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THE STATE AND FUTURE OF COMMUNITY AND PUBLIC HEALTH NURSING: AN INTEGRATIVE LITERATURE REVIEW

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ABSTRACT

The purpose of this paper was to conduct an integrative review to explore the changing role of community and public health nursing (C/PHN) in the United States today. The specific aim of the paper was to determine the current state of C/PHN supports and barriers, specifically in education, credentialing, and health policy. The search for literature was conducted using the terms *community health nurse, public health nurse, role, perceptions, change, intervention, baccalaureate education, graduate education, curriculum, certification, Affordable Care Act,* and *health policy* in PubMed, Web of Science, and CINAHL databases for studies conducted between January 2004 and October 2014. Inclusion criteria included that they must have been published in English and relevant to community and public health nursing (C/PHN) baccalaureate and graduate education, health policy, certification, intervention outcomes, or their changing role. A total of 26 articles were included in the review. It was found that more is known about C/PHN education (n=14) and intervention outcomes (n=6) than is known about health policy (n=3), credentialing (n=1), and the changing role of C/PHNs (n=2). Several themes emerged from the research related to education, health policy, certification, and intervention outcomes. It was found that the field of community and public health nursing is undergoing changes, with both supports and barriers for the role. Supports for the field include an increase in funding for public health and coverage of preventive services due to the implementation of the Patient Protection and Affordable Care Act, an arena in which C/PHNs may play an important role due to the significant impact they have been found to have on the health of communities and populations. However, recent judicial trends have limited the enforcement power of public health departments and traditional baccalaureate nursing programs may not provide an adequate

foundation for practice in the community. At the same time, the number of C/PHNs is dwindling and all but one C/PHN credential have been discontinued as of January, 2014. Community and public nursing now has an opportunity to expand its impact on the nation's health, but the field faces many barriers to expansion.

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Chapter 1

Introduction

History and Effect of Community and Public Health Nursing (C/PHN)

Community and public health nurses (C/PHNs) have a clear and proven impact on the health of populations. Nurses have historically been active partners in providing care in the community for at-risk populations (Kulbok, Thatcher, Park, & Meszaros, 2012). Over 150 years ago, a new understanding of disease transmission brought about public health interventions, district nursing, and the visiting nurses association. By the beginning of the 20th century, the role of the community and public health nurse had reached into education, politics, and advocacy for the underserved (Kulbok et al., 2012). Community and public health nursing's goal of healthier communities and populations has not changed since its inception over a century ago, but the role and prevalence of C/PHN in the United States is changing. There are currently an estimated 97,210 C/PHNs in the United States, which makes up just 3.7% of the entire nursing force (Boulton & Beck, 2013; U.S. Department of Health and Human Services, 2010), a number that decreased 3.4% from 2000 to 2004 (Quad Council of Public Health Nursing Organizations, 2007). If school and occupational health nurses are included, the percentage of nurses working in C/PHN increases to 7.8% (U.S. Department of Health and Human Services, 2010). Yet, nearly 40% of state and local health departments are unable to fill their nursing vacancies (Boulton & Beck, 2013).

Community and public health nursing has a unique role in prevention and early intervention. Community and public health nursing "integrate[s] community involvement and knowledge about the entire population with personal, clinical understandings of the health and illness experiences of individuals and families within the population… through targeted interventions, programs, and advocacy" (American Public Health Association, 2014). Specifically, their specialized skills can impact chronic disease in patient populations through early interventions that help patients manage their disease and avoid long-term effects and associated heavy healthcare utilization. Patients with chronic conditions are the most frequent users of healthcare in the U.S. and account for 81% of hospital admissions; 91% of all prescriptions filed; and 76% of all physician visits (Hoffman & Rice, 2004). Seven out of ten deaths in the United States are due to chronic disease, amounting to 1.7 million deaths each year (Centers for Disease Control, 2007). Because of the important role C/PHNs can play in mitigating the long-term effects of chronic disease, it is important to determine the viability of the C/PHN role in the United States today.

C/PHNs work not only at the individual level, but at the broader community and population levels. In fact, for each ten percent increase in spending on local public health initiatives, mortality falls between 1.1 and 6.9 percent (Mays & Smith, 2011). The C/PHN to population ratio is significantly related to improvements in state health ranking ($p=.020$), the rate of infectious disease ($p=.039$), the percent of children below the poverty line ($p=.019$), and the percent of uninsured patients ($p=.011$) (Bigbee, 2008). Therefore, C/PHNs have the potential to impact the health outcomes of vulnerable patient populations.

The Future of Community and Public Health Nurses and the Affordable Care Act

Recent changes brought on by the Patient Protection and Affordable Care Act (ACA), signed into law in 2010, have led to a greater emphasis on prevention, in which community and public health nurses could play an important part based on their unique skill-set and expertise focused on caring for communities and populations. However, the current viability of the community and public health nursing (C/PHN) role appears to be at risk due to policy and educational shifts. The need for C/PHN can be expected to increase due to implementation of the ACA. The ACA will expand insurance coverage to 94% of the population, rapidly increasing the number of patients with healthcare access. This initiative will invest 11 billion dollars in health centers from 2011-2016 and an additional 1.5 billion in the National Health Service Corps, with the patients served by the health centers expected to double. New regulations will also require insurance to cover preventive services without cost sharing and require nonprofit hospitals to participate in community health planning. The ACA also establishes a Prevention and Public Health Trust Fund with 12.5 billion dollars at its disposal to improve public health. Specific investments will be made in American Indian health centers, tobacco cessation for pregnant women in Medicaid, oral health prevention, and school-based health centers. The ACA also authorized, but has not yet appropriated, funds for training professionals in primary care. These initiatives are ideal for the specialized skills of the C/PH nurse given their skill in planning and implementing community-based initiatives.

ACA legislation is expected to increase the number of individuals with healthcare access and the expansion of the nation's primary care system will include an emphasis on prevention. This shift to a greater emphasis on prevention of disease provides an ideal environment for C/PHNs to apply their program-planning skills. However, statistics show that the number of

applicants for public health and community positions has declined. In addition, the C/PHN national credential was recently retired and the status of the role seems unclear. Despite the positive impact made by C/PHNs and the current changing healthcare environment, a rigorous and thoughtful review of the current discourse surrounding the state and future of C/PHN has not been conducted to date. Therefore, the purpose of this review is to determine the current state of C/PHN supports and barriers, specifically in education, credentialing, and health policy.

Chapter 2

Methods

Eligibility Criteria

To be included, articles must have been published in English and focused on the United States, in order to ensure relevancy to the purpose of the paper. The search was also limited to articles published between January 2004 and October 2014, to ensure that all the information was recent enough to be applicable to our current healthcare system. Quantitative and qualitative research were included. As seen in Figure 1, the articles must also have been focused specifically on community and public health nursing rather than other sub-specialties or general public health initiatives that were not carried out or planned by nurses in order to ensure relevance specifically to the topic of C/PHN. Additional inclusion criteria required the articles to relate to one of the areas of potential salience for this review: baccalaureate and graduate C/PHN education, C/PHN credentialing, health policy related to C/PHN, the changing role of C/PHNs, the outcomes of C/PHN initiatives, or the opportunities and barriers in the field. Articles also needed to focus on the current state or very recent history of C/PHN and not on historical views of the field because the focus of the review was to examine the current state of C/PHN.

Information Sources and Search Selection

The online databases CINAHL and PubMed were searched employing the aforementioned criteria. The search terms included "community health nurse[ing]" and/or "public health nurse[ing]" with combinations of "role", "perceptions", "change", "intervention", "baccalaureate education", "graduate education", "curriculum", "certification", "credential", "Affordable Care Act", and "health policy". Searches were conducted from January to October of 2014. Relevant articles published before 2004 were searched in Web of Science to find relevant articles that had cited them within the accepted time reference.

Data Collection Process

After the articles were identified, they were then organized into a matrix table using the method described by Garrard (2011). The matrix method provides a structured, organized way to review and compile the available literature. From each article, a structured abstract is drawn into a review matrix, or table designed to provide the important information from the literature in a way that allows comparison among articles via the data items that were extracted.

