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Review Article

Safety Net Hospitals as Vulnerable Populations

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Abstract

Aim: The aim of this article is to highlight the serious crisis approaching the safety net hospital system and to present an evidence-based approach to addressing the needs of a vulnerable population.

Background: Safety net hospitals play a paramount role in providing care to vulnerable populations. However, as a result of economic, political, and regulatory factors, these hospitals have themselves become vulnerable populations. Nurses and Nurse Practitioners are ideally positioned to intervene and advocate for vulnerable patient populations because of their presence in emergency rooms, critical care units, observation units and other inpatient service areas of safety net hospitals. Indeed, they are positioned to reduce the burden on the hospital as a vulnerable population by meeting patient needs for care in a physician shortage, improving patient satisfaction, and improving access to care for the vulnerable populations in the community.

Method: Recent review of literature lends its support of using nurse practitioners to address health disparities in safety net hospitals. A scoping review of the literature encompassing databases from MEDLINE/Pub Med, PsycINFO, CINAHL, EBSCO, grey literature, the Cochrane library and secondary references from primary articles was conducted to identify studies that critique this topic.

Results: A solution to the health disparity caused by a shortage of nurse practitioners in a safety net hospital is a well-organized collaborative cooperative to address the main barriers that keep the disparity alive. The quality of care and level of patient satisfaction provided by NPs has been well documented in multiple research studies and found to be comparable to that of their physician counterparts. Additionally, they are able to provide this care at lower costs to facilities.

Conclusions: Advanced nurse practitioners play a crucial role in the management of acute care patients in and out of the safety net hospital system.

Implications for Nursing Management: As nursing management begins to prioritize financial and human resources to meet challenging demands in a safety net hospital, it must consider the role of the advanced practice nurse practitioner in a hospitalist role.

Addition to Current Knowledge: Nurse Practitioners (NP) by their scope of practice are empowered to affect major changes in patient care and systems. With an environment void of autocracy, the NP thrives and is able to be creative in ways to improve the profession of nursing and patient health outcomes. For example, the NP may conduct research studies to determine more effective means of patient care delivery, treatment methods, or medication regimens. The majority of research available suggests solutions that do not include the nurse practitioner in the acute care setting. This proposal suggests expanding the role and the evidence based benefits that can be obtained from such an endeavor.

Keywords: Access to Care; Safety Net Hospitals; Vulnerable Populations

Introduction

In the current healthcare and economic environment of limited resources and increasing regulatory requirements, the question of who is worthy and undeserving of assistance becomes a critical debate. In fact, hospitals, physicians, clinics, legislators, regulators, payer sources, and patients are all faced with making difficult and sometimes unpopular decisions in order to make these determinations. A scoping review of the literature encompassing databases from MEDLINE/Pub Med, PsycINFO, CINAHL, EBSCO, grey literature, the Cochrane library and secondary references from primary articles was conducted to identify studies that critique this topic.

The term “Vulnerable” in healthcare has been used to include the poor, the medically underserved, the chronically ill, citizens with disabilities and/or mental illnesses, immigrants, minorities, children and elderly, homeless, substance abusers, and other “At Risk” groups. There are many variations of what defines a vulnerable population, but one perhaps, is more appropriate to addressing the needs of healthcare organizations more than any other. Vulnerability, the susceptibility to harm, results from the interaction between the resources available and the health and life challenges they face [1].

Safety net hospitals have also been loosely defined in the media and the literature. The Clinton Healthcare Proposal from the 1990’s defined safety net hospitals as those who were legally mandated to provide care and were located in high levels of need such as health professional shortage areas [2]. Others define these hospitals as those that serve large numbers of low income medically vulnerable patients. These hospitals serve disproportionately large numbers of low-income, underinsured, uninsured, and receive lower Medicaid share hospital payments to sustain their operations [3]. Healthcare organizations, specifically safety net hospitals, have become vulnerable and susceptible to harm via threat of closure, financial ruin, and negative patient outcomes because there has become a drastic disproportionate ratio between the resources available to meet the needs of the hospital’s mission and patient populations.

In Georgia, there were forty-two safety net hospitals in 2009 [4]. These hospitals were designated by the Division of Health Planning based on the criteria of meeting at least two of the following criteria: teaching or children’s hospital (Defined by Georgia Board for Physician Workforce), trauma center designation (Designated by Georgia Department of Human Resources), Medicaid/PeachCare admissions greater than twenty percent (2009 Annual Hospital Questionnaire, Division of Health Planning, Georgia Department of Community Health), and uncompensated

indigent (greater than six percent) and charity care (greater than ten percent) performance [4].

