencies could also drive health improvements statewide.

Some of the challenges associated with implementing this recommendation include embedding quality improvement cultures within local public health agencies. However, with the recent creation of the North Carolina Center for Public Health Quality, the timing is ideal to offer training and tools to local health department teams motivated to solve community health problems through quality improvement approaches. Another challenge will be identifying the appropriate indicators and measures to address. Some indicators will require significant time to change, and the time between accreditation cycles may not be adequate. The accreditation requirements will need to include proxy, or intermediate, targets for improvement. One health director who was interviewed as part of this research stated the following concerns succinctly:

> I would do something … to increase the number of school nurses in local schools, or increase the amount of nurse time in local schools, or increase the amount of health care in local schools, whether it's carried out by a nurse or not …I wouldn't choose something like reducing the teen pregnancy rate.

Currently, local public health agencies receive a one-time appropriation of $25,000 to pursue initial accreditation. Many health departments have used these funds to support an accreditation coordinator, or hire temporary staff so that full-time employees are able to take time to work on accreditation requirements. After the agency attains accreditation status, funds are no longer available to the county to maintain accreditation-related or quality improvement activities. In addition, there are no financial incentives or disincentives to attaining accreditation or being conditionally accredited. This issue of financial incentives

and disincentives was raised several times by health directors and management team members who participated in interviews and focus groups. One health director noted that the current accreditation program reinforces maintaining, not optimizing, performance.

Recommendation 5. The NC Division of Public Health, in collaboration with the Office of Performance and Accountability, should consider providing financial incentives to local public health agencies based on achieving performance targets agreed to by local and state public health agencies as discussed in Recommendation 4.

During one of the focus groups, a management team member suggested that if additional funds are not available to recognize performance, then existing funds should be reallocated from low performing to high performing health departments. This recommendation does not include reallocating funds or reducing funding to low performing agencies, since these agencies generally need more resources to address the health challenges in their communities. However, use of incentives in addition to base funding for health departments could further drive improvement, as long as the incentives are significant enough.

The most difficult challenge to implementing this recommendation is identifying the financial resources to provide incentives. In addition, an incentive program would need to be structured in such a way that the program reinforced and maximized performance efforts. One option could be to tie incentives to achievement of performance indicator targets described in the previous recommendation. Thus, achieving accreditation status would not result in incentives, but meeting performance targets identified by the local public health agency would result in financial incentives or bonuses to the agency. The newly created NC Center for Public Health Quality could distribute incentives in collaboration with its efforts to

drive quality improvement. In addition to financial incentives, a recognition program could be developed to showcase high performing local public health agencies.

Currently, the accreditation program is designed to grant accreditation status to health departments that minimally meet the requirements for the benchmarks and activities. As one health director noted in her interview, the current program probably does not make a good health department that much better, but may be considerably challenging for a more marginally performing health department. Other health directors shared that for the most part, their departments were able to easily meet the accreditation requirements during the first round of accreditation, and while the reaccreditation process will likely require more evidence, they do not anticipate having difficulty meeting requirements for reaccreditation.

Recommendation 6. The NC Local Health Department Accreditation Board and the Accreditation Administrator should consider establishing a tiered system of accreditation as part of the reaccreditation process so that local public health agencies that exceed the minimum requirements can voluntarily pursue a more advanced level of accreditation. In lieu of a tiered system, outstanding health departments could be recognized using rankings or percentiles.

There is a need to imbed continuous performance improvement within the accreditation program in order to ensure that high performing health departments continue to accrue benefits from the accreditation process. One way to do this is to give high performing health departments the opportunity to achieve stretch goals i.e. the requirements for advanced accreditation are significantly more challenging than those for basic accreditation. Another option is to recognize these departments through percentiles or rankings, such as, “Health Department X performed in the top 10% of all North Carolina health departments seeking accreditation in 2009.”

There are a number of challenges to implementing this recommendation in the near future, though implementation might be more feasible in later years. Some of the management team members interviewed felt use of tiers or rankings might detract from the spirit of collegiality currently shared across health departments, i.e., health departments would be less inclined to share their approaches or best practices with those departments they might be competing with for rankings or advanced status. Also, they thought that there were some health departments that were so poorly resourced that they would never be able to attain advanced status regardless of the competency and professionalism of the staff, and that a tiered system would be inherently unfair.

Upon hearing this recommendation, other stakeholders were concerned that North Carolina was in the process of seeking substantial equivalency with the national Public Health Accreditation Board, and that modifying the state's program at this time could jeopardize this request. With respect to using rankings or percentiles, stakeholders expressed concerns regarding inter-rater reliability of site reviewers, and whether rankings would even be credible if there were differences in rater interpretations. Thus, in a tiered or ranked system, additional training would be needed for volunteer reviewers, and documentation requirements for advanced activities would need to be clearly understood.

As mentioned earlier, there is no reaccreditation/quality improvement funding available to local public health agencies once they are initially accredited. As a result, health departments have limited resources to invest in quality improvement, or maintain activities in preparation for reaccreditation. In interviews with health directors, there was general consensus that base funding for quality improvement activity in every health department would contribute to public health performance.

Recommendation 7. The NC General Assembly and the NC Division of Public Health should assure that recurring base funding for quality improvement

activities is allocated to each local public health agency to support reaccreditation/quality improvement as required by state law.

While there is some funding through the North Carolina Center for Public Health Quality for local health department teams to receive quality improvement training, the funds are one-time and not identified for infrastructure. Given the budget crisis, additional state funds for quality improvement are not likely in the immediate future. However, the NC Division of Public Health in collaboration with the North Carolina Association of Local Health Directors should consider pursuing expansion funding from the legislature for the accreditation program so that each local health department that is accredited can retain the $25,000 for accreditation/quality improvement activities.

Sustainability

In order to sustain support for the accreditation program, and potentially generate additional state funds for reaccreditation and quality improvement, there is a need to better inform legislators and local county commissioners on the importance of local public health agency accreditation and the benefits to the general public. For example, at the time this dissertation was being finalized the NC Senate had eliminated funding for the accreditation program in its proposed FY 2009-2010 budget. Prior to the creation of the mandated program in North Carolina, there was considerable effort committed to educating policymakers about why the state needed an accreditation program for local public health. Findings from interviews with health directors and management team members demonstrated that elected officials, community partners, and the general public are basically unaware of the significance of the accreditation program, and as such do not attribute much added value to the accreditation seal. While there is local recognition of the health

department at the time of accreditation, the recognition is usually fleeting and limited, and the accreditation brand tends to lose its significance over time.

Recommendation 8. The Accreditation Administrator, in collaboration with the NC Division of Public Health and local health directors, should develop an expanded communications/marketing program to better educate elected officials and the general public about the benefits of local public health agency accreditation.

A statewide communications and marketing campaign could be highly beneficial in generating more recognition and appreciation for the program, as well as additional financial resources.

Challenges related to this recommendation include identifying resources during the economic downturn to carry out these activities. Additionally, the content of the messages and how to deliver the messages would need to be determined. With the Accreditation Administrator housed within University of North Carolina at Chapel Hill, there may be opportunities to leverage student resources from the schools of journalism, business, and public health. In addition, social marketing resources at the NCDPH and the NCIPH might be available to assist with the development of a communications plan.

The NC Local Health Department Accreditation Board should support the creation of an advisory committee to work with the Accreditation Administrator on further study and implementation of these recommendations. In addition, the development of a business plan for the accreditation program could be helpful in establishing goals, objectives, activities, and funding for the program in the coming two-to-five years.

Research Application and Practice Implications

Leadership

Over the next twelve months there will be several opportunities to share these research findings and recommendations with practice partners. The author has agreed to serve on an internal accreditation advisory committee within the NCIPH to assist the Accreditation Administrator in working with various constituent groups to implement reaccreditation. The author also has agreed to help devise a business plan for the accreditation program which would incorporate some of the recommendations outlined above, and is exploring an opportunity with the Council on Linkages between Academia and Public Health Practice to serve on the workgroup charged with developing competencies for senior leaders in public health. Finally, the author plans to continue working on the National Association of City and County Health Officials local health official orientation workgroup which is exploring a national leadership and orientation program for new local health directors. In this role, the author will continue to provide input into the content and structure of the program so that new health directors have the tools needed to lead high performing organizations.

Knowledge

The author plans to advance knowledge in the area of local public health agency accreditation and performance by presenting these research findings at state and national meetings. In April 2009, the author participated on a panel for new investigators at a national meeting of public health systems and services researchers. The author also is planning to present at the National Association of County and City Health Officials annual meeting in July 2009, at the North Carolina Public Health Association annual meeting in October 2009, and at the American Public Health Association meeting in November 2009. The author is scheduled to make a formal presentation of her research findings and recommendations to

the North Carolina Local Health Department Accreditation Board in July 2009, and will pursue opportunities to share her findings with the national Public Health Accreditation Board and its Research and Evaluation workgroup. In addition to making presentations, the author will submit papers for publications to various public health practice journals, such as the *Journal of Public Health Practice and Management.*

Research

The NCIPH has secured funding through the Robert Wood Johnson Foundation to continue to conduct research to assess the influence of accreditation on local public health agency performance. The author currently is co-investigator on a grant that will utilize the research survey findings and existing performance data to further analyze the relationship between accreditation and performance. The North Carolina Center for Public Health Preparedness within the NCIPH also has funds to study the impact of accreditation on preparedness and the author will explore opportunities to help with that project as well. As a member of the Public Health Systems and Services workgroup of AcademyHealth, the author will use this network to explore other opportunities for research.