Data Items

Data items that were extracted onto the matrix included author, article title, journal, year of publication, purpose, research design, findings, and the strengths and limitations of the article. Desired findings were articles related to the domains of C/PHN impact, education, credentialing, or health policy. The domain of the impact of C/PHNs included quantitative and qualitative

evaluation of outcomes of various C/PHN-led interventions and programs. The domain of C/PHN education included baccalaureate and graduate C/PHN-specific education articles, from which were extracted items that discussed the classroom and clinical aspects of community health courses in baccalaureate or graduate programs. Data items related to the development of community health curriculum and the evaluation of community health clinical experiences were extracted, both from the student and school's perspective. The domain of C/PHN credentialing included articles discussing credentialing for C/PHN and the various C/PHN credentials offered by the American Nurses Credentialing Center. This included articles that discussed the changes undergoing C/PHN credentialing as well as the evaluation of who gets credentialed and why. The domain of C/PHN health policy included articles related to federal and state policies that directly affect or govern the practice of C/PHN. Articles which discussed the changing role of C/PHN over time, how it is currently changing, or is projected to change, were additionally extracted.

Synthesis of Results

Once the articles were incorporated into the matrix, they were analyzed using a qualitative descriptive design (Sandelowski, 2000). The changing state of C/PHN was examined in terms of education, credentialing, policy, and impact. During the data analysis, these four domains were organized into the sub-domains of supports and barriers to the field of C/PHN. The topics within the sub-domains were then arranged in terms of micro to macro influences on the field that are currently undergoing changes. Each of the domains and sub-domains was found to influence each other. The articles were analyzed to determine why the changes are occurring

and how the areas exert influence on each other. The articles in each individual sub-domain were analyzed first individually and then as a whole to determine their units of meaning. These units of meaning were then aggregated to create a schematic of the trends in that area. The sub-domains were then analyzed on a macro level to determine overall trends in the system as a whole. These trends are described and analyzed within this review.

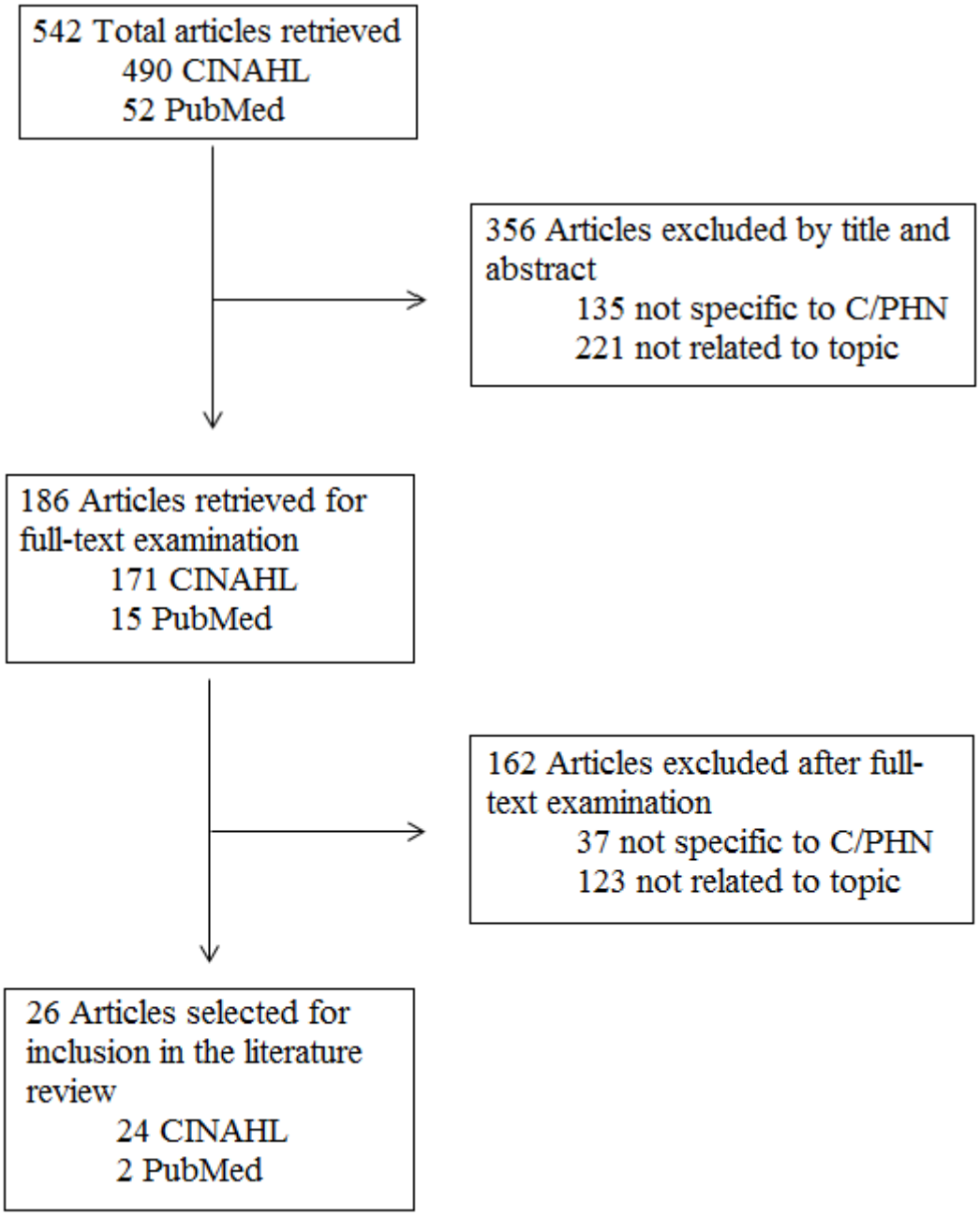

Figure 1. Selection of Articles for Inclusion in the Review

Chapter 3
Findings

Demographics of the Accepted Studies

Five hundred and forty two potentially relevant articles were found in the search. A total of 186 full-text articles were examined and 26 met the necessary criteria, of which three were not research (see Figure 1). Of the articles included, five were descriptive correlational studies (Bekemeier, 2009; Bigbee, 2008; Campbell, Fowles, & Weber, 2004; Hsuan & Rodriguez, 2013; Monsen, Radosevich, Kerr, & Fulkerson, 2011) and fourteen were strictly descriptive in design (Alexander, 2005; Carter, Kelly, Montgomery, & Cheshire, 2013; Diem & Moyer, 2010; Frank, Adams, Edelstein, Speakman, & Shelton, 2005; Hodge et al., 2013; Levin, Swider, Breakwell, Cowell, & Reising, 2013; Luthy, Beckstrand, & Callister, 2013; Moon, Henry, & Kirsch, 2005; Northrup-Snyder, Van Son, & McDaniel, 2011; Shannon, 2014; Simpson, 2012; Swider et al., 2006; Wade & Hayes, 2010; Yang, Woomer, & Matthews, 2012).

Methods of the Included Studies

Seven studies utilized surveys (Alexander, 2005; Bekemeier, 2009; Campbell et al., 2004; Diem & Moyer, 2010; Frank et al., 2005; Hsuan & Rodriguez, 2013; Yang et al, 2012), two used focus groups (Luthy et al., 2013; Northrup-Snyder et al., 2011), and Shannon (2014) utilized a combination of surveys and in-person interviews. Three studies (Bigbee, 2008; Hsuan & Rodriguez, 2013; Monsen et al., 2011) used large data sets of local and state-level health department data. Five solely descriptive papers described implementation of a program or incorporation of competencies into an existing program (Carter et al., 2013; Levin et al., 2013;

Moon et al., 2005; Simpson, 2012; Swider et al., 2006) and one described evaluation of a current program (Wade & Hayes, 2010). Joo and Huber (2014) and Keleher et al. (2009) were systematic reviews addressing the effectiveness of C/PHN interventions, and Mays and Smith (2011) was a quantitative ecological study. The study by Butterfield, Hill, Postma, Butterfield, and Odom-Maryon (2011) was a preventive clinical trial. The three non-research articles consisted of a position paper by Levin et al. (2008) and two information articles (Parmet & Jacobson, 2014; Rosenbaum, 2011) regarding current health policies and their effect on community and public health initiatives.

Thematic Analysis

When a thematic analysis of the studies was conducted, this integrative review yielded trends in the current state of supports and barriers to the role of C/PHN in the healthcare system in regards to health policy, education, and credentialing.

Impact of C/PHNs

Community and public health nurses have been found to make a significant impact on the health of communities and populations (Joo & Huber, 2014; Keleher et al., 2009; Monsen et al., 2011; Butterfield et al., 2011). Several systematic reviews of the literature, including Joo and Huber (2014) and Keleher et al. (2009), have found significant effects of C/PHN interventions on the public's health. One review by Joo and Huber (2014) examined 18 empirical studies on the effectiveness of community-based care-management programs led by C/PHNs. Eight of the nine of the studies which looked at rates of hospital admission and readmission following C/PHN care management found that C/PHNs significantly decreased hospitalization rates. Both of the studies

which looked at cost-effectiveness found that C/PHN intervention significantly lowered costs. Of the six studies examining patient outcomes, five found increased self-reported satisfaction and quality of life in intervention participants while the other study did not find a significant difference. Other studies found that C/PHN management resulted in improved chronic disease control, reduced suicide attempts, and fewer legal problems. Another systematic review by Keleher et al. (2009) examined 31 studies comparing C/PHN intervention to that of primary care physicians and found that C/PHNs were most effective in care management and achieving patient compliance. In this study, C/PHNs were effective in a wider range of roles, including chronic disease management, illness prevention, and health promotion.

