

INCORPORATION OF THE CLINICAL NURSE LEADER IN PUBLIC HEALTH PRACTICE

SALLIE SHIPMAN, MSN, RN, CNL,* MARIETTA STANTON, PhD, RN, CNL,†
JOHN HANKINS, EdD, MBA, MSN, RN,‡ AND REBECCA ODOM-BARTEL, MS§

A case study was conducted to examine the appropriateness of the clinical nurse leader (CNL) role and its use within the Alabama Department of Public Health. The role of the CNL to provide leadership within the public health environment is examined. Using the aspects of the CNL training toward improvement of patient outcomes and prevention of errors through coordination was the key outcome of the case study. The role of the CNL was used to provide evaluation while promoting progress and improvement of planning efforts with the performance improvement planning microsystem. The article will discuss and evaluate various functions of the CNL role as it is adapted to the public health environment. The CNL role, as described in the case study furthermore, may be implemented in a wide variety of similar situations through the nation's health settings. (Index words: CNL; Public health; Role functions) *J Prof Nurs* 29:4–10, 2013. Published by Elsevier Inc.

THE CLINICAL NURSE leader (CNL) is a role that was developed by the American Association of Colleges of Nursing ([American Association of Colleges of Nursing \[AACN\], 2006](#)) to provide leadership across all facets of the health care system. AACN determined that the role would vary across the various levels of health care. Initially, the majority of CNLs were positioned in hospitals. However, application of the CNL role in other areas of health care delivery has been explored ([Lammon, Stanton, & Blakney, 2010](#)). One of these areas delineated by Lammon et al. was in public health. However, there is limited additional information

about how the CNL does or could function in that environment. The CNL role is defined as a nurse that collaborates with other nurses and disciplines to use evidence-based practice for the improvement of patient outcomes ([Rusch & Bakewell-Sachs, 2007](#)). The skill set for the CNL allows them to identify problems, suggest solutions based on evidence, monitor outcomes, and relate mechanisms to determine the effectiveness of the intervention. The decision to use the CNL in a public health setting was based on a trend noted in the review of the literature related to the need for quality improvements and accountability within public health emergency preparedness ([Nelson, Lurie, Wasserman, & Zakowski, 2007](#)). Public health preparedness is essential to our nation and tremendous strides to achieve preparedness in the entire health care system have occurred. However, there are still gaps in performance along with problematic spending of preparedness funds. These gaps in spending have led to difficulties with the public health system's ability to deal with the medical response to disasters ([Salinsky & Gursky, 2006](#)). It was suggested that the CNL skill set, with its emphasis on performance improvement, could effectively address the

*Instructor, Capstone College of Nursing, University of Alabama, Tuscaloosa, AL.

†Assistant Dean Graduate Programs, Capstone College of Nursing, University of Alabama, Tuscaloosa, AL.

‡State Nursing Director, Alabama Department of Public Health, Tuscaloosa, AL.

§Coordinator of Student Recruitment, Nurse Educator Program, University of Alabama, Tuscaloosa, AL.

Address correspondence to Sallie Shipman: Capstone College of Nursing, University of Alabama, Box 870358, Tuscaloosa, AL 35487. 8755-7223/12/\$ - see front matter

serious problems with disaster management that the public health sector faces today (Dunham-Taylor & Pinczuk, 2006). To pilot this approach, we asked a CNL student from the public health setting to assume a leadership role in disaster planning. Specific outcomes for disaster planning were delineated, and the CNL student, under the supervision of her clinical and faculty advisor, assumed leadership of the disaster planning project for a centralized planning committee. An analysis or case study of that placement is described using the position description and role functions specified by AACN. This article describes the experience associated with the deployment of the CNL in the public health environment within the emergency response system, specifically that portion of disaster management associated with hazard vulnerability and emergency preparedness.

Overview of the CNL Role in Public Health

Leadership is a key element for the CNL in any health care environment and, especially, in the public health setting. The CNL is expected to provide leadership in many diverse health care scenarios including emergencies. Other fundamental aspects of the CNL role include all of the following:

- Design and provision of health promotion and risk reduction services for diverse populations;
- provision of evidence-based practice;
- population-appropriate health care for individuals, clinical groups/units, and communities;
- clinical decision making;
- design and implementation of plans of care;
- risk anticipation;
- participation in identification and collection of care outcomes;
- accountability for evaluation and improvement of point-of-care outcomes;
- mass customization of care;
- client and community advocacy;
- education and information management;
- delegation and oversight of care delivery and outcomes;
- team management and collaboration with other health professional team members;
- development and leveraging of human, environmental, and material resources;
- management and use of client care and information technology; and
- lateral integration of care for a specified group of patients. (AACN, 2007; Begun, Hamilton, Tornabeni, & White, 2006)

This article will illustrate, through a specific case study, how the various functions inherent in the CNL role can be adapted in the public health environment. It will also demonstrate how the specific skill set of the CNL is especially suited not only for implementation in the public health sector but also specifically in the area of hazard vulnerability and emergency preparedness. The

CNL role description in this case study may also be applicable in a wide variety of similar situations throughout the nation, not only in public health settings but also in all organizations that have responsibility for hazard vulnerability and emergency preparedness.