APPENDIX 1

Literature Review Summary

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Model standards impact on local health department performance in California	Examines use of model standards, specific to California, to improve local health department performance.	Spain, Eastman, Kizer	1989	Paired county health departments (those who participated in negotiation process [value] and those who did not [no value]); interviews and questionnaires to document program performance	Found that use of model standards in health departments were linked to health officer commitment, priority status of program, availability of data, and relationship of standards to existing planning and evaluation tools; negotiating health depts. showed greater performance improvement.	True controls should have been those not interested in model standards at all => all involved had some exposure to model standards also improvements were self-reported	LHDs in California

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
The impact of critical events of the 1980s on core functions for a selected group of local health departments	Describes results from surveys of 14 local health directors on the impact of 20 critical events of the 1980s on public health performance.	Miller, Moore, Richards	1993	Cross-sectional surveys of health departments that had participated in longitudinal case studies	Functions most benefited in 1980s were assessment and policy development; greatest impacts were HIV/AIDS, Medicaid, IOM report on future of public health.	LHDs not representative sample	LHDs
A screening survey to assess local public health performance	Surveyed local health directors using protocol with 81 indicators to assess overall public health performance, core function performance, and public health practice performance.	Miller, Moore, Richards, McKaig	1994		Evaluations of local public health performance are feasible by means of survey responses from directors of local health departments.	Further evaluation and refinement of indicators needed; limited sample size.	14 LHDs
A proposed method for assessing the performance of local public health functions and practices	Fourteen health departments were studied between 1979 and 1992; respondents completed survey using 81 indicators linked to public health functions and practices.	Miller, Moore, Richards, Monk	1994	Longitudinal	Profiles of jurisdictions differentiate performance levels of different public health practices.	Findings based on perceptions of respondents; findings not generalizable beyond sample of health departments.	14 Health Depart-ments

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Implementing and assessing organizational practices in local health departments	Presents framework identifying 10 organizational practices for public health.	Turnock, Handler, Dyal, Christenson, Vaughn, Rowitz, Munson, Balderson, Richards	1994	Descriptive	Additional examination and validation of framework is needed to further efforts to measure public health practice and impact on the public's health.	n/a	n/a
Analyzing organizational practices in local health departments	Primary care and CD accounted for more resources in LHD in Florida; much smaller fraction devoted to analyses of health needs and development of policies (based on manpower hours and % of salary/fringe).	Studnicki, Steverson, Blais, Goley, Richards, Thorton	1994	Descriptive case study	Eighty-nine percent of manpower related to assurance, 9% to assessment, and 2% to policy development; primary care and communicable disease used 75% of LHD resources.	Questionable validity and reliability of 10 organizational practices as method for characterizing range of health department activity (overlap of definition); manager perception introduced bias.	LHD
Capacity-Building Influences on Illinois Local Health Departments	Study surveys LHDs in 1992 and 1994 to evaluate changes in practice performance.	Turnock, Handler, Hall, Lenihan, Vaughn	1995	Cross-sectional survey	Improvement in performance of core functions demonstrated.	Self reported performance improvement; doesn't fully describe how activities were performed.	LHDs in Illinois

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Evaluating local public health performance at a community level on a statewide basis	Survey of local health departments in 6 states to measure community performance of core functions of public health and 10 practices linked to core functions.	Richards, Rogers, Christenson, Miller, Taylor, Cooper	1995	Cross-sectional survey	Variations in performance related to state, population size and administrative relationship of local jurisdictions to state; mean performance score = 56%.	Response rate of 94%; not representative sample; states may not be comparable.	LHDs in 6 states
Local health department effectiveness in addressing the core functions of public health: essential ingredients	Describes characteristics of effective LHDs.	Handler, Turnock	1996	Stratified random sample; survey of local PH practice merged with NACCHO profile of local health agencies.	Effective health departments more likely to have full-time directors, larger annual expenditures, more staff, and diversified budget.	Survey response rate 43%; NACCHO response rate 72%; effectiveness based on self-reports.	264 LHDs
Determinants of US local health department expenditures, 1992 through 1993	Examined LHD expenditures and relationship to several LHD characteristics, including size of population.	Gordon, Gerzoff, Richards	1997	Cross-sectional survey	Expenditures $26 per capita on avg.; great variability in per capita expenditures (70% accounted for by differences in jurisdiction population size).	Local health department effectiveness in addressing the core functions of public health: essential ingredients	Describes character-istics of effective LHDs.

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
From measuring to improving public health practice	Describes history of performance measurement in the public health system.	Turnock and Handler	1997	Discussion	Measurement in public health system must include inputs, processes, outputs, and outcomes in ways that allow for changes in one to be linked with changes in another.	n/a	n/a
Typology of local health departments based on maternal and child health core functions	Describes findings of survey to measure core public health functions within MCH as well as LHD organizational and jurisdictional characteristics.	Mayer, Konstant, Wartman	1997	Cross-sectional survey	Described six-cluster typology for LHDs.	Survey response rate of 83%; date self-reported.	LHDs in Missouri
Core function-related local public health practice effectiveness	Assesses degree to which LHDs perform on 20 core function related measures.	Turnock, Handler, Miller	1998	Cross-sectional survey of randomized LHDs.	LHDs serving > 50,000 outperformed smaller agencies in core functions.	Instrument not validated; only 59% response rate; reporting consistent with other studies.	LHD
Priorities and strategies for promoting community-based prevention policies	Need investment in PH infrastructure for effective policy advocacy, community mobility, education about policy issues.	Milio	1998	Describes framework	Policy development available to only 40% of Americans; less than 25% total spending invested in core functions.	Good review of current literature.	Includes LHDs in discussion

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
The practice of community development approaches in heart health promotion	Presents findings of a study of the factors affecting the use of community development approaches to heart health promotion in Canada.	Robinson, Elliott	2000	Qualitative analysis: interviews	Evaluates role of community development/ community partnerships reports show that elements of community development are used but are adapted to local settings; trend towards collaboration and participation.	Response rate of 88%; unclear understanding of terms community development, community organization, community-based.	8 health units in Canada
External collaboration and performance: North Carolina local health departments, 1996	Extent to which LHDs collaborated with external partners and how the collaboration affected core PH functions.	Lovelace	2000	Survey data (questionnaire); cross-sectional study	PH performance higher with greater frequency of interaction with partners.	Response rate 75%; LHDs reported directly; question definition and external validity.	LHD

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Can public health performance standards improve the quality of public health practice?	Public health performance standards may be useful in improving quality, accountability, and strengthening science base of public health practice if following issues are addressed: purpose of measurement, specific qualities to be measured, and strategies to promote use of standards.	Turnock	2000	n/a	n/a	n/a	n/a
Using the essential services as a foundation for performance measurement and assessment of local public health systems	Reviews the history of local public health and the development and application of the essential services framework and predecessor frameworks such as the core functions, organizational practices, and the essential elements.	Corso, Wilsner, Halverson, Brown	2000	n/a	n/a	n/a	n/a

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Profiles in courage: evolution of Florida's quality improvement and performance measurement systems	Describes Florida's quality improvement and performance measurement system and lessons learned.	Beitsch, Grigg, Mason, Brooks	2000	Descriptive	n/a	n/a	LHDs in Florida
Multi-disciplinary top management teamwork: effects on local health department performance	Explores the effects of multidisciplinary LHD management teams on agency performance; examined MT agenda, diversity, conflict, and performance.	Lovelace	2001	Cross-sectional survey exploring MT tasks and relationships; analysis consisted of descriptive statistics, analysis of variance, and least squares multiple regression.	The more frequent MT met, the better agency performance; the greater diversity, the better performance; the more effective the MT, the more extensive the interactions with community.	Response rate 69%; cannot evaluate causality.	LHDs in NC
Partnering with communities to improve health : the New York City Turning Point experience	Describes Turning Point site (NYC) and efforts to convene forums to initiate a public health planning process; public health improvement plan was put in place with community partners.	Cagan, Hubinsky, Goodman, Deitcher, Cohen	2001	Descriptive	Partnership	n/a	LHD in New York City

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Assessment of validity of the national public health performance standards: the local public health performance assessment instrument	Reports on the face and content validity of the local public health performance assessment instrument.	Beaulieu, Scutchfield	2002	Survey	The performance standards were found to have face and content validity.	Response rate 75%; does not include system partners.	LHDs
A model approach for developing effective local public health policies: a NC county responds to large-scale hog production	Describes model approach to assist local PH officials in crafting reasonable health policies that protect the public's health and that diverse stakeholders can accept.	Upshaw, Okun	2002	Describes framework for addressing controversial health issues.	Policy development	Framework; based on experience of one jurisdiction; question generalizability.	Local officials
The impact of accreditation on the quality of hospital care: KwaZulu-Natal province, Republic of South Africa	Describes improved performance on accreditation standards but not on selected outcomes.	Salmon, Heavens, Lombard, Tavrow	2003	Randomized control trial; prospective	Accredited hospitals significantly improved compliance with accreditation standards with no appreciable improvement in control hospitals.	Limited time to measure quality improvement differences overall.	Hospitals

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Content and criterion validity evaluation of natural public health performance standards measurement instruments	Evaluation of the content and criterion validity of the local public health performance assessment instrument.	Beaulieu, Scutchfield, Kelly	2003	Survey for local instrument; group interviews for state instrument	State and local assessment instruments were found to be valid measures of public health performance (with respect to completeness, importance, achievability).	Evidence provided for only 5 of the 10 essential services for 20 health departments (10 on even #s, 10 on odd #s); 44.6 % response from community partners.	LHDs; community partners; state health department reps
Recommendations from testing of the national public health performance standards instruments	Reviews validity testing of state and local performance standards instruments.	Beaulieu, Scutchfield, Kelly	2003	Surveys	Determines validity of standards	Did not assess reliability given lack of controlled test-retest environment for the instruments; state PH administrators were unable to judge LHDs on some specific essential services.	NPHPS Instrument
A study of local public health system performance in Texas	Describes an evaluation of LPHAs in Texas on performance and characteristics associated with high performing system.	Kennedy	2003	Cross-sectional survey and phone interviews	High performance of core functions associated with larger community size, high SES, high LPHA capacity and agency contributions, higher education levels.	LPH staff completed instruments; exploratory; not a random sample; not generalizable; statistical test not performed.	47 LPHAs in Texas

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Assessing capacity of health departments to engage in community based participatory public health	Identified 4 factors to measure community-based participatory practice; possible to measure competencies needed by LHD staff.	Parker, Margolis, Eng, Henriquez-Roldan	2003	Cross-sectional survey	Partnership	Response rate of 66%; excluded respondents with missing data.	LHD
Developing quality indicators for local health departments: experience in Los Angeles County	Describes process for developing public health quality indicators for LHDs.	Derose, Asch, Fielding, Schuster	2003	Explanatory	Proposed 111 indicators, including 61 recommended indicators and 50 acceptable indicators.	n/a	LHDs
Can accreditation work in public health? Lessons from other service industries	White paper prepared for RWJF; reviews the literature on the experiences and outcomes of existing accreditation programs in health and social service industries.	Mays	2004	Review of existing accreditation programs in other industries	Evidence base concerning effectiveness and impact of accreditation programs is limited.	Used various databases to identify publications; also reviewed grey literature and conducted phone interviews; 94 documents total.	Accredita-tion programs
Local health department partnerships with faith-based organizations	Examines effectiveness of partnerships between LHDs and faith-based organizations.	Zahner, Corrado	2004	Cross-sectional surveys (2)	Partnership effectiveness; implementation of programs) was related to having a budget and longer time in existence.	Pilot tested surveys; reports from LHDs subjective; need faith-based organizations perspective.	LHDs