C/PHNs are also reportedly adept at tailoring interventions according to patient risk factors (Monsen et al., 2011; Butterfield et al., 2011). Monsen et al. (2011) examined C/PHN documentation for 486 families and found that C/PHNs paid more visits to higher risk families and varied their interventions according to the patient's problem and level of risk. Tailoring of interventions also was reported in a study by Butterfield et al. (2011), which examined the effectiveness of teaching by public health nurses. Two-hundred and thirty-five families were randomly divided into a control group and an intervention group who received four home visits from a public health nurse who provided teaching about household environmental hazards tailored to each household according to the individual results of environmental testing. Three months post-intervention, the intervention group had significantly higher self-rated efficacy scores, with the largest increases seen in knowledge of radon and lead. Seventy percent of the intervention group, versus 38% of the control group, had modified their household to reduce at least three of the six environmental risks addressed and a significantly higher proportion of the intervention group completed five of the six household precautions. The only precaution on

which there was no significant difference was the adoption of secondhand smoke precautions. Overall, the C/PHN teaching reportedly had a significant impact on knowledge and adoption of household environmental risk reduction. Therefore, their positive impact on the health of communities has been well documented and their ability to tailor interventions according to education level and existence of risk factors in populations is considered one of the main reasons for their effectiveness (Monsen et al., 2011; Butterfield et al., 2011)

Education Preparation for C/PHNs

Baccalaureate preparation for C/PHNs is considered the minimum due to the complexity of the position. However, sixteen percent of current C/PHNs only have an Associate's degree, in which C/PHN is not a designated or required part of the curriculum (DeVance-Wilson, 2012). At the baccalaureate level, the American Association of Colleges of Nursing suggests in its "Essentials of Baccalaureate Preparation Guidelines" that graduates should be proficient in "community organizing models" and "population-focused care" with an emphasis on "health promotion and disease prevention" (AACN, 2010). Throughout the guidelines, the AACN repeats that graduates should be prepared to assess, plan, and deliver the care of individuals, families and communities (AACN, 2010). However, while most graduates state they feel prepared to care for individuals and families, many relate they believe they are unprepared to address the needs of the community (Rosen, 2001; Leh, 2006). It is not clear what causes this discrepancy in perceived preparation by graduates.

Current baccalaureate preparation involves classroom and clinical preparation. Many programs choose clinical sites based on convenience or ease of finding preceptors, so the

majority of community health clinical experiences are in schools, public health departments, prisons and local homes (Frank et al., 2005). Preceptors provide the only supervision anywhere from 27-40% of the time (Frank et al., 2005) but adequately qualified preceptors are difficult to find and students often end up with preceptors who are not nurses themselves. Despite the fact that 18% of current C/PHNs work as faculty (DeVance-Wilson, 2012), adequate faculty with a background in C/PHN are difficult to find, and thus faculty overseeing the clinical often do not have experience in the area themselves. Students state they often find it difficult to transition from a concrete acute care focus to abstract critical thinking about the various determinants of health, made all the more difficult if their preceptor or faculty do not have C/PHN experience (Wade & Hayes, 2010). Difficulty finding adequate clinical placements and preceptors is suspected to contribute to students having little understanding of what it is that C/PHNs actually do and little desire to enter the field when they graduate (Leh, 2006; Northrup-Snyder et al., 2011).

Some baccalaureate programs have made an effort to create innovative community health clinical experiences. Carter et al. (2013) describe a program in which nursing students at the Capstone College of Nursing partnered with the University of Alabama's Office of Health Promotion and Wellness to provide individual and population-focused health promotion to their employees, resulting in better health knowledge for the employees and a 23% improvement in the nursing students' NCLEX-RN scores over a two-year period. The students learned from C/PHNs how to analyze and categorize risk factors and to tailor intervention strategies according to this analysis, helping them to improve their understanding of health promotion, a topic which makes up 6-12% of the NCLEX-RN exam. Another university chose to teach these skills through a collaborative, evidence-based public health project built into the C/PHN curriculum (Yang et

al., 2012). Surveyed students who participated in the project indicated that it was challenging but helpful to their understanding and learning of C/PHN concepts.

Luthy et al. (2013) found that ideal community health clinical experiences were based primarily in one location and completed later in the program, an idea that was demonstrated in the clinical experience of one nursing school's students described by Simpson (2012). In this educational model, the nursing program places students in one location over three years. These locations are all focused on serving vulnerable populations such as homeless shelters, low-income children's programs, low-income senior housing programs, wellness centers, transitional housing, and residences for the mentally ill. Students choose their clinical placement after one semester rotating through the various choices and then are placed under the mentorship of an older student already in that location. As part of the clinical, students must demonstrate creativity in addressing the health needs of the population. In homeless shelters, students stocked basic first-aid supplies and over-the-counter medications to reduce unnecessary emergency department visits while students at a local company ran a weight loss contest and students at the senior housing ran exercise classes and taught residents how to properly use the exercise equipment. In order to complete the clinical, students had to be flexible in the hours they worked according to the schedule of their chosen agency. The nursing school makes it a priority to arrange lectures and other clinicals so that students are able to complete all their community health clinical hours. Through this community health clinical experience, students are reportedly able to develop their critical thinking skills and focus on population-level health promotion for a long enough time to see the effects of their interventions. Many students continued to volunteer at the agencies during summers and after graduation.

Another nursing program, this time based out of the University of South Carolina, partnered with the South Carolina Department of Health and Environmental Control to provide a population-focused community health clinical precepted by public health professionals (Alexander, 2005). Over sixty PHNs were trained as preceptors prior to the start of the program, because lack of training had been a prior obstacle to recruiting preceptors. Students were involved in epidemiology and disease surveillance, home care, child health and family planning, tuberculosis and infectious disease control, environmental health, and case management of babies, pregnant teenagers, and HIV patients. Post-graduation, former participants in the program were surveyed and 33% responded. Of those who responded, 3.95% were already in or actively seeking a position in C/PHN and an additional 18.4% were considering working in C/PHN. Compared to the national average of 3.7% working in C/PHN, these numbers show an improvement in interest in the field. Overall, students stated that the information they gained from the clinical experience would be helpful no matter in which setting they chose to work. Another program created by Public Health Nurses for Virginia's Future which matched students with public health nurses as preceptors and provided education for the preceptors increased the number of students interested in going into C/PHN from 1.5 to 40% (Moon et al., 2005). Few innovative programs were found in the literature and it is not clear if the majority of current traditional baccalaureate nursing programs provide an adequate foundation for practice in the community or even the base needed for graduates to enter graduate-level C/PHN programs.

Community and public health nursing courses have an opportunity to expand students' view of C/PHN by including the research and health promotion aspects of public health. Shannon (2012) found that few nursing schools participated in community-based health promotion and even fewer participated in research. Stated barriers to participation included cost,

time, student interest, and curriculum design. Community members who were interviewed expressed interest in health promotion activities coordinated by schools of nursing and 60% of community members viewed the primary outcome of community health promotion as improved understanding of the community for students. An improved understanding of the community and its accompanying cultural competence is helpful for any specialty the student may enter.

There is currently no accepted standard way to assess the effectiveness of community and public health clinical experiences. Diem and Moyer (2010) developed a tool to assess nursing students' clinical skill confidence and satisfaction following their C/PHN clinical. In their beta test of the survey tool, they found that 68% of students were satisfied with their clinical experience and that satisfaction was associated with having support and feeling independent, valued, and integrated into the clinical team. Over three-quarters of the students rated their clinical skill confidence at a four or five on a Likert scale of five. However, confidence does not necessarily translate into the ability to perform the skills. This tool has the potential to be used as the basis of standard evaluation for baccalaureate C/PHN clinical experiences. A standardized evaluation tool allows for objective comparison of the various aspects of different programs and the development of improved clinical experiences through student feedback.