Methods

A case study was conducted examining the appropriateness of the CNL role and its use within the Alabama Department of Public Health (ADPH), specifically within the emergency response system. This pilot produced evaluative data that looked intensely at the CNL role throughout emergency preparedness, related staff development and training, performance improvement, and outcomes management. This case study demonstrated how the CNL role can not only be used in the public health sector but also in emergency preparedness. The case study employed the use of the CNL role functions outlined by AACN (2006) as a framework for reviewing the job responsibilities of the CNL in public health and, specifically, in emergency preparedness. Actual products/outcomes produced by and activities completed by the CNL were reviewed by immersion experience faculty and a public-health-based clinical facilitator involved with the CNL, then reviewed by comparing what was done to role functions outlined by AACN. This evaluation process entailed faculty, the public health facilitator and the CNL student comparing the role functions of the CNL to those delineated in previous AACN documents.

The ADPH is the lead agency for coordinating the medical response in emergencies for the state of Alabama (Clanton & Alabama: State of Alabama Emergency Management Agency, 2006). Because a pandemic influenza (PI) event would be a public health medical emergency situation, it is predictable that the agency would also lead the state's PI planning efforts. Since 2005, the agency has been working to prepare for any public health emergency. During the original development of the CNL program at the University of Alabama, ADPH attended partnership meetings for collaborating agencies and found this role attractive for coordinating its emergency response planning. This article examined the outcome of that original pilot effort.

Case Study

Part of the responsibility of the ADPH is the oversight of the state's PI emergency response system. Gaps and recommendations to the response system were identified in an organizational assessment, which led to the development of a strategic plan for all hazards and emergency response strategic planning. A core interdisciplinary team was identified to initiate the planning and coordination of efforts in counties throughout the state. Intense training and planning at the county and local level were required if the response efforts for pandemics and other emergencies were to be effective when called to action. Health care providers that would be involved with responding to the emergencies at the county or local level have diverse levels of education, training, and experience.

The CNL, with its specific skill set as described by AACN (2006) and listed earlier, seemed especially well suited to coordinate emergency response and care delivery at the point of service and provide the education and training for the geographically distant providers who will participate in emergency operations. The integration of the CNL role into the hazard vulnerability and emergency response will be reviewed.

The CNL's academic preparation includes leadership in the care of the sick in and across all environments. This preparation also includes the provision of population-appropriate health care to individuals, clinical groups/units, and communities (AACN, 2006). Because public health and emergency care may provide service to and for widely divergent patient populations, the population health focus in the CNL role would seem appropriate for projecting the vulnerability of communities to certain hazards. For this reason, the CNL role was considered an appropriate preparation for the hazard vulnerability analysis nurse coordinator (HVANC) in the ADPH. The HVANC's overall job description requires the CNL to collaborate within the Center for Emergency Preparedness (CEP) to assume leadership in emergency preparedness, grant funding procurement, analyzing target capabilities, setting objectives and requirements as related to hazard vulnerability, and coordinating ongoing analysis of the ADPH emergency support capability. Other CNL role functions identified by AACN can be compared with the duties of the HVANC to validate the use of this particular role in the public health and emergency preparedness setting.

One benefit of the utilization of the CNL in this project was improved communications between the core team members. Communication problems were previously noted from the organizational and root cause analysis within the local areas and between the state and local area. In this project, the CNL served to help bridge this gap. The CNL was available upon request and served as a mediator during the project. A basic element of a successful microsystem is that the central players work together (Mohr & Batalden, 2002). As these preparedness projects continued, the CNL worked with each area individually, resolving planning difficulties, improving communication, and sharing best-practices information.

Another responsibility of the CNL working as the HVANC was the systems analyst and risk anticipator, which corresponds with the listed AACN (2006) role functions. In this capacity, the CNL, who functions as the HVANC, participated in systems review to critically evaluate and anticipate risks to client safety and monitor the quality of client care delivery that was necessary in a variety of emergency situations (AACN, 2006).