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Practices in public health finance: an investigation of jurisdiction funding patterns and performance	Examined association between PH system performance of 10 essential services and funding patterns of 50 LHDs in large state.	Honore, Simoes, Jones, Moonesinghe	2004	Correlational	Found relationship between per capita taxes and performance, but not between LHD funding and performance.	Measurement error may have resulted from not being able to identify all funding supporting public health; sample size reflects only 43% of LHDs in state (could be bias in representation).	LHDs
Performance contracting for public health: the potential and the implications	Describes a state that requires LHDs to achieve agreed upon outcomes in exchange for funding.	Rohrer	2004	Commentary	Core functions	n/a	LHD
Availability and perceived effectiveness of public health activities in the nation's most populous communities	Describes availability and perceived effectiveness of PH activities in communities where most people reside.	Mays, Halverson, Baker, Stevens, Vann	2004	Cross-sectional--self administered questionnaire	Core functions: availability of PH services varied with population size, SES, LHD spending, and presence of local BOHs; effectiveness ratings higher for assurance and assessment than for policy.	Survey administered to local LHD (bias); only focused on 20 activities; sample did not reflect range of LHDs; can't be generalized.	LHDs serving at least 100,000 residents

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
National profile: overview of capabilities and core functions of local public health jurisdictions in 47 states, the District of Columbia, and 3 US territories, 2000-2002	Describes results of population survey assessing core findings of public health to provide population baseline data.	Suen, Magruder	2004	Cross-sectional survey; descriptive analysis	Core functions	Response rate of 87%; modified questionnaire could affect reliability and validity; data self-reported; different interpretations for questions.	LPH jurisdictions
Getting what you pay for: public health spending and the performance of essential public health services	Examined the association between public health spending and the performance of essential public health services.	Mays, McHugh, Shim, Lenaway, Halverson, Moonesinghe, Honore	2004	Cross-sectional survey; nonrandom	LPH performance varies with local and federal spending; all services more sensitive to local spending.	Volunteered; not a representative sample; considerable variability; bias due to instrument revision; PH spending approximated.	315 LPH jurisdictions
The impact of accreditation on organization functioning and performance	Looks at effect of accreditation on specific performance measures.	Hazard, Pacinella, Pietrass	2004	Matched subjects research study (matched by geography and budget size)	Three indicators differed among accredited and non-accredited: risk mgmt, performance evaluation, and corrective action	Differences noted only when 3 accredited agencies responded one way and 3 non-accredited responded differently; generalizability weak.	Social service agencies

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Application of quality measurement and performance standards in public health systems: Washington state's approach	Describes Washington's performance standards, accreditation-type evaluation process, and results of recent performance evaluation against standards.	Mauer, Mason, Brown	2004	Self-assessment survey	Documented baseline evaluation to drive local or system-wide quality improvement; found positive correlation between size of budget and # of employees and higher performance; developed compendium of best practices.	Findings may not be generalizable to health departments outside of WA.	LHDs
Local public health agency capacity and its relationship to public health system performance	Examined associations between certain LPHA characteristics and performance of the ten essential public health services.	Scutchfield, Knight, Kelly, Bhandari, Vasilescu	2004	Cross-sectional multivariate regression analysis using 1997 NACCHO profile and performance scores from the National Public Health Performance Standards	Funding, organizational leadership and community partnership found to be significantly related to performance.	Good discussion of methodological limitations.	County and city public health jurisdictions in 3 states.; N=152
The managing moment: partnering essentials	Commentary on necessity of partnering to achieve public health goals.	Porter, Baker	2005	Framework for effective partnering	Partnership	n/a	n/a

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Statewide community-based health promotion: a NC model to build local capacity for chronic disease prevention	Describes statewide approach to provide TA to local communities to support and develop health promotion capacity; focus on policy and environment change strategies addressing tobacco, nutrition, physical activity.	Plescia, Young, Ritzman	2005	Longitudinal (baseline 2001 and then 2004 after-program intervention)	Nearly 100% of LHDs addressed tobacco or nutrition or physical activity in 2004; between 2001 and 2004, # of LHDs reporting policy or environmental outcomes almost doubled.	Data submitted by local staff may be biased, inaccurate; early reporting system not the same as current reporting system (lacked dated fields).	LHD
Local public health system partnership	Explored extent to which LHDs collaborated, characteristics of partnerships, factors associated with partnership effectiveness.	Zahner	2005	Cross-sectional survey	Partnership effectiveness	Response rate 93%; generalizable; bias-surveyed LHDs.	LHD
Local public health agency performance and community health status	Describes study of LPHA performance and health outcomes.	Kanarek, Stanley, Bialek	2006	Descriptive cross-sectional survey	LPHA performance affects community health status; contributions vary depending on outcome.	Survey response rate 59%.	Local public health jurisdictions

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Institutional and economical determinants of public health system performance	Examines association of institutional, financial, and community characteristics and performance of essential services	Mays, McHugh, Shim, Perry, Lenaway, Halverson, Moonesinghe	2006	Cross-sectional survey; nonrandomized	Core functions (including policy development) varied significantly with size, organization structure of LPH; only 28% of variance explained by these factors.	LPH systems not a representative sample; inputs and outputs from different time periods; variation in instrument design may have introduced measurement error.	Local public health systems
Community empower-ment: a partnership approach to public health program implementa-tion	Describes model for public policy implementation that builds on learning and shared decision making and better addresses relationships between providers and consumers.	Hanks	2006	Descriptive; offers alternative framework for program implementation	Clinical/ programmatic	n/a	Work program implementa-tion models
Evaluating MAPP and NPHPs in local public health jurisdictions	Study evaluates the experience of jurisdictions using MAPP process and those using NPHPS.	Lenihan, Landrum, Turnock	2006	Surveys	MAPP found to be successfully applied; use of NPHPS has not yet demonstrated strong overall impact on public health system change.	Findings not generalizable to all LHDs.	LHDs

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Putting the public in public health: new approaches	Well-informed public and business, community, and policy makers must believe that PH has an important community benefit; PH professionals must engage these groups.	Benjamin	2006	Commentary	n/a	n/a	n/a
The public and public health organiza-tions: issues for community engaement in public health	Assessed whether leaders of public health-related organizations embraced deliberation as a mechanism to identify and address community health problems.	Scutchfield, Hall, Ireson	2006	Qualitative analysis of knowledge use and dissemination of deliberation in community health using open-ended questions; conducted analysis using NVIVO.	Participants cited the benefits and potential drawbacks of deliberation; offered suggestions for disseminating concept to public health leaders.	Limited sample size	Eight CEOs of national public health constituent organizations
Local public health agency funding: money begets money	Local PHAs that get more federal and state funding also get more local money; local money improves agency performance, so need more state and federal money.	Bernet	2007	Descriptive	Financing as "input"; doesn't look at outcomes.	Need to examine if matching funds are required for higher state and federal money.	LHDs in Missouri

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Linking accreditation and public health outcomes: a logic model approach	Discusses effectiveness of accreditation in moving PH systems toward community health improvement; proposes logic model to link accreditation with outcomes.	Joly, Polyak, Davis, Brewster, Tremain, Raevsky, Beitsch	2007	Conceptual model	Framework for evaluating accredited LHD as input.	n/a	n/a
PH laws and Implications for a national accreditation program: parallel road ways without intersection	Discusses legal process for accreditation.	Beitsch, Landrum, Chang, Wojciehowski	2007	Policy analysis	n/a	n/a	n/a
Enhancing Michigan's local public health accreditation program through participation in the multistate learning collaborative	Presents Michigan's accreditation program; explains outcomes achieved from meeting accreditation goals.	Kushion, Tews, Pacher	2007	Descriptive	Review finds that Michigan needs to raise accreditation standards in order to continuously improve health department performance.	n/a	n/a

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
North Carolina local health department accreditation: July 2006-June 2007 stakeholder evaluation report	Discusses evaluation of accreditation process for the health departments attaining accreditation in NC.	Davis, Cannon	2007	Program evaluation using surveys and interviews	Found that the accreditation program in NC is working as intended and that 90% of accredited agencies had implemented improvements to meet standards.	Small sample size; may not be generalizable to health departments outside NC; based on self-reports.	LHD
States gathering momentum: promising strategies for accreditation and assessment activities in multistate learning collaborative applicant states	Reviews data extracted from applications of 16 of the 18 MLC applicant states and reviews common themes across programs.	Beitsch, Mays, Corso, Chang, Brewer	2007	Document review of proposals submitted for MLC findings	Describes key attributes of states with accreditation and/or performance improvement programs.	Data based on self-reports from states completing applications.	State public health agencies
The performance of local health departments: a review of literature	Literature review of LHD performance measurement and factors that impact performance.	Erwin	2008	Systematic review	Identifies substantial body of literature on LHD performance.	Limits review to studies in peer-reviewed journals only.	n/a

Article	Summary	Authors	Date	Type of Study	Type of Outcomes	Quality	Unit of Analysis
Public health accreditation: progress on national accountability	Discusses the road to voluntary national accreditation and the possible benefits of a national system of public health accreditation.	Tilson	2008	Descriptive review on public health policy and performance accountability	n/a	n/a	n/a
What predicts local public health agency performance improvement? A pilot study in North Carolina	The study examined what factors are associate with LPHA improvement in NC from 1999-2004. Findings indicated that workforce characteristics contributed significantly to performance	Hajat, Cilenti, Harrison, MacDonald, Pavletic, Mays, Baker	2009	Cross-sectional study using existing datasets; bivariate and multivariate analyses were performed to assess individual predictor's association with outcomes	Workforce was a predictor for all nine performance outcomes; expenditures not significant predictor of performance	Limitations include cross-sectional nature of study, ceiling effect of performance, small sample size and number of models	Local public health agencies in NC

APPENDIX 2

Local Public Health Agency Survey

Agency Study No: _____

Is your agency currently accredited? a. YES b. NO

If yes, what was the most recent date of accreditation? _____ (month and year)

Directions: The following questions address your agency's activities related to community engagement, leadership and policy implementation. For each question, please circle the most appropriate response.