Ideally many contend that education beyond the baccalaureate level is needed, and there are currently MSN and DNP programs available throughout the United States leading to advanced practiced roles in C/PHN. Indeed, of current C/PHNs, 30% have their master's and 16% have a doctorate degree (DeVance-Wilson, 2012). Levin, Cary, Kulbok, Leffers, Molle, and Polivka (2008) found that current graduate programs preparing students for the APHN certification should focus more on areas such as policy, epidemiology, communication,

biostatistics, population theories, environmental health, genomics, and leadership in order to adequately prepare students to confront the future healthcare needs of the population.

The Quad Council outlines the specific competencies educational programs should address in their C/PHN coursework. Levin et al. (2013) cross-mapped the competencies required for certification in home health, occupational health, environmental health, and school nursing with the Quad Council graduate-level educational competencies and found that they matched closely. Twelve gaps between the competencies were noted, however, including a lack of teaching about referrals in home health, individualized care plans for school health nurses, and environmental hazards for occupational health. Swider et al. (2006) outlines the difficulties Rush University faced trying to form a graduate curriculum that matched the Quad Council competencies. Specific barriers they encountered included the difficulty in distinguishing knowledge from proficiency, and how to effectively evaluate students' proficiency.

Credentialing of C/PHNs

Recognition of the expertise of nurses is enhanced by certification and certification serves to control the quality of the provider. However, recent credentialing changes could make the future of C/PHN even more uncertain. As of the beginning of 2014, the American Nurses Credentialing Center (ANCC) retired the certifications for the Public/Community Health Clinical Nurse Specialist (PHCNS-BC), the Community Health Nurse (RN-BC), and the Advanced Public Health Nurse (APHN) due to inadequate applications for the certification. The ANCC needs at least 300 applicants each year to make offering the certification exams cost-effective, but only 76 C/PHNs took the APHN exam in 2011 (Little, Vanderhouten, & DeVance-Wilson,

2013). However, the ANCC plans to offer new APHNs a certification through portfolio submission, which will include an application, resume, professional development record, demonstration of meeting the criteria, and written evaluations (American Nurses Credentialing Center, 2014). Only 34% of current nurses working in C/PHN are certified. When surveyed, 32% of C/PHNs stated that certification did not help them attain a job and 55% said it made no difference whether or not they were certified. In fact, the certification was not required by 90% of C/PHN employers, and 40% of employers said it was not valuable to obtain (DeVance-Wilson, 2012).

Bekemeier (2009) surveyed 655 C/PHNs who were members of the Quad Council organizations and found that having obtained the C/PHN credential was correlated to working in academia or research ($r=0.151; P<.001$) or a college ($r=0.152; P<.001$), and having a graduate degree ($r=0.131; P<.001$). When asked about the perceived value of the credential using the Perceived Value of Certification Tool (PVCT), respondents mostly (90.1%) agreed with the statements about the intrinsic value but were less certain (70.0%) about the extrinsic value. Perceived barriers to credentialing mainly consisted of a lack of external incentives, particularly financial incentives. An additional barrier was that 21.7% of respondents were not previously aware of the C/PHN credential, with not having heard of the credential correlating to not having a graduate degree, working in a clinical setting, and being a racial minority. Perceived value and barriers related to credentialing did not differ significantly between those were credentialed and those who were not. The only significant differences between the two groups were the aforementioned demographic variables. Potential limitations of this study include the survey only of Quad Council organization members and that the majority of respondents were white (83.8%) and middle aged or older (89%). In addition, the survey did not distinguish between the basic and

advanced C/PHN credential nor did it distinguish between those with a lapsed or current credential.

The C/PHN baccalaureate-level certifications have now been discontinued and only the Advanced Practice Public Health Nurse (APHN-BC) certification still remains (American Nurses Credentialing Center, 2014). Baccalaureate preparation is necessary not only to successfully accomplish the C/PHN role but also to be able to advance to obtain the graduate-level degrees in C/PHN to obtain certification as an APHN. Nurses are eligible to sit for the Advanced Practice Public Health Nurse (APHN-BC) certification if they have completed a master's or doctorate degree in public health, such as a Master's in Public Health (MPH), or if they have completed a graduate degree in nursing with a specialization in public health. Additional requirements for the APHN-BC include a minimum of 2,000 hours of experience in advanced practice public health nursing and thirty hours of continuing education in the past three years (American Nurses Credentialing Center, 2014). These requirements for the APHN-BC first require a solid baccalaureate foundation in C/PHN.

Health Policy Changes Effecting C/PHN

The implementation of the Patient Protection and Affordable Care Act (PPACA) will greatly affect the area of public health due to its focus on strengthening the healthcare system's delivery of primary and preventive care. Once the PPACA is fully implemented, over 94% of the population will be covered by insurance and there will be a resultant increase in demand for services. Exclusion from mandatory coverage is extended to individuals who cite religious objection or financial hardship. Demand for services will also likely be increased due to banning

of coverage limitations and the requirement to cover recommended immunizations and preventive services rated as an "A" or B" by the U.S. Preventive Services Task Force. One of the major aims of the PPACA is to strengthen the primary care and public health systems through $11 billion in investments into health centers (Rosenbaum, 2011).

To further strengthen the primary care system, health plans are also now required to have sufficient networks of providers, including agreements with community providers. Coordination of care with community providers will also be encouraged through Medicaid's backing of Patient-Centered Medical Homes. On the acute care end, hospitals will be required to assess community health needs periodically and then demonstrate how their investments are helping to meet them. Community health investments will be directed at medically underserved populations, such as health centers in schools, tobacco cessation for pregnant women in Medicaid, and oral health screenings (Rosenbaum, 2011). Medicare will begin to cover colorectal cancer screenings and annual personalized prevention plans and will incentivize recipients to modify behaviors (Kaiser Family Foundation, 2013).

The Prevention and Public Health Fund was set up through the PPACA as a mandatory fund to promote the nation's health through investing in public health and prevention programs. The fund was originally to be given $18.75 billion over twelve years. However, after cuts by Congress the fund stands at $12.5 billion over the coming decade. The funds are being used in community and clinic-based prevention programs, public health infrastructure, and health data collection. As a result of these investments, Virginia has saved $1.2 million in information technology and increased Medicaid Family Planning enrollment by 32% while Iowa has expanded blood pressure and tobacco checks in dental offices to reach over 300,000 people (American Public Health Association, 2013b).

The PPACA incentivizes employers to institute wellness programs and activities for their employees (Rosenbaum, 2011). Currently, around 77% of large manufacturing companies and 29% of small companies offer some wellness services to their employees. The Prevention and Public Health Fund has $200 million specially earmarked for small businesses to create employee wellness programs. With rising rates of chronic disease, employers can save an average estimated $3.27 for each dollar spent on wellness services for employees (Anderko, Roffenbender, Goetzel, Millard, Wildenhaus, DeSantis, & Novelli, 2012). Employers will be able to pass along some of those savings by offering coverage discounts to employees who participate in these programs (Kaiser Family Foundation, 2013). C/PHNs have the specialized skills necessary to make these programs a success.

Another issue that impacts C/PHN is that the ability of public health departments to enforce public health policies has been limited by recent judicial trends. One emerging principle involves limiting health departments' regulatory authority while another involves the Supreme Court's interpretation of federal power that limits the power of national and state initiatives. The third recent judicial trend is in the increasing demand for evidence-based regulation, the research for which requires time and money (Parmet & Jacobson, 2014). All three of these recent trends have begun to limit the power of health departments to enact and enforce regulations, which in turn limits what C/PHNs can accomplish and dis-incentivizes nurses from working in C/PHN.

The practice of public health law has recently been challenged by these policies. The Network for Public Health Law maintains a registry of requests for technical help and over the past three years, requests have focused on information about the Patient Protection and Affordable Care Act and the legality of public health interventions such as tobacco and food safety control and vaccination as well as related topics of public health accreditation and health

information privacy (Hodge et al., 2013). The second most requested topic is the Patient Protection and Affordable Care Act, which has raised numerous questions from nonprofits, healthcare organizations, and practitioners alike concerning the insurance exchanges, the expansion of Medicaid, medical homes, community assessment, and workplace wellness programs, among other topics. Government agencies themselves accounted for 37% of policy clarification requests. The need for the creation of the Network for Public Health Law in 2010 as well as the inundation of information requests they have received since their inception is not surprising considering the recent health policy changes as well as constant judicial rulings which affect how the policies are implemented and enforced. These changes make it difficult to predict how C/PHN will be affected in coming years.

Supports and Barriers in C/PHN

The field of C/PHN currently has various supports and potential barriers to its success. The PPACA will provide a major support to the expansion of C/PHN through the expansion of primary care and preventive services. Another support lies in the field itself, which has been shown to consistently have high job satisfaction scores, especially in environments that emphasize collaborative work in which C/PHNs work together with colleagues and management to make decisions and determine tasks (Campbell et al., 2004).