The HVANC CNL provided supervision and management of county and area planning efforts. As part of that effort, several other fundamental aspects of the CNL role were accentuated, including participation in the identification and collection of potential care outcomes in the event of an emergency or pandemic, accountability for evaluation and improvement of point-of-care perfor-

mance during such situations, mass customization of emergency care throughout the state, and delegation and oversight of care delivery and outcomes for affected populations (AACN, 2006). Specifically, this was best evaluated through a series of simulated pandemic response procedures conducted with area teams. These activities were followed by ongoing meetings throughout all public health areas to discuss concerns and issues with pandemic and all-hazards planning and to determine best practices. The CNL collaborated on overall procedures and specific emergency planning issues and coordination of selected response sections (e.g., bureau of clinical laboratories, division of epidemiology, infection control, division of radiation, and professional support services).

The CNL was heavily involved in information management and in the use of information technology (AACN, 2006). The CNL, functioning as an HVANC, was and is expected to submit required documents and ongoing data submissions for all emergency situations. To facilitate the tracking of data on outcomes, the CNL evaluated a 72-element template to improve county and area assessments by streamlining planning issues and assessing progress planning related to a pandemic and other all hazards. The CNL cooperated with members of the emergency response team regarding data submissions including qualitative and quantitative analysis from each community. The CNL collected and verified evidence from each area and provided details to emergency planning operations and area staff regarding best practices and deficiencies. The CNL played a critical role in the coordination of these efforts, monitoring of outcomes, and tracking data related to evaluating response systems.

The CNL spearheaded the rewriting of the previous performance improvement guidance, which led to the development of County and Area Emergency Support Function (ESF) 8 Assessments. The Federal Emergency Management Agency (FEMA) defines the purpose of the ESF 8 as follows: "Health and Medical Services provides coordinated Federal assistance to supplement state and local resources in response to public health and medical care needs following a major disaster or emergency, or during a developing potential medical situation" (FEMA, 2003). These ESF 8 assessments were developed by a team, led by the CNL, to aid area and county ADPH staff to perform hazard vulnerability analyses encompassing all PI planning efforts. The objective was to improve communications, provide education, and elicit input for improvement and progress in a cost-effective manner. The data were collected through the ADPH Learning Content Management System to derive a baseline assessment that will be compared with quarterly reassessments. This allowed the core team to identify and address gaps leading to the development of improvement measures. This course of action emphasized the evaluative role of the CNL and the critical role in performance improvement.

The CNL performance improvement role was utilized in other aspects of all-hazards and PI planning, including the development of the Health Care Sector (HCS) PI

Committee. The HCS Committee was developed to serve as one of the guiding forces addressing the tough questions being asked by health care providers and other health care-related issues that would be implemented during a PI event. The committee has served as a conduit for health care organizations seeking guidance with their specific hazard planning issues. The CNL focus on best practices and superior outcomes appears to have vastly improved PI procedures for all-hazards planning.

The CNL functions as a member of a profession actively pursuing new knowledge and skills in the CNL role, needs of clients, and the health care system (AACN, 2006). This was especially true of the CNL in the HVANC role. Investigating evidence and best practices is a major focus of the role. Taking evidence and enhancing the knowledge base through ongoing training are critical responsibilities of the CNL in the HVANC role. In the past few years, the southeast has experienced hurricanes, oil spills, and other disasters; therefore, staying abreast of the latest research and best practices is critical to those working in the public health arena. The CNL, functioning as the HVANC, was able to locate, translate, and apply best evidence effectively and efficiently on an ongoing basis.

The CNL functioned as an advocate for the citizens of the state focusing on enhancing quality service and care outcomes in an emergency response situation. During previous natural and man-made disasters, the CNL coordinated the efforts of volunteer nurses whose duties were to set up and operate a shelter. Food, shelter, and coordination of medical care by referral, as needed to appropriate agencies, were basic core needs. The CNL advocate anticipated needs of the evacuees and coordinated services and transitions to other levels of service or care as necessary, ensuring that all evacuees received the quality support they required. Advocating for these evacuees in their time of need produced excellent outcomes for the hurricane victims. As problems arose, the CNL communicated effectively to coordinate quality outcomes and advocated as necessary for the evacuees as they transitioned back to their own environment.