<table>
<tr><td colspan="2">Questions 1-3 ask about your activities related to community assessment.</td></tr>
<tr><td>1. In your agency's most recent community health assessment, how many different agency and community representatives were involved in planning and conducting the assessment?

a. None
b. Less than 10
c. 11-20
d. 21-30
e. More than 30</td><td>2. Did the health director attend any meetings with external partners related to conducting your agency's most recent community assessment?

a. No
b. Yes</td></tr>
<tr><td colspan="2">3. Who from your agency's management team participated in a community-wide forum to share the findings from your most recent community assessment? Please circle all that apply.

a. Health Director
b. Deputy Health Director
c. Environmental Health Supervisor
d. Nursing Supervisor
e. Health Education Supervisor
f. Nutrition Supervisor
g. Social Work Supervisor
h. Medical Director
i. Other_____
j. No One</td></tr>
<tr><td colspan="2">Questions 4-7 ask about your activities related to preparedness.</td></tr>
<tr><td>4. Does anyone on your health department's management team, including the health director, have a defined role in the emergency operations plan for your local jurisdiction?

a. No
b. Yes</td><td>5. In the past 12 months, how often has health department staff participated in local or regional exercises and drills in order to test the agency's public health preparedness and response plan?

a. Not at all
b. One time
c. Two times
d. Three times
e. More than three times
f. Do not have preparedness and response plan</td></tr>
</table>

6. Has the health director served as a participant in any local or regional emergency preparedness exercises and drills in the past 12 months?

   a. No
   b. Yes

7. In the past 12 months, how frequently has the health director communicated with the local emergency management director regarding preparedness and response issues?

   a. None
   b. 1-3 times
   c. 4-6 times
   d. 7-10 times
   e. More than 10 times

Questions 8-10 ask about your activities related to informing the public about health issues.

8. In the past 12 months, how many times has the local health director shared information, either through the media or community presentations, on current local health issues with the general public and community partners?

   a. None
   b. 1-3 times
   c. 4-6 times
   d. 7-10 times
   e. More than 10 times

9. In the past 12 months, how many times did the local health director make a presentation to the local Board of Commissioners highlighting a local public health issue?

   a. None
   b. 1-2 times
   c. 3-4 times
   d. 5-6 times
   e. More than 6 times

10. In the past 12 months, how many times did the local health director make a presentation to the Board of Health highlighting a local public health issue?

    a. None
    b. 1-2 times
    c. 3-4 times
    d. 5-6 times
    e. More than 6 times

Questions 11-21 ask about your activities related to partnerships and outreach.

11. In the past 12 months, how many agencies and community organizations collaborated with the health department to deliver health promotion/disease prevention programs?

    a. None
    b. Less than 5
    c. 5-10
    d. 11-15
    e. More than 15

12. In the past 12 months, how many events related to health promotion/disease prevention, such as a community walking program, involved the health director as a participant?

    a. None
    b. One
    c. Two
    d. Three
    e. More than three

13. In the past 12 months, how many Healthy Carolinian steering committee meetings, or other collaborative community health steering committee meetings, took place?

    a. None
    b. 1-2
    c. 3-4
    d. 5-6
    e. More than 6
    f. Do not have Community Health Steering Committee (SKIP to Question 19)

14. Of these meetings in question 13, how many did the local health director attend?

    a. None
    b. 1-2
    c. 3-4
    d. 5-6
    e. More than 6

15. In the past 12 months, how many community agencies and other public health partners were represented on the Healthy Carolinian steering committee, or other collaborative community health steering committee?

a. None
b. Less than 5
c. 5-10
d. 11-15
e. More than 15

16. In the past 12 months, how many collaborative funding requests were generated by the Healthy Carolinian steering committee, or other collaborative community health steering committee, in partnership with the health department?

a. None
b. Less than 5
c. 5-10
d. 11-15
e. More than 15

17. In the past 12 months, how often did representatives of the Healthy Carolinian steering committee, or other collaborative community health steering committee, make presentations to the Board of Commissioners? (do not include health department staff)

a. None
b. 1-2 times
c. 3-4 times
d. 5-6 times
e. More than 6 times

18. In the past 12 months, how often did representatives of the Healthy Carolinian steering committee, or other collaborative community health steering committee, make presentations to the Board of Health? (do not include health department staff)

a. None
b. 1-2 times
c. 3-4 times
d. 5-6 times
e. More than 6 time

19. In the past 12 months, how many new partnerships were initiated between the health department and other community agencies and representatives, such as businesses, healthcare providers, faith leaders, and grassroots organizations?

a. None
b. 1-3
c. 4-6
d. 7-10
e. More than 10

20. In the past 12 months, how many outreach events were sponsored by the health department to increase awareness of public health issues among less traditional public health partners?

a. None
b. Less than 5
c. 5-10
d. 11-15
e. More than 15

21. Of the events provided in question 20, how many involved the health director as a participant?

a. None
b. 1-2
c. 3-4
d. 5-6
e. More than 6

Questions 22 and 23 ask about your activities related to advocating for public health needs.

22. In the 12 past months, how often did members of the health department management team provide information related to public health needs to elected and appointed officials?

a. None
b. 1-2 times
c. 3-4 times
d. 5-6 times
e. More than 6 time

23. In the past 12 months, how often did Board of Health members, not including the Commissioner on the Board of Health, attend Board of Commissioner meetings to provide support and information related to public health needs?

a. None
b. 1-2 times
c. 3-4 times
d. 5-6 times
e. More than 6 times

Questions 24-28 ask about your activities related to rule making.

24. In the past 12 months, how many times did the Board of Health consider the need for additional rules or ordinances to protect the health of the public in your jurisdictions?

a. None
b. One time
c. Two times
d. Three times
e. More than 3 times

25. In the past 12 months, how many new or revised rules or ordinances were proposed by the Board of Health?

a. None
b. One
c. Two
d. Three
e. More than 3

26. Of those proposed in question 25, how many were adopted?

a. None
b. One
c. Two
d. Three
e. More than
f. Have not yet voted to adopt or revise

27. Has the health director and/or Board of Health made efforts to prohibit the use of tobacco products within your jurisdiction as allowed by state law?

a. No (skip to Q. 29)
b. Yes

28. If yes, was the health department successful in prohibiting the use of tobacco products as allowed by state law?

a. No
b. Yes
c. Have not yet voted to adopt or revise

Questions 29 and 30 ask about your activities related to strategic planning

29. During your most recent strategic planning process, how many partners agreed to contribute resources to help carry out the proposed strategies and activities?

a. None
b. Less than 5
c. 5-10
d. 11-15
e. More than 15
f. Have not had strategic planning process

30. Of the proposed strategies and activities included in your most recent strategic plan, what percentage has been implemented?

a. None
b. Less than 25%
c. More than 25% but less than 50%
d. More than 50% but less than 75%
e. More than 75%
f. Do not have a strategic plan

Questions 31 and 32 ask about your activities related to policies.

31. In the past 12 months, what percentage of your health department policies authorized by either the Board of Health or the health director have been reviewed and/or updated?

a. None
b. Less than 25%
c. More than 25% but less than 50%
d. More than 50% but less than 75%
e. More than 75%

32. In the past 12 months, what percentage of your health department policies authorized by either the Board of Health or the health director has been monitored for compliance?

a. None
b. Less than 25%
c. More than 25% but less than 50%
d. More than 50% but less than 75%
e. More than 75%

Questions 33-36 ask about your activities related to availability of health care.

33. In the past 12 months, how many times has the health department staff met with local healthcare providers regarding the availability of accessible preventive and primary health care services?

    a. None
    b. 1-3 times
    c. 4-6 times
    d. 7-10 times
    e. More than 10 times

34. In the past 12 months, how many times has the health department staff met with representatives from different ethnic and racial backgrounds regarding the availability of preventive and primary health care services intended to reach underserved population groups?

    a. None
    b. 1-3 times
    c. 4-6 times
    d. 7-10 times
    e. More than 10 times

35. In the past 12 months, how often has the health director met with local health care providers regarding the availability of accessible preventive and primary health care services?

    a. None
    b. 1-3 times
    c. 4-6 times
    d. 7-10 times
    e. More than 10 times

36. In the past 12 months, how often has the health director met with representatives from different ethnic and racial backgrounds regarding the availability of preventive and primary health care services for underserved population groups?

    a. None
    b. 1-3 times
    c. 4-6 times
    d. 7-10 times
    e. More than 10 times

Questions 37-40 ask about your workforce and organizational improvement.

37. In the past 12 months, what percentage of the health department's workforce development plan/workforce training plan was implemented?

    a. None
    b. Less than 25%
    c. More than 25% but less than 50%
    d. More than 50% but less than 75%
    e. More than 75%
    f. Do not have workforce development plan

38. In the past 12 months, what percentage of the health department's diversity plan was implemented?

    a. None
    b. Less than 25%
    c. More than 25% but less than 50%
    d. More than 50% but less than 75%
    e. More than 75%
    f. Do not have diversity plan

39. In the past 12 months, what percentage of the health department's quality improvement plan was implemented?

    a. None
    b. Less than 25%
    c. More than 25% but less than 50%
    d. More than 50% but less than 75%
    e. More than 75%
    f. Do not have quality improvement plan

40. In the past 12 months, how often did the health director participate in leadership development training or other personal leadership growth activities?

    a. None
    b. 1-2 times
    c. 3-4 times
    d. 5-6 times
    e. More than 6 times

THANK YOU FOR YOUR TIME IN COMPLETING THIS SURVEY

Codes for Local Public Health Survey

Variable	Code
Agency Number	STUDYNO
Agency Accreditation	ACCREDIT
Most Recent Date of Accreditation	DATAACCRED
Q.1	ASSESSREP
Q.2	ASSESSHD
Q.3	ASSESSMT
Q.4	PREPAREROLE
Q.5*	PREPAREDRILL
Q.6	PREPAREHDEXER
Q.7	PREPAREHDCOMM
Q.8	INFORMHDGEN
Q.9	INFORMHDBOC
Q.10	INFORMHDBOH
Q.11	PARTNERORG
Q.12	PARTNERHD
Q.13	HCMEET
Q.14	HCMEETHD
Q.15	HCORG
Q.16	HCFUND
Q.17	HCBOC
Q.18	HCBOH
Q.19	PARTNERNEW
Q.20	OUTREACH
Q.21	OUTREACHHD
Q.22	INFORMMT

Q.23	INFORMBOH
Q.24	BOHRULES
Q.25	RULESNEW
Q.26	RULESADOPT
Q.27	NOTOBACCO
Q.28*	TOBACCOPASS
Q.29	PARTNERSTRAT
Q.30	STRATPLANIMP
Q.31	POLICYREV
Q.32	POLICYMON
Q.33	STAFFLOCPROV
Q.34	STAFFETHNIC
Q.35	HDLOCPROV
Q.36	HDETHNIC
Q.37	TRAINIMPLEM
Q.38	DIVERSIMPLEM
Q.39	QIIMPLEM
Q.40	LEADER

Questions by Domain

Leadership - Q. 2,3,4,6,7,8,9,10,12,14,21,22,23,35,36,40

Community Engagement - Q. 1,11,13,15,16,17,18,19,20,29,33,34

Policies and Plans - Q. 5,24,25,26,27,28,30,31,32,37,38,39

* Q.5 and Q.28 were excluded from the policies and plans domain because scores were negatively correlated with the sum index.