One of the challenges facing the field of C/PHN is the shortage of nurses entering the field. Reasons for the shortage include lack of promotion opportunities and monetary incentives (Boulton & Beck, 2013). The shortage of C/PHNs is only expected to grow as the workforce ages and fewer new graduates enter the field (Boulton & Beck, 2013).

Health departments are a major employer of C/PHNs, employing 65% of them (DeVance-Wilson, 2012), but the role of local health departments is a topic of contention. Some health departments view their primary role as focusing on core public health functions and population-based services and believe that offering clinical services diverts resources from this role. Other health departments view offering clinical services as an opportunity for generating revenue and believe that services should be offered if their patient population has no other local options where they can obtain those services. Due to this debate, only 22.2% of local health departments have expanded the clinical services they offer in the last decade. Those that have expanded are mainly ones in areas with larger increases in the non-White population and in Medicaid patients. Overall, the majority of local health departments have steadily begun to discontinue clinical services (Hsuan & Rodriguez, 2013) although 65% of current C/PHNs work in health departments (DeVance-Wilson, 2012). This may affect the job opportunities for C/PHNs in health departments.

Another major challenge in addressing the shortage is a lack of understanding of what it is that C/PHNs do (Leh, 2006; Northrup-Snyder et al., 2011). To increase awareness of the role of C/PHNs, one group decided to start a media campaign. University art students were recruited to create posters for mass distribution. Four posters were chosen, with themes emphasizing their work outside the hospital in a variety of locations, their focus on population-focused prevention, and their role in politics. At the bottom of each poster, the text explains that C/PHNs monitor disease and environmental problems, use education to promote the community's health, and are prepared for disasters. These posters were distributed throughout Canada and the United States and have been adopted by the American Public Health Association and the Association of Community Health Educators (Baldwin, Lyons, & Issel, 2011). Campaigns such as this one aim

to promote awareness of the role of C/PHNs and encourage more people to enter the field.

Chapter 4

Discussion

The purpose of this review was to determine the current state of C/PHN supports and barriers, specifically in education, credentialing, and health policy. While reviews of the impact on C/PHN of education, credentialing, and health policy have been done, the field as a whole had not been previously examined. Some important conclusions can be drawn from this review. First, C/PHNs have a clear impact on the health of populations (Joo & Huber, 2014), are adept at tailoring interventions according to risk factors (Monsen et al., 2011; Butterfield et al., 2011), and are effective in a wide range of roles related to disease management and health promotion (Keleher et al., 2009). Second, despite their proven effectiveness, C/PHNs are undergoing a number of changes related to education practices and licensure. Current baccalaureate preparation faces challenges with inadequate clinical sites (Frank et al., 2005) and faculty without a background in C/PHN (Frank et al., 2005; Wade & Hayes, 2010), which often results in students who feel unprepared or uninterested to enter the field of C/PHN (Rosen, 2001; Leh, 2006; Northrup-Snyder et al., 2011). Some baccalaureate programs have tried to mitigate this by creating innovative C/PHN clinical experiences with varying levels of success, but these programs are still relatively rare (Carter et al., 2013; Luthy et al., 2013; Simpson, 2012; Alexander, 2005; Moon et al., 2005). In addition to changes in educational preparation, C/PHN is facing uncertainty on the future of credentialing, with all but the APHN-BC now discontinued (American Nurses Credentialing Center, 2014), while also facing an increase in both patients and

funds due to the ACA (Rosenbaum, 2011; Kaiser Family Foundation, 2013; American Public Health Association, 2013b) and legislation that limits their authority (Parmet & Jacobson, 2014). All of these factors influence the current trajectory of the field. However, changing just a few of these factors has the potential to influence the future of C/PHN.

Current Supports for C/PHN

Impact

C/PHNs have demonstrated a clear ability to impact the health of populations (Joo & Huber, 2014; Monsen et al., 2011; Butterfield et al., 2011) and are adept at health promotion and disease prevention (Keleher et al., 2009), niches that are increasingly important considering the prevalence of chronic disease in the United States. C/PHN skills can impact chronic disease prevalence and morbidity through health education and early interventions that help patients manage their disease and avoid long-term effects and associated heavy healthcare utilization. This would help to minimize healthcare expenditures in a cost-effective manner (Joo & Huber, 2014).

Education and Credentialing

To better prepare students for a career in C/PHN, some schools have taken the initiative to improve their baccalaureate C/PHN programs. Some schools have made smaller changes such as training C/PHNs to be preceptors for students (Alexander, 2005; Moon et al., 2005) or placing students in the university's employee wellness program (Carter et al., 2013) while others have made major changes such as placing students in one location over three years (Simpson, 2012). All these programs saw a rise in the number of students interested in pursuing C/PHN after

graduation. The success of these programs demonstrates that changes in how the C/PHN curriculum is taught have the potential to increase the number of students entering C/PHN.

Health Policy

Students who become interested in the field will have the opportunity to enter a changing field as the ACA begins to incentivize and fund a fundamental shift in the healthcare system toward primary and preventive care. While the value of the Prevention and Public Health Fund has decreased since it was first proposed, it still stands at $12.5 billion – a total which has the potential for a major impact on the system. With a large increase in the number of insured patients and the number of preventive services that are covered, health departments and C/PHNs have an opportunity to expand their services and their impact on the health of the population. However, the current debate concerning the role of health departments in providing clinical services will have to be settled in order for them to take full advantage of this opportunity. Health centers and employee wellness programs will also receive funds to expand, providing further opportunities for C/PHNs. The changes instituted by the ACA have the potential to significantly increase the demand and opportunities for C/PHNs.

Current Barriers to C/PHN

Education

It is clear that inadequate numbers of graduates are interested in C/PHN. Lack of financial incentives as well as a misunderstanding of the field itself likely contributes to the number of health departments who are unable to fill their vacancies (Boulton & Beck, 2013). Misunderstanding of the field can be changed through innovative clinical experiences which help

students to view C/PHN as a fairly autonomous, complex role available to them within nursing (Leh, 2006; Northrup-Snyder et al., 2011). However, many schools have not chosen to adjust their current C/PHN clinical courses. This may be due to a variety of factors, including a lack of needed faculty, preceptors, or local organizations willing to work with them or a belief that it would cost too much money to accomplish or that current programs are adequate.

Whatever the reason, even the best current programs are turning out inadequate numbers of students to fill current vacancies. This problem will only worsen as the changes made by the ACA increase funding for public health and increase the number of patients with access to services. Clearly, many nursing programs have not yet found adequate incentive to change their programs, and yet a few have successfully made effective changes without undue difficulty. Even if changes are made to other areas affecting C/PHN, it will not ultimately make a difference unless students first become interested in and desire to become a C/PHN. Without adequate nurses entering the field, it may eventually cease to exist. The key will be helping schools and colleges of nursing to realize that small changes to their programs could have large potential benefits not only for the students but also for the schools themselves. Potential benefits could include improved NCLEX scores (Carter et al., 2013) which reflect well on the school and may increase enrollment and funding opportunities. Innovation and creativity on the part of professors and schools can spark passion and participation in students, and result in a beneficial experience for all involved.

Credentialing

This review also revealed interesting demographic trends behind who chooses to get their C/PHN credential. Although its intrinsic value was considered higher than its extrinsic value, the overall perceived value of the credential did not change between those who chose to get it and

those who did not. Having a graduate degree, being a non-minority, and working in academia rather than a clinical setting all contributed to the likelihood of knowing about the credential and therefore correlated to being credentialed (Bekemeier, 2009).

The fact that 21.7% of C/PHNs, who were active enough in their fields to join one of the Quad Council organizations, were not aware of the existence of the credential indicates the likelihood that an even larger number would be unaware of it from a sample of all C/PHNs in the United States (Bekemeier, 2009). It is possible that simply promoting the existence of the credential, especially among staff nurses in the clinical setting, would have raised the number of applicants and perhaps prevented it from being discontinued. Now that the C/PHN credentials, except for the APHN-BC, have been discontinued, it may take a lot of support for them to be revived. Improved awareness of the credential as well as improved extrinsic value such as financial incentives and promotion opportunities may be needed if the credential is to be revived.

Health Policy

Recent judicial trends have limited the power of public health departments to enact and enforce policies (Parmet & Jacobson, 2014), which limits their potential to impact the public's health and dis-incentivizes nurses from working for health departments, where the majority of C/PHNs are currently employed. There is also an ongoing debate concerning the role health departments should play, especially concerning whether they should offer clinical services or focus more on traditional public health roles (Hsuan & Rodriguez, 2013). This role conflict, combined with the judicial trends limiting their authority, has contributed to the inability of health departments to fill their C/PHN vacancies.