As an outcomes manager, the CNL in the public health setting synthesized data to evaluate and achieve optimal service. To illustrate the CNL's role in gathering evidence and initiating best practices, we developed the Criteria for Mechanical Ventilator Triage Following Proclamation of Mass-Casualty Respiratory Emergency. This involved providing statewide disaster-related triage protocols for ventilators based on best practices. Management and supervision of the protocol by the CNL included the following:

- Management and coordination of Review Board with review of the ventilator triage document
- Update of the document with changes from the Review Board
- Coordination with ADPH General Counsel regarding development and implementation of the document
- Coordination of evidence-based practice research in support of the policy

- Coordination of the review board meetings and discussions regarding the document
- Formation and management of the collaborative efforts for emergency planning between ADPH and healthcare organizations conferences, which were provided in each of the six hospital-planning regions along with one on-demand satellite broadcast, including a cumulative question-and-answer session. These conferences allowed state hospitals direct access and input into the final version of the protocol.
- Coordination with the implementation protocol in the Alabama Emergency Operations Plan (EOP).

The use of this protocol assured that the benchmarks and outcomes measured for this particular emergency situation would be consistent throughout the state. The CNL's participation in system reviews were to critically evaluate and anticipate risks to client safety and to determine best practices to improve quality of client care delivery (AACN, 2006). In an effective microsystem, ways to measure and evaluate "what they do" are developed specifically for the microsystem (Mohr & Batalden, 2002).

As a clinician, the CNL assimilated and applied research-based information to design, implement, and evaluate emergency response planning (AACN, 2006). The Alabama Healthcare Disaster Planning Guide is the result of many discussions between the CNL and health care organizations across the state. This guide was developed to assist health care organizations in Alabama coordinate and create EOPs specific for their organization. Development and management of the Alabama Healthcare Disaster Planning Guide included the following:

- Cross referencing of The Joint Commission, Assistant Secretary for Preparedness and Response Center for Disease Control (Centers for Disease Control, Prevention, U.S. Department of Health, & Human Services, 2007), and FEMA
- Issues, questions, and best practices from the various committees

The CNL for this public health activity functioned as a team manager identifying clinical and cost outcomes that improved safety, effectiveness, timeliness, efficiency, and quality (Barker, Sullivan, & Emery, 2006). This position, because of its generalist orientation, worked well as a team leader in emergency preparedness.

As an educator, the CNL used appropriate teaching/learning principles and strategies and current information, material and technologies to facilitate the learning of clients, groups, and other health care professionals (AACN, 2006). In the educator role, the CNL created a training plan and is in the process of implementing a program to provide a standardized training program to better prepare staff to respond to emergencies.

The CNL is well prepared as a staff developer and trainer. Staff education is imperative in all aspects of public health. The CNL is coordinating the standardization of emergency training preparedness content.

Table 1. Implementation of CNL Aspects in the Public Health Setting

Aspects of the CNL	How they were implemented
Design and provision of health promotion and risk reduction services for diverse populations	Development and evaluation of the County and Area ESF 8 All-Hazards Assessments
Provision of evidence-based practice	Development of the Criteria for Mechanical Ventilator Triage Following Proclamation of Mass-Casualty Respiratory Emergency
Population-appropriate health care to individuals, clinical group/units, and communities	Development and evaluation of the County and Area ESF 8 All-Hazards Assessments
Clinical decision making	Advocacy of disaster victims during evacuations and transitions
Design and implementation of plans of care outcomes	Spearheaded the rewriting of the PI guidance that developed into the ESF assessments
Accountability for evaluation and improvement of point-of-care outcomes	Coordinating ongoing analysis of the ADPH emergency support capability
Mass customization of care	Alabama Health Care Disaster Planning Guide
Client and community advocacy	Advocacy of disaster victims during evacuations and transitions
Education and information management	Creation of standardized training programs for clients, groups, and other health care professionals
Delegation and oversight of care delivery and outcomes	Supervision and management of county and area planning efforts
Team management and collaboration with other health professional team members	Collaboration with the CEP, public health areas, and health care organizations
Development and leveraging of human, environmental, and material resources	Advocacy of disaster victims during evacuation and transitions
Management and use of client care and information technology	Submit and manage documentation and ongoing data submissions for all emergency situations. The creation of the County and Area ESF 8 All-Hazards Assessments
Lateral integration of care for a specified group of patients	Development and evaluation of the County and Area ESF 8 All-Hazards Assessments

Educational tools and standards for all areas were developed through the CNL (e.g., presentations, assessment tools, and planning guides), resulting in consistent training for ADPH staff regarding responsibilities for the ADPH emergency preparedness response. The role functions or aspects of the CNL role, as outlined by AACN, appears in Table 1, along with the specifics of how these role functions were implemented in the public health setting.

Lessons Learned

The CNL can function as a leader in the public health setting. The leadership skill set proved invaluable in this structure for emergency preparedness but would be equally effective with other public health institutions and projects. The ability of the CNL to leverage human, environmental, and material resources is an important aspect of providing leadership for special projects. The CNL's focus on response evaluation and point-of-care outcomes, with the necessary data management, promotes best practices and ongoing performance improvement, which is actually an element in the success of any public health project.