Survey Scoring System

1.a=0, b=1, c=2, d=3, e=4

2. a=0, b=1

3. no one=0, 1-2 ppl=1, 3-4 ppl=2, 5-6 ppl=3, 7+=4

4. a=0, b=1

5.* a=0, b=1, c=2, d=3, e=4, f=0

6. a=0, b=1

7. a=0, b=1, c=2, d=3, e=4

8. a=0, b=1, c=2, d=3, e=4

9. a=0, b=1, c=2, d=3, e=4

10. a=0, b=1, c=2, d=3, e=4

11. a=0, b=1, c=2, d=3, e=4

12. a=0, b=1, c=2, d=3, e=4

13. a=0, b=1, c=2, d=3, e=4, f=0

14. a=0, b=1, c=2, d=3, e=4

15. a=0, b=1, c=2, d=3, e=4

16. a=0, b=1, c=2, d=3, e=4

17. a=0, b=1, c=2, d=3, e=4

18. a=0, b=1, c=2, d=3, e=4

19. a=0, b=1, c=2, d=3, e=4

20. a=0, b=1, c=2, d=3, e=4

21. a=0, b=1, c=2, d=3, e=4

22. a=0, b=1, c=2, d=3, e=4

23. a=0, b=1, c=2, d=3, e=4

24. a=0, b=1, c=2, d=3, e=4

25. a=0, b=1, c=2, d=3, e=4

26. a=0, b=1, c=2, d=3, e=4, f=0

27. a=0, b=1

28.* a=0, b=1, c=0

29. a=0, b=1, c=2, d=3, e=4, f=0

30. a=0, b=1, c=2, d=3, e=4, f=0

31. a=0, b=1, c=2, d=3. e=4

32. a=0, b=1, c=2, d=3, e=4

33. a=0, b=1, c=2, d=3, e=4

34. a=0, b=1, c=2, d=3, e=4

35. a=0, b=1, c=2, d=3, e=4

36. a=0, b=1, c=2, d=3, e=4

37. a=0, b=1, c=2, d=3, e=4, f=0

38. a=0, b=1, c=2, d=3, e=4, f=0

39. a=0, b=1, c=2, d=3, e=4, f=0

40. a=0, b=1, c=2, d=3, e=4

SUBTOTAL LEADERSHIP DOMAIN POINTS = 55

SUBTOTAL COMMUNITY ENGAGEMENT POINTS =48

SUBTOTAL IMPLEMENTATION OF POLICIES AND PLANS =37 (* Excludes values for Q.5 and Q.28.)

TOTAL POSSIBLE POINTS = 140

APPENDIX 3

Interview Protocols

Health Directors Interview Protocol

Purpose of the Interview

Thank you for agreeing to talk with me today. The purpose of this interview is to provide information regarding the extent to which accreditation has impacted local health department performance. Findings from this interview will be summarized as part of my dissertation. Do you understand the purpose of this interview? Do you have any questions before we get started?

To ensure that your thoughts and opinions are accurately captured, I would like to audiotape this session. You may request at any time that the tape be turned off. We will not use your name in any results of the study, and will keep your individual comments confidential, and stored separately from the summary statements and final paper unless written consent is requested to attribute a thought or comment to you. Do I have your permission to audiotape this session?

Questions

This first set of questions relates to accreditation and its impact on your organization.

1. Preliminary findings from the survey you completed in October suggest that health departments that have achieved accreditation are more likely to have important policies in place. Can you tell me about your health department's policy development activities related to accreditation and how you have implemented these policies since receiving accreditation status?

2. How has your agency's development and implementation of its strategic plan been facilitated by the local health department accreditation program?

3. Survey responses also seem to suggest that community engagement activities are more prevalent among health departments that have received accreditation status. How have your community engagement efforts been strengthened by your agency's accreditation-related activities?

4. How have accreditation requirements facilitated your efforts to leverage community resources to achieve public health goals?

5. Please describe other leadership positions you hold in the community and how relationships you have established through these positions have helped you in your role as health director. How have these relationships been strengthened as a result of accreditation?

6. How has your communication and work with your local Board of Commissioner, Board of Health and the general public been impacted by accreditation?

7. In your opinion, to what extent does accreditation improve performance of the health department?

8. To what extent do you think the current local health department accreditation program contributes to community health improvement?

9. In your opinion, how can reaccreditation of local public health agencies drive local public health agency performance in a positive direction?

10. How can the local health department accreditation program be improved for greater impact on community health goals?

This next set of questions relate to public health agency improvement in general.

11. What incentives are currently in place to maximize your health department‘s performance?

12. What barriers currently exist that impede performance improvement within your agency?

13. Please describe your collaborative work with other health departments and how you utilize mentors, peers and training institutions (such as AHEC, universities) to enhance your effectiveness and the performance of your agency.

14. What is your highest hope for the impact that your health department can have in improving the health of individuals, families and communities in your county?

15. Given the health department’s mission and activities now, what three wishes do you have to heighten the effectiveness of the health department?

16. Looking back from a place five years from now where the health department is at its optimal performance:

    a. What products and services do you offer? To whom?

    b. What changes in operations have been made?

    c. With whom have you partnered? On what types of activities?

    d. What risks did you have to take? What did you have to learn?

17. Is there anything else you would like to share regarding the local health department accreditation program or public health improvement in general?

Management Team/Agency Accreditation Coordinator Interview Protocol

Purpose of the Interview

Thank you for agreeing to talk with me today. The purpose of this interview is to provide information regarding how accreditation has impacted local health department performance. Findings from these interviews will be summarized as part of my dissertation. Do you understand the purpose of this interview? Do you have any questions before we get started?

To ensure that your thoughts and opinions are accurately captured, I would like to audiotape this session. You may request at any time that the tape be turned off. We will not use your name in any results of the study, and will keep your individual comments confidential, and stored separately from the summary statements and final paper unless written consent is requested to attribute a thought or comment to you. Do I have your permission to audiotape this session?

Questions

1. What influenced your agency's decision to pursue local public health agency accreditation?

2. In your opinion, what have been the main impacts, successes and innovations of the local health department accreditation program in NC?

3. What do you value most about the local health department accreditation program in NC?

4. Please share your organization's experience with accreditation. Include key motivations and milestones. Highlight results and benefits with respect to:

    - finances,
    - personnel,
    - program operations and
    - policies.

5. In what ways has the local health department accreditation program changed the organizational culture of your health department?

6. How has health department performance improved as a result of preparing for and attaining accreditation?

7. What activities or processes are in place to assure that policies and plans that were used as evidence for accreditation are implemented?

8. How has the accreditation program changed the way the health department works in the community?

9. Do you think the health department has a more visible leadership role in the community as a result of preparing for and attaining accreditation?

10. To what extent do you think the accreditation program has helped your health director and management team members become better leaders?

11. In your opinion, how does accreditation of local public health agencies drive local public health performance?

12. How can requirements for reaccreditation be designed to have greater impact on public health agency performance?

13. How do you think local public health agency accreditation could be used as a tool to improve community health outcomes?

14. Is there anything else you would like to share regarding the local health department accreditation program?

APPENDIX 4

Health Directors' Survey Responses

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
What are the agency's policy development activities related to accreditation, and how has the agency implemented these policies since receiving accreditation status?	• Developed new policies • Updated existing policies • Utilized BOH review • Established QI team	• Created policies for both accreditation and reaccreditation • Required revisiting policies, keeping them up-to-date, and making sure staff can find them	• Updated existing policies • Put policies on Intranet so employees could access • Created new policies for dental program • Executive team reviews policies annually • BOH Chair and Vice Chair approve policies annually	• Supervisors are responsible for policy implementation • Agency is much more organized around policies • Agency originally had only clinical policies, now has Administrative Policy Manual; copy of manual given to each unit manager • Implemented annual policy review/update process • Set aside annual meeting with BOH for policy review • Store policies electronically for staff

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How has the agency's development and implementation of its strategic plan been facilitated by the local health department accreditation program?	• Identified new focus areas for plan, including: cultural diversity training, policy development, partnership agreements	• Had a strategic plan prior to accreditation • Reviews strategic plan annually with BOH, although review is not necessarily related to accreditation	• Accreditation had no effect on strategic plan, since a process was already in place • Program managers monitor implementation of strategic plan	• Re-framed strategic plan using 10 Essential Services • Reminds BOH of agency's responsibility for 10 Essential Services • Management team reviews strategic plan quarterly
How have the agency's community engagement efforts been strengthened by accreditation-related activities?	• Established new partnerships and formalized existing partnerships	• Already collaborating with community partners • Accreditation provided feedback and validation regarding significance of health department role in community	• Already collaborating with every health and human service agency in county • Agency now gathers better documentation of community engagement activities • Found it "eye-opening" to compile list of partners	• Agency now gathers better documentation of already extensive community engagement • Agency vision is to be health resource for the community • Stepped up outreach and responsiveness to clients (e.g., stayed open late twice/week • "Accreditation has made us more thoughtful and more prescriptive in our approach to getting feedback from people we serve"

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How have accreditation requirements facilitated the agency's efforts to leverage community resources to achieve public health goals?	• Received grants for walking trails (largely due to work of community health educator)	• "Whether we are accredited or not doesn't impact resources one way or another"	• No effect on leveraging resources; did do a better job of documenting receipt of grants • Received funds from county for facility improvements	• Documentation (such as annual reports) helped create a compelling case for grant funding • Leveraged tax dollars through reports (e.g., QI report, CD report) by being more accountable • Obtained some resources for facility
What leadership positions does the Health Director hold in the community and how have these positions help the health director in his/her role? How have these relationships been strengthened as a result of accreditation?	• Community leadership positions have elevated the visibility of the Health Director.	• The Health Director's relationships have not been affected by accreditation; the community does not understand accreditation • The agency does not make a big marketing splash about accreditation like hospitals do	• Health Director is a member of community boards and thus has an increased awareness of community resources for clients • Internal relationships improved as result of accreditation process; benefit to community since internal staff can relay better information to local citizens	• Health Director is a member of local community hospital board, a relationship that helps agency share resources better and puts public health in front of the medical community; has also helped with preparedness • Health Director also chairs local School Health Advisory Committee)SHAC) and Healthy Carolinians Council (a community health planning group)