Opportunities for C/PHN Moving Forward

Education

Current traditional baccalaureate C/PHN preparation is inadequate to funnel prepared and interested students into the field. The key to changing current education will be showing schools of nursing the importance of C/PHN as well as what changes can be made to improve course efficacy in a cost-effective manner. Some schools have already successfully changed their programs and a more comprehensive and detailed overview of the changes these schools have made and what has worked best would be helpful for schools looking to make changes. First though, C/PHN will have to be promoted as a priority among leaders in nursing education and the issue will likely need to be framed as an opportunity for growth and recognition rather than a criticism of current programs in order to receive support.

In order for schools of nursing to be able to change their programs, C/PHNs and their workplaces will also need to make changes. Workplaces will need to recognize that in order to maintain an influx of nurses into the field to replace C/PHNs as they retire and to fill the spots created by new funding, they will have to act as a clinical site to accommodate nursing students. Health departments, home health agencies, student health services, community health centers, senior citizen centers, homeless shelters, and worksite wellness programs, among others, can all be used as clinical sites for students. These places can incentivize C/PHNs to act as preceptors and schools of nursing can offer training for those interested in order to encourage confident participation from nurses. With an increase in nurses as preceptors, prepared with training, teaching in areas in which C/PHNs actually work, students will be able to better understand the field of C/PHN and perhaps gain an interest in pursuing it. Even if the students do not enter the field, improved knowledge of health promotion and disease prevention will help them not only

with their NCLEX scores but also in any area of nursing they choose. After all, any interaction with a patient is an opportunity to provide important health knowledge.

Credentialing

In order to motivate employers to incentivize credentialing, research will be needed to show how nurse credentialing affects patient outcomes or at least that it increases the use of evidence-based practice. Unfortunately, there is currently insufficient data available to researchers to make that possible (Institute of Medicine, 2015). Although the advent of electronic health records allow for the possibility of anonymized, searchable data, researchers do not currently have access to standardized, interoperable datasets. In addition, it is nearly impossible to connect patient outcomes to the actions of one credentialed nurse and designing an experiment to demonstrate causality between the two is likewise difficult (Institute of Medicine, 2015). Therefore, moving forward, careful methodologies will need to be designed and researchers will need access to adequate data in order to demonstrate the effect of nurse credentialing on patient, nurse, and organizational outcomes.

For current C/PHNs, an awareness of the availability of the C/PHN credential may be achieved, for example, through an ad campaign or through its prioritization by public health organizations. If the organizations of the Quad Council made the re-establishment of the credentials a priority and encouraged the circulation of a petition, enough C/PHNs may become aware of – and properly motivated to obtain – the credential. Proper motivation may also be provided through the provision of financial and promotion incentives by employers to increase the credentials' extrinsic value. With enough support for the credential, the American Nurses Credentialing Center may re-instate the credentials, again providing a standard by which to indicate expertise and control quality.

Health Policy

With the implementation of the ACA, health promotion, disease prevention, and primary care will become more of a focus within the health care system. A greater percentage of the population covered under insurance will not only increase patient populations served but also hopefully incentivize newly covered patients to utilize available primary care resources to promote health and minimize health care costs later on. Primary care is predicted to grow in infrastructure and ability to reach the population through the growth of health centers and employee wellness programs. A health care system with a greater focus on primary care will require a greater focus on health promotion and disease prevention within nursing education and will provide opportunities for the growth of C/PHN, which may help attract nurses to the field. The variety of services provided by C/PHNs may also expand, allowing C/PHNs greater autonomy and scope of practice. If, however, necessary changes within education and policy are not made to encourage the growth of C/PHN, other public health professionals will fill the gaps made by these changes and C/PHN will lose an important opportunity for growth.

Health policy is an important influence in the field of C/PHN. The ACA has the potential to greatly impact and expand the field while recent judicial trends have directly impacted the ability of public health departments to enact and enforce regulation. Policy can be used to extend the reach of C/PHN, for example through expanding the teaching of C/PHN concepts in nursing education, increasing incentives for credentialing, and increasing the coverage of preventive services. Policy can also be used to channel funds towards health promotion campaigns or to encourage nurses to enter C/PHN. The United States spends the most on health care of any country in the world, and yet its health indicators are among the worst for developed countries. Chronic diseases, many of which are preventable, account for 81% of hospital admissions

(Hoffman & Rice, 2004). Policy must continue to increase the system's reliance on and utilization of primary care in order to make the system more cost-efficient.

Limitations

Several limitations should be kept in mind when viewing the findings of this paper. As with any review, the literature search terms used and the databases accessed all contributed to the body of literature available for analysis. Use of different terms and databases may have resulted in different papers being identified. In addition, this review covers a wide variety of areas and it was not feasible to provide a fully comprehensive overview of all the research in every area. Only one author reviewed the studies and no quality assessment tool was used to assess the studies, which could have affected the results. Unfortunately, many of the changes discussed are quite recent: the credentials were discontinued as of January, 2014 and changes due to the ACA are still being implemented and thus little research has been done yet and what is available is somewhat speculative in nature. As a result, the findings of this review may be potentially biased. Finally, there were some inconsistencies in efficacy findings concerning the impact of C/PHNs, which were discussed in that section. Despite these limitations, this study has several strengths, such as its use of a systematic and transparent process for review of the literature. It is also one of the few to look at the field of community and public health nursing from multiple angles to determine the interplay of factors and their overall effect on the field.

Chapter 5

Conclusion

This review summarizes the current state of C/PHN supports and barriers, specifically in education, credentialing, and health policy. The field is facing an opportunity for growth due to the implementation of the ACA. However, deficits in C/PHN preparation and credentialing put the future of C/PHN at risk. At the same time, recent judicial trends have converged to limit the power. While the field of C/PHN is facing a unique opportunity, it may not be able to expand in response because of the challenges it is facing. If C/PHN is to take advantage of the current expansion in primary and preventive care, changes will have to be made in education, credentialing, and policy

Appendix

Characteristics of articles included in the review of literature on community and public health nursing trends

Author	Title	Journal	Year	Purpose	Design	Findings	Strengths/Limitations
Alexander, J.W.	Addressing the public health nursing shortage: university-health department collaborative experience for BSN students	South Carolina Nurse	2005	To describe a clinical partnership between the University of South Carolina nursing school and the South Carolina Department of Health and Environmental Control to provide a public health professional-preceptored clinical experience in a variety of population-focused settings for nursing students	Descriptive: Cross-sectional	Students were placed in the health department and preceptored by public health workers, the majority of whom were nurses, and worked on child health, tuberculosis care, family planning, home care, disease surveillance, environmental health, epidemiology, and case management of babies, HIV patients, and pregnant teenagers. Post-graduation, 76 students were surveyed and 25 responded. Of those, 16 were considering a career in C/PHN - of which two were actively applying for a C/PHN job - and 1 was currently working as a school nurse.	Limitations: 33% survey response, thus liable to response bias

Bekemeier, B.	Nurses' utilization and perception of the community/ public health nursing credential	American Journal of Public Health	2009	To explore the underutilization of the C/PHN credential through determining the characteristics of community and public nurses, their perceived value of the certification, barriers to their obtaining the credential, and whether they are currently certified.	Descriptive correlational : cross-sectional	From a national sample of 655 C/PHNs, the perceived value of and barriers to the credential did not differ depending on whether the C/PHN was certified. Perceived barriers were the lack of extrinsic factors such as financial and advancement incentives. However, C/PHNs in academic settings were certified 12.1% more often than those in clinical settings. C/PHNs without a graduate degree were 13.8% less likely to be certified. The C/PHN credential was unknown to 21.7% of respondents, with those who had not heard of the credential being more likely not to have a graduate degree, to work in a clinical setting, and to be a racial minority.	Strengths: The survey examined both the intrinsic and extrinsic perceived value as well as potential barriers to certification Limitations: Only PHNs belonging to the Quad Council national organizations were surveyed; most respondents were white and at least middle aged; basic and advanced credential were not distinguished; having a lapsed versus current credential were not distinguished

Bigbee, J.L.	Relationships between nurse- and physician-to-population ratios and state health rankings	Public Health Nursing	2008	To determine the extent of correlation between states' public health rankings and their nurse-to-population ratio and physician-to--population ratio as well as the ratio of specific specialty nurses to the population.	Descriptive (secondary analysis correlational design)	The public health nurse-to-population ratio was significantly related to state health ranking ($\rho=-.334$, $p=.020$). However, significant correlation was found with only 3 of the 18 components: the percent of children in poverty ($\rho=-.339$, $p=.019$), infectious disease rate ($\rho=-.299$, $p=.039$),), and the percent of uninsured residents ($\rho=-.328$, $p=.023$).	Limitations: Used state-level data, when data may vary considerably within the state. Multiple determinants are involved in health - this data is correlational, not causative.