The focus of the CNL on evidence-based practices proved invaluable in developing protocol and best practices. In the public health setting, consistency throughout different parts of the state is requisite. The ability of the CNL to incorporate best practices is

invaluable in the public health sector. The ability to mass customize care and support the internal integration of care is especially valuable in this setting.

The CNL's training in informatics and data management proved to be one of the most valuable skills for the CNL in terms of coordinating outcomes, developing communication networks, and managing database. This CNL skill is paramount in public health. Data, in turn, were used to develop best practice procedures and to monitor key outcomes.

The advocacy role of the CNL interfaces beautifully with the public health role. Public health nurses are focused on Healthy People 2010 and now 2020, so advocating for their state residents and their best health practices interfaces seamlessly with the CNL's emphasis on advocacy.

As an educator, the CNL skill set includes preparation of staff development and training programs and educational materials. The focus on health promotion and reduction of risk is an integral component not only of the CNL role but also of the public health nursing.

Team management and delegation was well illustrated using the case study discussed in this article. These skills can be thoroughly used and integrated in the public health setting.

In addition to the evaluation of the role functions for the CNL by the faculty and clinical facilitator/advisor, general informal evaluative data were discussed by the

public health facilitator with the faculty advisor. That discussion is summarized here.

1. What benefits did or do you see in the CNL/HVANC position?

What we have seen is that the CNL is prepared to be a leader. The CNL emphasis on leadership was helpful during disasters for planning and implementation. The CNL skills and abilities to assess a situation along with plan development are useful during a disaster response. The CNL role works well with the community and the department by building bridges and alliances between the departmental divisions and partner agencies. The CNL coordinates activities, delegates, and is a leader in the emergency preparedness process.

2. What barriers did you see in the implementation of the CNL/HVANC position?

There is a lack of understanding of the role by administration and nurses both in public health and in the overall nursing community. There are huge gaps in what it means to be a CNL in the nursing community and the administration in health care. U.S. Department of Veterans Affairs does see the benefits of the CNL role, but outside of the federal government system, there is a lack of understanding of the CNL.

3. Were you satisfied with the CNL evaluation of the PI program and progression toward all-hazards planning? Please list reasons why or why not?

The CNL has been good for the department; PI assessment completed by the interdisciplinary team along with the CNL prepared us for development of an all-hazards principle. The process of introspection allowed the department to look at our response and assess gaps while looking toward what we can do better next time. Most hazards have a basic core, and the evaluation process enables the department to identify the differences by the individual county because every county is unique. The CNL is able to identify the differences in the community to assist with the planning and identify the unique needs of the community within our state.

4. What skills in the CNL were most utilized in the role as an HVANC in public health?

Systems analyst/risk anticipator through assessment skills; team manager through leadership skills; and advocate through interdisciplinary health care team collaboration.

5. Do you think that the CNL role could be utilized in other programs within public health? Please list reasons why or why not.

The CNL could be utilized and adapted in other roles in public health. For example, programs such as emergency medical services; epidemiology; disease control; family health services; wellness; diabetes; cancer prevention; tobacco-related, breast and cervical cancer; and health promotion could utilize the CNL for evaluation. The CNL is able to step back and examine

the situation more objectively and help people develop a plan objectively. The clinical facilitator/advisor sees the CNL within public health as a state level patient leadership position. The leadership and management within the CNL role would be very effective in public health across multiple programs to assist with evaluation and education. The CNL could be effective within all the phases of public health, including treatment, prevention, follow up, and evaluation.

This additional evaluative data assisted in examining how the CNL role might be incorporated into other aspects of the public health environment. This has provided much insight into the adaptability of the CNL in the public health arena. Based on the analyses of CNL functions in the case study and the review of the actual CNL functions delineated by AACN, it is obvious that the CNL skill set can be well utilized in the public health sector and in the emergency response planning, implementation, and evaluation of any organization.

Conclusions

The diversity of public health offers infinite possibilities for the CNL role. The CNL role in public health emergency preparedness continues to provide a unique opportunity to promote and encourage improvements in an organization using a microsystem approach. Using the CNL role to guide this process has encouraged input from all staff and has become essential to evaluation and improvement measures within this public health setting. Assessing the organization by the way of microsystems helped to make the overwhelming task manageable. The success of this project provided support for further utilization of the CNL within public health to manage other public health programs. The CNL in this role brings a new focus on quality, best practices, interdisciplinary collaboration, and outcomes measurement to the traditional public health care setting.

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