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How has the agency's communication and work with the local Board of Commissioners, Board of Health and general public been impacted by accreditation?	• Now communicate more openly • Worked harder to develop partnerships • Created greater capacity for press releases, alerts, articles	• A lot of discussion with BOH concerning smoking provisions	• Agency already had good communications • Did better job of documenting and recognizing efforts as part of accreditation activities	• Still need to work on BOC communication; agency tends to fly "under the radar" • Chair of BOC is member of BOH • BOC generally critical of public health clients or services
To what extent does accreditation improve the performance of the health department?	• Management team performance improved • Created communications committee • Agency became more business-oriented	• Fleeting marginal improvement; staff returned to "business as usual" after 6 months or so • Hard to continue spending resources on QI • Not going to get really bogged down in preparing for reaccreditation because "everyone passes anyway" • Given the range of health department responsibilities, accreditation doesn't make a significant difference in the way services are delivered.	• Agency became more organized • Greater attention to detail • Updated policies • Plan better • More automation • Operate more efficiently and professionally • Not much effect on quality of health care	• Accreditation probably doesn't make a good health department a lot better • Brings focus • Helps a good health department express how good it is • Probably does raise the bar for marginal or below-average health departments that are less engaged with the community • Raised the bar for a few areas of weakness (e.g., privacy)

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
To what extent does the current local health department accreditation program contribute to community health improvement?	• Agency redirected health education position from clinic to community • Health department team now more involved in the community • Community Health Assessment renamed to be more user friendly	• Actual performance indicators are not improving • Accreditation should push health departments to consolidate if agencies are unable to achieve performance targets	• Helped leverage partners on major events • Influenced commissioners to pay for building upgrades, signage, and more automation • Made an improvement in quality of businesses processes	• Forces use of community health assessment to develop community action plans • Year before accreditation was the first year agency had conducted a really big, community engaged, community health assessment • Before accreditation CHAs used to vary greatly across the state; they are executed more consistently now
How can reaccreditation of local public health agencies drive agency performance in a positive direction?	• Implementation of standards and benchmarks, preparation for site visit team, and review comments from team all drive public health agency improvement	• Need to tie reaccreditation to financial incentives • Include performance in standards • If performance standards not met, then county loses a percentage of state funding	• Health department could come up with one deliverable to impact community and voluntarily include as part of their re-accreditation and work on it	• Accountability is a driver in and of itself • Helps get supervisors to do annual performance appraisals • Accreditation needs to evolve as federal and state laws change

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How can the local health department accreditation program be improved for greater impact on community health goals?	• Needs to drive and reward motivation and leadership of the health director	• Accreditation needs to depend on accomplishments within the community beyond the public health department • Health department needs to demonstrate the range of accomplishments it can achieve through its partnerships (e.g. new transportation system for county)	• Have at least one goal per agency that's measurable that the agency can try to improve upon (e.g., improve the school nurse/student ratio, or the amount of nursing time or health care in schools) • Could influence BOH and BOC to support us with more positions • Would *not* choose an outcome indicator like teen pregnancy rate • Need to require a Healthy Carolinians Coalition in each county	• Accreditation should focus on improvement of processes that will impact one or two priorities that as a state we would want to accomplish
What incentives are currently in place to maximize the agency's performance?	• Strive to be the best • Staff know mission and essential services	• Individual and group bonuses • Performance is more difficult to quantify in some areas; need to tie to quality	• Incentives are to maintain a basic level of service, not maximize performance, or else funding could be reduced • Would love to have incentives to make agency do even better	• "Folks aggravated with you if you aren't going to work hard"; culture of hard work • System of recognition

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
What barriers currently exist that impede performance improvement within the agency?	• Staff perceive money as a barrier • Staff are only limited by what they haven't thought of	• Need enough people to do QI; currently divided among 5-6 people	• 1.5 FTE for QI is not sufficient; every single employee needs to be their own QI monitor • QI is an add-on; staff have real jobs in their own departments • Salaried employees are paid regardless of production • There aren't a lot of ways to improve performance; the agency can fire people for really poor performance	• Programs don't cover cost; more clients mean more cost, not more revenue • Old building impacts patient flow
Describe the agency's collaborative work with other health departments, and how the agency utilizes mentors, peers and training institutions to enhance its effectiveness and performance	• Agency is a member of the NC Association of Local Health Directors • Health Director has close working relationship with neighboring health director • Agency utilizes library program from university	• Agency has strong collaborative relationship with partner agencies in the NC Public Health Incubator Collaboratives • Health directors less involved; encourage staff to participate in incubator work groups and learn what other counties are doing	• Health Director collaborates with others through Incubator and regional health director meetings; learns how neighboring health departments carry out public health duties • Uses informal mentors and a formal mentoring program for employees • Uses AHEC and other training institutions but they need to "step it up a notch"	• Very noncompetitive environment with regional health directors • AHEC, university offerings, state offerings seem redundant • Community college is a major partner of agency; provides allied health students • Participates in Incubator Collaboratives initiative

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
What is the highest hope for the impact that the agency can have in improving the health of individuals, families and communities in the county?	• Hope to stay at current level of performance	• Reduce infant mortality rate to world-class number • Need comprehensive community plan; infant mortality is not just a health department problem; need to work more closely with NC health care systems	• Focus on youngest audiences to make them healthy adolescents and healthier adults • Need to start as early as possible • Want to help clients be self-sufficient • Prevention education is first priority • "Want to work ourselves out of a job or downsize the need for us"	• Want to make a difference in: health promotion, tobacco legislation. childhood obesity, access to care, and substance abuse
Given the health department's mission and activities now, what are three wishes to heighten the effectiveness of the agency?	• Better salaries • Better legislative and fiscal attention to infrastructure • Remain health director in order to carry out strategic plan	• Better trained staff • More resources distributed by need and performance • Better commitment and professionalism in public health	• Wish the community would embrace prevention • Self-sufficiency for clients • Access to care in the private market so there's less need for health department safety net clinics	• Funding • Selling health promotion and policy change to local government officials

Survey Item	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
Looking back from a place five years from now where the agency is at its optimal performance: • What products and services does it offer? To whom? • What changes in operations have been made? • With whom has the agency partnered: On what types of activities? • What risks did the agency take? What did the agency have to learn?	• Better identify diseases impacting the community • Better identify and reduce risks	• Agency is a model health department • Agency offers community-wide services; health department is center of community for health education and information and not just a provider of services to poor people • We have a first class facility with the latest technology, books, wellness kitchen, day care • We cannot afford to fail because the bar for public health is high • we need to act quickly, precisely, and well to exceed high expectations; currently a perception that public health cannot deliver • We need a different type of employee; more visible/professional	• Agency is offering more prevention education and fewer clinical services • Better outcomes for clinic clients • Implementation of new model to serve high risk pregnant women • Partner with private medical providers • Risks are related to funding some private providers and not others	• Clinical services moved into a federally-qualified health center • Cannot sustain health care for poor people without money • Agency is conducting more health promotion and prevention activities

	Health Directors' Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
Other comments?	• How to integrate national and state accreditation programs	• Counties know they aren't going to fail accreditation; need more credibility in program. If a health department does not meet criteria in a clear way, they should fail and be allowed a period of time to fix problems • The accreditation process should seek feedback about health department from its customers • Accreditation should incorporate health director competency in agency assessment • Accreditation should evaluate health director effectiveness and leadership and identify areas needing improvement • The health director has the most significant impact in the community compared to anyone else on staff; the health director needs to be a change agent and risk-taker	• Keep the accreditation process • Good to evaluate its relevance and the difference the program is making	• None

APPENDIX 5

Themes in Health Director Interviews

POLICY/PLAN DEVELOPMENT AND IMPLEMENTATION

- policies created, reviewed, updated (4)
- BOH review on regular basis (3)
- accessible to staff (3)
- supervisors responsible for implementation (2)
- more organized around policies (1)
- established QI team (1)

STRATEGIC PLAN

- no effect (2)
- review with BOH (2)
- managers review and monitor plan (2)
- focus on cultural diversity (1)
- based on 10 essential services (1)

COMMUNITY ENGAGEMENT

- already in community (3)
- role of public health in community validated (2)
- better documentation of community engagement activities (2)
- new partnerships established (1)
- existing partnerships formalized (1)
- elevated visibility (1)
- more prescriptive regarding client input (1)

COMMUNICATIONS

- increased BOH communications on policy matters (3)
- better tracking of communication to public, physicians, BOH/BOC, etc. (2)
- redirected resources for greater communication to public (1)
- implemented improved communication strategies within department (1)
- prepared schedule of annual business for BOH (1)

RESOURCES

- some resources for facility improvements (4)
- no impact (2)
- increased grants as a result of dedicated community work by health department (1)
- accreditation documentation helped build compelling case for grants, local revenue by demonstrating need, accountability (1)

HEALTH DEPARTMENT PERFORMANCE

- no significant difference in quality of services (2)
- more business oriented (2)
- better team work (1)
- fleeting, marginal improvement (1)
- implemented QI team (1)
- lack of resources for ongoing QI work (1)

HEALTH DEPARTMENT PERFORMANCE (continued)

- created communications committee (1)
- better organized (1)
- greater attention to detail (1)
- plan better (1)
- more automation (1)
- doesn't make a good health department a lot better (1)
- helps good health department express how good they are (1)
- raises the bar for marginal, below average departments (1)

LEADERSHIP

- no impact (3)
- more open communication (1)

IMPROVED COMMUNITY HEALTH STATUS

- adapted community health assessment to be more useful, relevant to general public (2)
- performance indicators not improving (1)
- redirected resources from clinic to community (1)
- help leverage partners on major events (1)
- influence BOC (1)
- improvement in business quality (1)