Safety Net Hospitals as Vulnerable

Safety net hospitals play a paramount role in providing care to vulnerable populations. However, as a result of economic, political, and regulatory factors, these hospitals have themselves become vulnerable populations. In the current economic environment, many safety net hospitals face dire financial circumstances and struggle to be able to provide care to increasing numbers of low-income, uninsured, and Medicaid patients. With federal proposals to target hospital payments, John Hauptert, president and CEO of Atlanta’s Grady Health System--Georgia’s biggest safety-net hospital--said the change could potentially have a \$4.6 million-per-year impact on the hospital system [5]. Like Grady Health System, other safety-net hospitals across the country are worried about their futures with reimbursement cuts. “The very existence of safety-net hospitals is at stake,” Mark Newton, president and Chief Executive Officer of Chicago’s Swedish Covenant Hospital, wrote in a letter to the editor of the Chicago Sun-Times. “Across-the-board rate cuts would deliver a fatal blow to our hospitals that serve ethnically diverse urban communities.” [5].

Georgia ranks fifth for the number of premature deaths due to lack of insurance and ranks among the top ten among states for citizens that avoid preventive care due to high cost and a lack of insurance [6]. Uninsured people are more likely to skip screenings and other preventive care, so their medical problems are often diagnosed later, when they are more advanced and tougher to treat. The uninsured are also more likely to skimp on necessary medical care, whether it is prescription drugs to keep their blood pressure in check or surgery to clear up clogged arteries. Those who live at, below or just above the poverty level are often eligible for financial assistance through government programs, but many uninsured patients who qualify for federal and state financial assistance programs do not utilize them. For example, in Fulton County, Georgia an estimated twenty percent of the county’s uninsured population qualified for existing public options such as Medicaid or PeachCare in 2007 but were not enrolled [6].

Consumers aren’t the only ones affected by unpaid medical bills. Hospitals that subsidize care for Georgia’s uninsured, particularly those that attend to a disproportionately high number of these patients, and can incur a crippling amount of debt due to the subsidies. Considered safety net facilities, these hospitals serve the areas uninsured. For some patients, federal, state and local governments will subsidize the health care costs through special programs; however, uninsured patients not eligible for indigent or charity care may burden safety net hospitals with unpaid and uncollectible debt [6]. There are approximately 1,300 public safety net hospitals in America – three hundred fewer than fifteen years ago. According to the National Association of Public Hospitals,

safety net members account for two percent of all hospitals but provide twenty-five percent of the nation's uncompensated care [6].

Why is this important? Safety net hospitals provide a disproportionate amount of care to vulnerable populations and financial failure leads to a greater risk for inferior care, poorer health outcomes in a population already at higher risk for poor health and poor health outcomes than the rest of society [3,7]. Safety net hospitals have historically played a critical role in providing otherwise unavailable or unaffordable care to vulnerable populations. They are not only able to provide more affordable care, they are often better able to meet the complex social, cultural, and linguistic needs that are more prevalent in vulnerable patient populations.

The growth of specialty hospitals over the past decade focusing on profitable service lines (i.e. cardiac surgery, outpatient surgery, cosmetic surgery) led to a study by the Center for Studying Health System Change. Responses in the study listed concerns from safety net hospitals that the specialty hospitals were taking the insured market, physicians, and healthcare professionals. Some safety net hospitals reported a drop in service volumes, competition for qualified healthcare providers, and an increase in serving more financially vulnerable patients. In the current economic climate, it is unclear how long safety net hospitals will be able to cost shift to insured patients to compensate the rising uncompensated care, further endangering their viability [7].

Political and legislative challenges are also contributing to the vulnerability of the safety net hospitals. In allocating resources, legislators and decision makers are required to make trade-offs between healthcare and other government agencies, as well as choices within health programs as to which populations to serve, what services to provide, and how robust those services should be [8]. Unfortunately, the availability of resources is the driving factor in decisions about care for vulnerable populations. Those resources could be financial, human (nurses), and physical (equipment and access to hospitals).