Butterfield, P.G., Hill, W., Postma, J., Butterfield, P.W., & Odom-Maryon, T.	Effectiveness of a Household Environmental Health Intervention Delivered by Rural Public Health Nurses	American Journal of Public Health	2011	To examine the effectiveness of public health nurse-led teaching of an intervention group about reducing household environmental risks to children	Preventive clinical trial	235 families were randomly assigned to the intervention or control group, with the intervention group receiving four visits from public health nurses with tailored teaching interventions depending on the environmental testing completed on each household. After three months, the intervention group scored significantly higher on knowledge of all six risks ($P<0.01$), on knowledge of general environmental health ($P<0.001$), having completed 5/6 precautions ($P<0.05$), and having completed general environmental precautions ($P<0.001$).	Strengths: Measures self-efficacy and precaution adoption of intervention versus control group Limitations: All the PHNs had at least a BSN; both communities were economically sound and reliant on tourism which limits generalization to other communities
Campbell, S.L., Fowles, E.R., & Weber, B.J.	Organizational structure and job satisfaction in public health nursing	Public Health Nursing	2004	To determine how organizational structure is correlated to satisfaction in public health nursing	Descriptive correlational	A significant correlation was found between job satisfaction for public health nurses and the existence of a collaborative work environment, in which PHNs have input into tasks and decisions with management, and in which PHNs work with their peers to make decisions and determine tasks.	Limitations: Surveyed 20 local Illinois health departments, 55% response rate

Carter, M.R., Kelly, R.K., Montgomery, M., & Cheshire, M.	An Innovative Approach to Health Promotion Experiences in Community Health Nursing: A University Collaborative Partnership	Journal of Nursing Education	2013	To describe a partnership between the Capstone College of nursing and the University of Alabama's Office of Health Promotion and Wellness wherein the nursing students provided health promotion for employees of the University	Descriptive	The partnership between the Capstone College of Nursing and the University of Alabama's Office of Health Promotion and Wellness is described, in which nursing students were able to provide health screening - through biometric and laboratory evaluation - and education and referrals to University employees. Over the two-year project, over 300 students participated and NCLEX scores improved by 23%.	Limitations: Mainly a project description, little discussion of the effectiveness of the program on employees' health or on student conceptions of C/PHN
Diem, E., & Moyer, A.	Development and Testing of Tools to Evaluate Public Health Nursing Clinical Education at the Baccalaureate Level	Public Health Nursing	2010	To develop and test two tools to evaluate community-based clinical courses in baccalaureate nursing programs based on students' satisfaction with the experience and confidence in the skills they gained	Descriptive: cross-sectional	A questionnaire was developed and tested on baccalaureate nursing students to assess satisfaction with community-based clinical experiences and confidence in having gained important skills in public health nursing. It was found that 68% of students were satisfied with their clinical experience 58% did not want to change the amount of interaction with resource contacts. Satisfaction was associated with having support, feeling integrated into the clinical team, feeling independent, and feeling valued. Over 75% of students rated all of the confidence questions at a 4 or 5 (out of 5).	Limitations: This is the testing data for the survey tool and it will need to be tested on students in different clinical coursework placements to assess validity of answers. Confidence does not necessarily translate into ability to perform skills.

Frank, B., Adams, M.H., Edelstein, J., Speakman, E., & Shelton, M.	Community-based nursing education of prelicensure students: settings and supervision.	Nursing Education Perspectives	2005	To determine how prelicensure nursing programs set up their community health clinicals, including location, level of supervision, and activities performed by students	Descriptive (online survey of 324 ADN and BSN program): cross-sectional	It was found that students were put in areas such as schools, public health departments, prisons, and homes in the community. Students gave immunizations, collected data, taught about health promotion, managed cases, performed treatments and procedures, and completed surveys on disease status. Professors were not present - leaving preceptors as the only form of supervision - anywhere from 27% to 40% of the time. Students acted independently anywhere from 4-29% of the time. The differences between BSN and ADN programs included placing BS students into schools more often and giving BS students more case management work.	Limitations: Only 39% response rate; web-based survey

Hodge Jr., J.G., Barraza, L., Bernstein, J., Chu, C., Collmer, V., Davis, C.,Griest, M.M., Hammer, M., Krueger, J., Lowrey, K.M., Orenstein, D.G.	Major Trends in Public Health Law and Practice: A Network National Report	Journal of Law, Medicine, & Ethics	2013	To review the data collected by the Network for Public Health Law since 2010 about requests for health law technical help	Descriptive	Major trends in the data include requests for help about issues concerning the Patient Protection and Affordable Care Act, legal preparedness for emergency situations, control of tobacco, policies of food and health information privacy, prevention of drug overdose, vaccination, sports injury, public health accreditation, and breastfeeding.	Limitations: Only question themes discussed, not specific questions or motivation behind asking
Hsuan, C., Rodriguez, H.P.	The Adoption and Discontinuation of Clinical Services by Local Health Departments	American Journal of Public Health	2013	To determine how the provision of clinical services by local health departments has changed over time	Descriptive: survey; secondary correlational analysis	Only 22.2% of local health departments had increased services over the past decade, an action correlated with the existence of local boards of health, no shortage of healthcare workers, an increase in the non-white. Local health departments that discontinued clinical services were correlated with lower per capita expenditure over time, increased community partner involvement, and decreased scope of activity. The majority of local health departments have been discontinuing services over the past decade. Those areas with greater resident need were less likely to discontinue clinical services.	

Joo, J.Y. & Huber, D.L.	An integrative review of nurse-led community-based management effectiveness	International Nursing Review	2014	To examine the effectiveness of community-based care management programs	Systematic Review	The majority of articles examined were based in the United States. It was found that across the board, community-based care management provided by C/PHNs significantly reduced hospital admissions, especially readmissions, in a cost-effective manner. It also improved patient outcomes and satisfaction.	<u>Limitations:</u> There was a variety of disease and demographic characteristics among patients involved in the community-based care management programs
Keleher, H., Parker, R., Abdulwadud, O., & Francis, K	Systematic review of the effectiveness of primary care nursing	International Journal of Nursing Practice	2009	To review current literature to determine the effectiveness of primary care nursing interventions	Systematic Review	Moderate evidence showed nurses can achieve positive health outcomes similar to those achieved by doctors. Nurses are most effective in care management, achieving patient compliance, and being effective in a range of roles such as chronic disease management, illness prevention and health promotion. There is still insufficient evidence about the specific effectiveness of nursing intervention on health outcomes.	<u>Limitations</u>: Articles reviewed covered several countries, including the U.S., Australia, and New Zealand

Levin, P.F., Cary, A.H., Kulbok, P., Leffers, J., Molle, M., & Polivka, P.J.	Graduate education for advanced practice public health nursing: at the crossroads	Public Health Nursing	2008	To determine areas in which graduate public health nursing education is lacking	Position Paper	It was found that the critical competence areas in which APHNs should have greater knowledge are: advanced nursing practice, population-centered nursing theory and practice, interdisciplinary practice, leadership, systems thinking, epidemiology, biostatistics, environmental health sciences, health policy and management, social and behavioral sciences, public health informatics, genomics, health communications, cultural competence, community-based participatory research, global health, policy and law, and public health ethics. More knowledge in these areas will allow APHNs to tackle future healthcare needs.	Limitations: position paper

Levin, P.F., Swider, S.M., Breakwell, S., Cowell, J.M., & Reising, V.	Embracing a Competency-Based Specialty Curriculum for Community-Based Nursing Roles	Public Health Nursing	2013	To determine the appropriateness of using the Quad Council competencies for public health nursing to prepare graduates for community-based roles in home health, occupational health, environmental health, and school nursing	Descriptive ("Cross-Mapping")	Community-based specialty competencies were closely aligned with the competencies designed by the Quad Council. A number of gaps were noted, such as referrals for continuity of care in home health nursing, individualized health plans for school nurses, and environmental hazards for occupational health nursing. Suggestions are given to incorporate specific competencies for these four community-based roles into the Quad Council PHN competencies.	
Luthy, K.E., Beckstrand, R.L., Callister, L.C.	Improving the community nursing experiences of nursing students	Journal of Nursing Education and Practice	2013	To determine which elements of community health clinical experiences make the best learning experience for baccalaureate nursing students	Descriptive: Focus group	It was found that the ideal community health clinical experience was completed in one community area rather than a series of locations, and that students got more from the experience when the clinical was later in the program. Incorporating a culturally diverse patient population was also found to be advantageous.	Limitations: Focus group of eight students