WAYS TO STRENGTHEN IMPACT OF REACCREDITATION

- more rigorous benchmarks/standards (1)
- tie to financial incentives/disincentives (1)
- include performance in standards (1)
- demonstrate that recommendations for improvement from site visit team reviewed as part of QI process (1)
- drive and reward motivation and leadership (1)
- base on accomplishments within community that demonstrate key role of health department (1)
- counties need to fail if they don't clearly meet criteria (1)
- interview health department clients on performance of health department (1)
- state and local health departments could identify 1 or 2 priorities to focus on (1)
- use accreditation to improve health director competency and effectiveness (1)
- accreditation needs to evolve with changes in federal and state laws (1)
- county could identify one deliverable to improve upon (1)
- accountability is driver in itself (1)

INCENTIVES

- strive to be the best (2)
- dollars for staff/team performance (1)
- commitment to mission and essential services (1)
- employee recognition (1)
- other employees weed out those not willing to work hard (1)
- current system is to maintain, not maximize service (1)

BARRIERS

- need dollars for QI (2)
- staff limited by what they haven't thought of (1)

BARRIERS (continued)

- programs don't cover cost; more clients mean more cost, not more revenue (1)
- salaried employees paid regardless of production (1)

COLLABORATIONS WITH PEERS

- incubator partners (3)
- university resources (2)
- NCALHD (1)
- neighboring health director (1)
- regional health directors highly collaborative (1)
- AHEC (1)

HIGHEST HOPE

- focus on prevention (2)
- stay at current level of performance (1)
- achieve world class performance on key indicators e.g. infant mortality (1)
- develop comprehensive community plan within other health care systems (1)
- substance abuse (1)
- focus on youngest audiences (1)
- help clients be self-sufficient (1)
- pass tobacco legislation (1)
- childhood obesity (1)
- access to care (1)

THREE WISHES

- better salaries (1)
- more legislative and fiscal attention (1)
- more dollars distributed by need and performance (1)
- better trained staff (1)
- more commitment and professionalism in public health (1)
- funding (1)
- help local governments understand health promotion and policy change (1)

OPTIMAL PERFORMANCE OF HEALTH DEPARTMENT

- more prevention education and fewer clinical services (2)
- better identify diseases impacting community (1)
- better identify and reduce risks (1)
- be a "model" health department with first-class facility (1)
- act quickly, precisely and well each time to exceed expectations (1)
- better outcomes for clinic clients (1)
- better model to reach high risk pregnant women (1)

OTHER ISSUES

- national and state accreditation programs need to interface (1)
- accreditation not credible if counties cannot fail (1)
- need to get feedback from health department clients (1)

APPENDIX 6

Management Team/Agency Accreditation Coordinators' Survey Responses

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
What influenced the decision to pursue local public health agency accreditation?	• Environmental Health Director participated in site visit reviews of other agencies and encouraged agency to proceed • Agency desired standardization, policies and procedures • Anticipated a great learning experience	• Interested in pursuing opportunities accreditation presented • Wanted to be one of the first to participate and to have a part in shaping the program • Wanted to be top of game	• Wanted to be one of first agencies in the state to receive accreditation • Always like to move ahead and make progress	• Health director is a great leader and was involved in health director meetings and task force related to accreditation • Perceived participation as a good way to assess health department and identify ways to improve and enhance quality of services • Perceived accreditation as like "Good Housekeeping Seal of Approval"

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
What have been the main impacts, successes and innovations of the local health department accreditation program in North Carolina?	• Provides "Good Housekeeping Seal of Approval" • Policy development (provides consistent interpretation) • Instills a great sense of pride • Accredited agencies gain more credibility in community • Helped employees learn about each other's roles	• Consistency and standardization among health departments • Camaraderie across health departments and with DPH consultants • Promoted teamwork • Opportunity to learn how other local public health agencies conduct business • Made public health work better known; proved to legislators what public health can do	• More clarity from the Division of Public Health regarding expected deliverables • Able to be more efficient and effective in what we're doing • Status from being an accredited agency (we note accreditation in grant proposals) • Recognize accreditation status in marketing and (radio, billboards) • Better training from Division of Public Health • Evaluation tool for self-assessment	• Standardization of health departments around 10 Essential Services of Public Health • Opportunity to define local public health • Peer review process is innovative • Enables health departments to see successes and identify areas needing improvement

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
What do you value most about the local health department accreditation program in North Carolina?	• Increased public understanding of what the health department does • Standardization of process • Greater accountability • Work in progress • Identified areas needing improvement, e.g., community engagement • Increased partnering and outreach to community	• Value health department performance • Help us to continuously raise bar and have higher standards • Helped us work together as team • Helped us value Healthy Carolinians program • Forces time for reflection and looking at how things are done with respect to performance of core public health services	• Forced us to organize material and information better; develop better documentation • Human Resource matters now well-defined in writing • Great learning experience • New managers get up and running quickly • Required fiscal reporting to BOH including revenue and expenditure data (enhanced fiscal communication to BOH) • Annual review of policies and guidelines • BOH better informed about their responsibilities	• Accreditation process helped staff see the big picture of public health • Community, partners and BOH better understand what the health department does • Interviews with partners, BOH, county manager built into the process brings the work of public health to the forefront • Process helps staff value what co-workers do in the health department and the community

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
Please share your agency's experience with accreditation. Include key motivations and milestones. Highlight results and benefits with respect to: • Finances • Personnel • Program operations • Policies	• Secured financial resources to address facility needs (locks, signs, etc) • Developed orientation for all new hires • Developed better communications with staff (e.g., established Communications Committee)	• Helpful for grants that require state certification • Helped get human resources records in order • Revised policies and procedures and made them available electronically • Better safety policies and procedures; added safety officer • Better orientation for staff	• Too early to see financial benefit; not sure if seeing more clients or getting more grants as a result • Currently using accreditation requirements as way to justify programs to BOC • Funding for facility improvements approved; more county support for facility clean-up, landscaping • Greater attention to regular audits; fewer corrective action plans submitted to state • Cross-agency learning (the more you know about all health dept. services, the better service given to community) • Able to see department from a broader perspective	• Received one-time state funds to prepare for accreditation • Don't know if accreditation helped obtain grants • There are costs in staff time and effort associated with accreditation • Required supervisors to review job descriptions • Changed process for employee evaluations • Established annual process for staff training • Employee orientation very beneficial in providing new staff with broad understanding of public health • Uniform policies and annual policy review • Had a clinic-oriented QI process prior to accreditation; added administrative policy manual and improved program policies • Staff more aware of agreement addenda requirements

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
In what ways has the local health department accreditation program changed the organizational culture of the agency?	• Better understanding of own and others' roles • Greater appreciation for others in agency • Better working management team • More sharing across health departments; better communication • Improved collaboration with DPH consultants and others at state level	• BOH more cohesive; conducted self-assessment • Policies in all program areas (there used to be just clinical policies) • Better documentation • Moving towards agency-wide QI culture • Managers better understand roles with respect to ensuring that policies and procedures are carried out	• QI committee used to be more of a record auditing committee; now has a broader goal and more authority (keep up with staff training, reviews client surveys)	• Staff have a better appreciation and understanding of the scope of work done in the agency and beyond the walls of the health department • Cultural diversity training more intense; changed thinking • Helps new supervisors understand roles better

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How has the agency improved as a result of preparing for and attaining accreditation?	• Provide standard level of service based on benchmarks • Raised expectations for performance • Greatest improvement in personnel policies and procedures • Staff know more of what is required • Environmental health and nursing strive for 100% compliance with program goals and continue to improve	• Checking to see where you are and making improvements • Better risk management strategy in Environmental Health with improved documentation • Logs in environmental health help with efficiency and ability to respond to complaints • Already in compliance with DPH program requirements	• Help us review and change processes • Process re-engineering forced us to evaluate resources and stop doing activities that were nice but not needed • More automation, electronic reporting • Accreditation process very stressful initially	• Created reward program for employees based on customer satisfaction • Expanded customer satisfaction surveys beyond clinical services to environmental health • Quality council reviews satisfaction reports regularly; has more influence in health department • Health department has identified areas needing improvement, e.g. expanded clinic hours • Documentation led to improved response to EH complaints • Policy development standardized and policies are accessible to staff

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
What activities or processes are in place to assure that policies and plans that were used as evidence for accreditation are implemented?	• Better management team review of requirements in agreement addenda • Regular employee training on policies • Policy log with review dates • Supervisors accountable for policy review and revisions • Policies emailed to staff and stored in shared folder • QI committee formed and meets quarterly • Maintaining folders to store documentation of strategic plan activities for re-accreditation • Need to better monitor corrective action	• Decentralized QI/QA; managers responsible for reviewing/revising/ documenting/enforcing • BOH reviews policies on annual basis	• QI team has more authority • Supervisors make sure staff review and sign-off on policies • Post policies, revisions on intranet	• Supervisors are responsible for assuring that staff members follow policies • Employees sign-off on annual review of policies • Review policy changes at staff meetings • Policies are reviewed with new employees • Encourage staff to access policies if they have questions about how to handle situations

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How has the accreditation program changed the way the health department works in the community?	• Not much change in environmental health; already out in community; however doing a little more outreach and education (e.g., Seafood festivals) • More outreach related to cultural diversity strategic goals (e.g., with faith-based, Hispanic communities) • Not much change in preparedness activities (already part of agreement addenda with DPH) • More diversity of partners in Community Health Assessment process • Clinical staff partnering more with school nurses (e.g., immunization clinics)	• Didn't really change; well established collaborations already existed • Agency already placed high value on being a community player	• Sought more community involvement and documented involvement better	• Agency has always been very involved in community • Accreditation impacted level and type of staff involved in community • Affirmed that community work is right thing to do

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
Do you think the health department has a more visible leadership role in the community as a result of preparing for and attaining accreditation?	• None noted • Leadership follows function; not related to accreditation • Other leaders in community (BOC, county attorney) need to better understand accreditation, its costs, and its benefits to the public	• Validated what others think about the department • Did not lead to more visible role • Feather in cap, though being 1 out of 40 accredited is not as impressive as being 1 of 6	• Already visible • Ask community to come to BOH and present their thoughts and ideas	• Public needs to understand accreditation; seal is on all health promotion materials • Increased visibility with community partners interviewed during the process • Helped agency include partners in identifying problems • Health directors need to help the community understand importance of accreditation
To what extent do you think the accreditation program has helped your health director and management team members become better leaders?	• Management team communicates better • Better communication with staff • More faith-based outreach • Improved delegation skills	• Accreditation gave health director better understanding of staff roles • Health director communicated great expectations to staff • All management team members better understand QI	• Provided guidelines • Engaged BOH; benchmarks required BOH to do business differently (e.g. review rule-making; receive orientation) • Forced better documentation • BOH more aware of Health Department activities; work with specific area of department	• Made managers more accountable • Improved ability to delegate • Health director kept staff focused and on track during process • Brought management team closer together; united team