Mays, G.P., & Smith, S.A.	Evidence Links Increases In Public Health Spending To Declines In Preventable Deaths	Health Affairs	2011	To determine whether public health departments' changes in spending over thirteen years were associated with a decrease in preventable mortality such as cardiovascular disease, cancer, diabetes, and infant mortality.	Quantitative: ecological	Only 65% of public health departments increased their spending between 1993 and 2005, with the average spending reaching $40.84 per capita. The top twenty percent of spenders reduced their age-adjusted CVD mortality rate by 104 deaths per 100,000 people whereas the bottom twenty percent of spenders had an increase in age-adjusted mortality of 43 deaths per 100,000 people. Communities with a local board of health spent over than 17 percent more capita on public health and communities under a state agency spent 24% less. The strongest association between spending and mortality rates were found with cardiovascular disease (3.2-6.9% decrease per 10% increase in spending, $p<0.05$), diabetes (1.4% decrease per 10% increase in spending, $p<0.05$), and cancer (1.1% decrease per 10% increase in spending, $p<0.05$). A 10% increase in spending could potentially lower cardiovascular mortality by 3.2%, requiring an additional $312,274 annually for the average community.	Limitations: Association, not causation. Possible confounds include the behaviors of community members in areas with less money to devote to public health department spending

Monsen, K.A., Radosevich, D.M., Kerr, M.J., Fulkerson, J.A.	Public Health Nurses Tailor Interventions for Families at Risk	Public Health Nursing	2011	To analyze PHN documentation to describe client risk, choice of home visit interventions, and the association between risk and tailoring of interventions	Descriptive correlational (Reviewed data from 486 families who received at least 3 PHN visits from 2000-2005)	More visits were accomplished to high risk clients and interventions varied according to the client's problem and level of risk. This demonstrates that PHNs did in fact tailor interventions according to the specific needs of each client.	Limitations: Focused on documentation by one public health department in the Midwest. Results may differ by quality of documentation.
Moon, M.W., Henry, J.K., & Kirsch, P.	Field action report. Public health nurses for Virginia's future: a collaborative project to increase the number of nursing students choosing a career in public health nursing	American Journal of Public Health	2005	To describe the Public Health Nurses for Virginia's Future Initiative to increase the number of baccalaureate graduates that enter C/PHN	Descriptive	Few changes have been made in the determination of clinical placements for nursing students despite an increased need for prepared graduates to enter C/PHN. This provides a description of the successful and potentially replicable initiative undertaken by the Virginia Public Health department to increase the number of students choosing to enter C/PHN.	-

Northrup-Snyder, K., Van Son, C.R., & McDaniel, C.	Thinking Beyond "The Wheelchair to the Car": RN-to-BSN Student Understanding of Community and Public Health Nursing.	Journal of Nursing Education	2011	To evaluate post-licensure RN-to-BSN students' understanding of the public and community health nurses' role after participating in a community health clinical	Descriptive: Focus group	Students reflected surprise that community nurses were "real nurses" with often more autonomy and critical thinking than in acute care. Students perspective of the extent of opportunities in nursing was enlarged, and students noted a new understanding of nurses' importance to population health and the healthcare system. Students commented on their new understanding of the extent of their community's needs and the resultant desire to get involved. Students conveyed a new understanding of "beyond the wheelchair to the car" - of their patients' lives after leaving the hospital and the importance of discharge planning and connecting patients to outside resources. They also commented on the lack of communication between acute care nurses and community health nurses (Despite the existence of care managers).	

Parmet, W.E., & Jacobson, P.D.	The Courts and Public Health: Caught in a Pincer Movement	American Journal of Public Health	2014	To outline and explain three emerging judicial standards that together limit the authority of public health departments	Information article	Recent case rulings have demonstrated three recent trends: 1. Use of the First Amendment to limit public health departments' ability to regulate advertising and selling of potentially harmful products 2. The Supreme Court has begun to reinterpret federal power that has limited federal and state public health departments' power 3. The standard of evidence has increased to justify public health interventions to an "unachievable" level	Strengths: Gives many examples of recent court rulings Limitations: Implications of judicial rulings fairly speculative
Rosenbaum, S.	The Patient Protection and Affordable Care Act: Implications for Public Health Policy and Practice	Public Health Report	2011	To describe the provisions of the Patient Protection and Affordable Care Act with regard to its implications for public health policy and practice	Information article	One major aim of the ACA is to improve access to and availability of primary and preventive care through strengthening existing primary care facilities and investing in expanding clinical and community public health initiatives. The ACA will, from 2011 to 2015, invest $11 billion in health centers and $1.5 billion in the National Health Service Corps. Around 94% of the population will have insurance coverage, resulting in an increased demand on the U.S. healthcare system. Many questions are explored as to how these changes will affect the primary care sector.	Limitations: The ACA had not been implemented as of this article's publication and thus many of the implications discussed are speculative.

Shannon, C.	Community-Based Health and Schools of Nursing: Supporting Health Promotion and Research	Public Health Nursing	2014	To determine the role that community-based schools of nursing play in promoting public health and research in areas of lower socioeconomic status and how that role could be improved	Descriptive (Survey of 17 schools, 6 key informants, and 10 community leaders): cross-sectional	Nursing schools barely participated in community-based health promotion and had not recently participated in research due to cost, time, level of student interest, and current curriculum design. ADN representatives were more positive about the potential for increasing community-based health promotion activities for their school's clinical component. Community members (60%) were more likely than school of nursing representatives (33%) to view the primary advantage of community-based health promotion as improved understanding of the community.	Limitations: Extensive breakdown of web-based surveys was impossible due to anonymity and only 17 schools were surveyed, all around the Chicago area.

Simpson,V.L.	Making it Meaningful: Teaching Public Health Nursing through Academic-Community Partnerships in a Baccalaureate Curriculum	Nursing Education Perspectives	2012	To evaluate a baccalaureate nursing program's innovative approach to community/public health clinicals	Descriptive	Offered nursing students a three-year clinical experience in agencies serving vulnerable populations. Students mentored incoming students, providing continuity. Agencies included homeless shelters, transitional housing, low-income children's programs (Boys and Girls Club, HeadStart, etc.), residential programs for the chronically mentally ill, low-income senior housing programs, wellness programs, and Hispanic parishes. Students had to be creative to deal with the problems in the community. They stocked homeless shelters with basic first aid supplies and OTC medications to lower ED visits and taught the homeless how and when to access HC resources. They taught the elderly how to use exercise equipment, and offered screening and education in Spanish to Hispanic community members. They ran a weight loss contest at a local company.	Limitations: describes the experience of one nursing program

Swider,S., Levin,P., Ailey, S., Breakwell, S., Cowell, J., McNaughton, D., & O'Rourke, M.	Matching a graduate curriculum in public/community health nursing to practice competencies: the Rush University experience	Public Health Nursing	2006	To describe the process of re-developing and evaluating a graduate C/PHN program in accordance with the Quad Council Competencies	Descriptive	Step-by-step integration of the Quad Council competencies into the graduate curriculum is described as well as evaluation of the success of the integration. Potential barriers to successful integration included distinguishing Knowledge from Proficiency, and evaluating Proficiency.	<u>Limitations:</u> Describes the experience of one graduate program
Wade, G.H. & Hayes, E.	Challenges and Opportunities Associated with Preceptored Community Health Clinical Experiences	Public Health Nursing	2010	To describe the difficulties associated with preceptored community health clinical experiences and to explore opportunities to overcome these challenges	Descriptive observational	It was found that due to a lack of adequate preceptors, many nursing students were placed with non-nurses or with advanced practice nurses or were placed in settings which were not conducive to learning about population-focused care. Faculty with adequate community health experience are also difficult to find, and thus faculty overseeing the clinical often do not have community health experience themselves. Preceptors also often do not understand their role. Suggestions for improving the preceptorship are suggested.	<u>Limitations:</u> Purely descriptive

Yang, K., Woomer, G.R., & Matthews, J.T.	Collaborative learning among undergraduate students in community health nursing	Nurse Education in Practice	2012	To evaluate nursing students' experiences with a collaborative public health project they completed as part of the community health clinical	Descriptive (pre and post-survey of 83 nursing student)	Survey indicated that students involved in the collaborative project thought it was challenging but a good learning experience. Students built an evidence-based nursing plan for a public health issue based on data and scholarly literature.	Limitations: no control group, survey-based data

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