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How does accreditation drive local public health performance?	• Raised the standard for performance and the expectation of what staff is expected to provide • Created continuous QI environment • Process identified areas needing improvement • Policies and procedures might have helped agency perform better	• Sharing with other agencies • Have standards and expectations • Roadmap for public health to create a system that recognizes excellence	• Provides operational guidance and direction • Helps agency stay focused • Ensures same standard of public health service regardless of county • Takes time for public to understand meaning of accreditation; need to know	• Accreditation is continual process • Need to maintain standards; documentation requirements need to go beyond “minimally met” • Need to stratify met/not met; maybe give grades or percentiles (top 10%) • Need to recognize outstanding health departments and offer ways for them to grow

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How can requirements for reaccreditation be designed to have greater impact on public health agency performance?	• Tie reaccreditation to money • Reallocate funds from underperforming to high performing health departments • Provide tangible incentives (greater eligibility for certain benefits, i.e. grants) • Educate politicians, BOC about the significance of being accredited • Need to balance making standards more difficult with focusing too much on accreditation and not on public health service • Consider a tiered system where expectations for level 3 are different than those for level 1 • Tie accreditation to profile of county, i.e., is local health department meeting needs of the community?	• Tie accreditation to best practices and performance indicators • Examine activities between accreditation cycles • Make reaccreditation more rigorous(may be difficult with limiting legislative language)	• Educate local elected officials to help avoid cuts to program • Current tool is excellent • Increase funding for infrastructure; need unrestricted funds to help with needs as identified by agency • Accreditation adds extra pressure to an already taxed staff • Medicaid could pay a penny more for service if agency is accredited • Tiered system could put pressure on county with limited fiscal resources that is unable to meet higher levels of accreditation • Reaccreditation adds value by requiring resources remain committed to meeting standards • Evaluation by independent group affirms that agency is meeting standards while offering ways to improve	• Would like to see public health accreditation meet guidelines for other programs, such as home health

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
How do you think local public health agency accreditation could be used as a tool to improve community health outcomes?	• Evaluate community health assessment process and follow-up, e.g., was the assessment on target with data available for your county? • Need to consider disincentives, i.e., fear that inability to improve community health might lead to districting, forced partnerships, or loss of accreditation status • Accreditation resembles the state preparedness program: gradual increases in requirements and more mandates with no funds and no personnel • Require more health promotion and education so that people know what services are available • Intensify requirements for working with community partners	• Tie accreditation to measurements of community needs, e.g., how well is agency addressing needs identified in needs assessment? • Offer higher tier of accreditation for those presenting evidence that they are addressing community health needs	• Need to look at how public health is addressing needs from community health assessment; important to evaluate what actions are taken, not just outcomes; hard to measure prevention	• Could use community health assessment and see how health department is addressing identified problems and whether there is improvement between accreditation cycles (e.g. accidental poisonings)

Survey Item	Responses, by Agency			
	Agency A	**Agency B**	**Agency C**	**Agency D**
Is there anything else you would like to share regarding the local health department accreditation program?	• More training for health departments on benchmarks and activities • More training on strategic planning • Better standardization of site visits and documentation requirements	• Nice to receive recognition • Important to have fun when involving staff; e.g., use games, contests, trivia, etc.	• Hope program is continued • Would have liked to see all counties accredited once before going through reaccreditation • BOH bylaws were developed as a result of accreditation • Staff on the look-out for accreditation evidence for re-accreditation	• Regional nurse consultants assigned to health departments is huge benefit; concerns though about competitiveness • Need to evaluate how much is too much help for nurse consultant to provide • Accreditation needs to be owned by health department; currently nurse consultants filling in for lack of health department leadership, lack of staffing, lack of resources

APPENDIX 7

Themes in Management Team/Agency Accreditation Coordinators' Interviews

REASON TO PURSUE ACCREDITATION

- wanted to be first/best in class (2)
- presented opportunity to move ahead and make progress (2)
- participated on site visit team and encouraged agency to participate (1)
- desired standardization of policies and procedures (1)
- thought it would be good learning experience (1)
- interested in opportunities presented by accreditation (1)
- wanted to help shape accreditation program (1)
- health director encouraged (1)

MAIN IMPACTS, SUCCESSES, INNOVATIONS

- provides Good Housekeeping Seal of Approval (2)
- consistency and standardization across health departments (2)
- sense of pride (2)
- more credibility in community (2)
- camaraderie across health departments (1)
- better relationships with DPH consultants (1)
- policy development (1)
- employees learned each other's roles (1)
- better clarity from DPH regarding expectations status (1)
- improved training from DPH (1)
- promoted teamwork (1)
- tool for self assessment (1)
- learned how other health departments do business (1)
- defined local public health (1)
- validated public health authority model (1)
- more efficient and effective (1)
- peer review process innovative (1)

MOST VALUABLE

- standardization of processes (2)
- identified areas needing improvement (2)
- increased public's understanding of what health department does (2)
- help staff see big picture of public health (1)
- greater accountability (1)
- increased partnering and outreach to community (1)
- helps to continually raise bar and have higher standards (1)
- teamwork (1)
- improved health department performance (1)
- helped us appreciate Healthy Carolinians (1)
- helps staff value what co-workers do (1)
- helps new managers get up and running quickly (1)
- better fiscal reporting to BOH (1)
- annual review of policies and guidelines (1)
- BOH letter informed of their responsibilities (1)

MOST VALUABLE (continued)

- BOH bylaws developed (1)
- better documentation (1)
- opportunity for learning (1)

BENEFITS TO AGENCY

- orientation for staff (3)
- funds to address facility issues (2)
- created/revised policies & procedures and made them available to staff (2)
- better communication with staff (1)
- helpful for grants that require state certification (1)
- helped improve personnel record-keeping (1)
- BOH more cohesive (1)
- one-time state funding (1)
- better employee safety (policies, procedures, dedicated personnel) (1)
- cross agency learning (1)
- justify programs for BOC (1)
- better internal auditing (1)
- required supervisors to review job descriptions and conduct employee evaluations (1)
- established process for assuring staff training (1)

CHANGES TO ORGANIZATIONAL CULTURE

- better understanding of own and others' roles (3)
- moving towards agency-wide QI culture (2)
- greater appreciation for others in agency (1)
- better working management team (1)
- more sharing, better communication across health department (1)
- policies in all program areas (1)
- better documentation (1)
- improved cultural diversity training (1)
- helped new supervisors understand roles better (1)

PERFORMANCE IMPROVEMENTS

- checking to see where you are and making improvements (2)
- better risk management in Environmental Health (2)
- provide standard level of service based on benchmarks (1)
- raised expectations for performance (1)
- improved personnel policies and procedures (1)
- improved knowledge of and compliance with DPH agreement addenda requirements (1)
- policies developed and available to staff (1)
- business process analysis and re-engineering (1)
- more automation (1)
- created reward program for employees (1)
- expanded focus of customer satisfaction surveys (1)
- quality council more influential (1)

ACTIVITIES TO ASSURE POLICIES ARE FOLLOWED

- supervisors accountable for policy review and revisions (4)
- QI committee formed; meets regularly (2)

ACTIVITIES TO ASSURE POLICIES ARE FOLLOWED (continued)

- BOH reviews policies on annual basis (2)
- training on policies for staff (2)
- better review of agreement addenda requirements by management team (1)
- maintain policy log with review dates (1)
- encourage staff to access policies if they have questions about how to handle situations (1)

CHANGES IN COMMUNITY WORK

- always involved in community (3)
- changes in level and type of staff involved in community work (2)
- more outreach related to cultural diversity as strategic priority (1)
- none for environmental health, preparedness (1)
- more diversity of partners in community health assessment process (1)
- better documentation of community involvement (1)

CHANGES IN LEADERSHIP ROLE

- none noted (4)
- community asked to present thoughts and ideas to BOH (1)
- increased visibility with community partners who were interviewed (1)
- partners more involved in identifying health priorities (1)
- health directors need to play role in helping community understand accreditation (1)

HEALTH DIRECTOR, MANAGEMENT TEAM LEADERSHIP

- management team communicates better (2)
- improved delegation skills (2)
- health director communicated great expectations to staff (2)
- better communication to staff (1)
- health director appreciated staff roles better (1)
- management team better understands QI (1)
- BOH better informed and more engaged (1)
- increased communication with BOH (1)
- managers more accountable (1)

ACCREDITATION AS DRIVER FOR LPHA IMPROVEMENT

- raised expectations for performance (3)
- created CQI environment (1)
- identified areas needing improvement (1)
- policies and procedures help staff perform better
- sharing with other agencies disseminates best practices (1)
- creates a system that recognizes excellence (1)
- provides focus to stay on track (1)
- standardizes public health across counties (1)
- accreditation is a continual process (1)
- needs to recognize outstanding health departments and offer ways for them to grow (1)

WAYS TO IMPROVE ACCREDITATION

- tie accreditation to profile of county; i.e., is LHD identifying and meeting needs of community? (4)
- educate politicians about the significance of attaining LPHA accreditation (2)

WAYS TO IMPROVE ACCREDITATION (continued)

- consider tiered system where expectations for level 3 are different than those for level 1 (2)
- tie accreditation to financial incentives (2)
- tie accreditation to best practices and performance indicators (1)
- examine activities between accreditation cycles (1)
- make reaccreditation more rigorous (1)
- reallocate funds from underperforming to high performing health departments (1)
- LPHA accreditation should meet guidelines for other program accreditation such as home health (1)
- require more health promotion and education so people know what services are available (1)
- intensify requirements for working with community partners (1)
- increase funding for infrastructure (1)
- evaluation by independent group offers ways to improve and affirms LPHA is doing the right things; need to track whether improvements are implemented (1)
- continue to use self-assessment tool to keep LPHA on track (1)

OTHER SUGGESTIONS

- continue recognition activities (1)
- have fun when involving staff e.g. use games, contests, trivia, etc. (1)
- more training for health departments on benchmarks and activities (1)
- more training on strategic planning (1)
- better standardization of site visits and documentation requirements (1)
- continue program (1)
- accredit all counties once before accreditation (1)
- need to evaluate how much is too much help for nurse consultant to provide (1)

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