In 2010, the American Nurses Association (ANA) updated its position statement on ethics and human rights to reflect a new position on the nurse's role in ethics and human rights: protecting and promoting individual worth, dignity, and human worth in practice settings. The purpose of the updated position is to bring the topic of human rights to the forefront and provides nurses with specific actions to protect and promote human rights in every practice setting. It describes the relationship between nurses' ethical obligations, the concept of human rights and professional nursing practice. Claim rights, or rights that are due to the right-holder by another, are fulfilled when healthcare policies are developed that require individual and group differences be considered in the delivery of care to fulfill patients' healthcare needs [9]. The ANA position statement postulates that this type of care is aimed at reducing the unfair burden of illness, suffering, and premature

death of vulnerable populations resulting from social inequities and institutionalized patterns of social discrimination. Healthcare that is congruent with the patient's needs and within available resources can be said to be both just and caring [10].

Nurses and Nurse Practitioners are ideally positioned to intervene and advocate for vulnerable patient populations because of their presence in emergency rooms, critical care units, observation units and other inpatient service areas of safety net hospitals. Indeed, they are positioned to reduce the burden on the hospital as a vulnerable population by meeting patient needs for care in a physician shortage, improving patient satisfaction, and improving access to care for the vulnerable populations in the community. One example would be a Nurse Practitioner (NP) led heart failure clinic. This would reduce the readmissions for the hospital, give the patient access to care, and utilize physicians in other areas while generating revenue simultaneously. This scenario was demonstrated in a study by Hoag Hospital in California by an NP led multidisciplinary performance improvement team in 2009 [11].

The complex issues associated with the current healthcare crisis for vulnerable populations and safety net hospitals are areas in which a Doctor of Nursing Practice (DNP) prepared nurse would thrive. The preparation in health policy would assist in legislative advocacy on behalf of the critical access hospitals and their patient populations. This corresponds with the ANA's stand that nurses advocate for the human rights of patients, colleagues, and communities and by creating and maintaining environments that support accepted standards of professional practice. The goal is to have a united voice using multiple professional nursing organizations to be politically active in the process to legislate for the fair and ethical treatment of all. This summary is directed to all professional nurses, nurse administrators, nurse educators and nurse researchers. The DNP nurse is equipped with knowledge of vulnerable populations, advanced nursing theory, epidemiology, statistics, evidence based practice, and research.

The DNP nurse practitioner would be extremely important to a safety net hospital in conducting high level performance improvement and evidence based practice to improve quality of care, reduce length of stay, and improve patient satisfaction. Additional benefits would be regulatory compliance, revenue generation and/or cost avoidance, and access to and continuity of care. Research and program development and analysis are also key areas that could be addressed by a DNP in the facility. Review of literature surrounding the practice of DNP nurse practitioners is limited and almost nonexistent in relationship to implications for safety net hospitals. Capstone projects for DNP NPs are published in the literature and the improvements to patient care, system care, safety, quality, education, and research are demonstrated in these projects [12]. The paucity of DNP NP studies in safety net hospitals should drastically increase in this decade as the numbers of DNP graduates increase and are utilized to transform our current

healthcare system. The remainder of this paper will discuss the need for nurse practitioners in safety net hospitals without distinguishing between the master's and doctoral preparation since the published data is still in development stages [13].

Georgia's Health Disparities

There is a need to address the shortage of nurse practitioners in safety net hospitals in order to correlate solution based outcomes for the vulnerable populations in Georgia. It is necessary to discuss the vulnerability of Georgia's population in order to understand the full impact of a shortage of nurse practitioners in safety net hospitals. Understanding the statistics of the health disparities in the state in this context makes addressing the shortage of provider's paramount. The data that describes Georgia's health disparities in chronic disease is alarming. There were 10,000 hospitalizations in Georgia in 2007 for asthma, with twelve percent children, according to the Centers for Disease Control and Prevention (CDC). In 2007, Georgia ranked higher than the national average in hospitalizations for Medicare patients having a stroke, prevalence of diabetes, mortality rates for diseases of the heart, and age adjusted mortality rate for congestive heart failure [9]. Sadly, Georgia residents' life expectancy at birth and at age sixty-five were lower than the national average, making anyone residing in the state more likely to die younger and more likely to not survive the first year of life [14].

In the 2010 the CDC's Chronic Disease Indicators report, Georgia ranked above the national average for obesity and overweight children and adults and the prevalence of cigarette smokers. In 2010, obesity cost Georgia's healthcare system an estimated \$2.1 billion per year in health costs [15]. Hispanics in Georgia were thirty-five percent more likely to become overweight and/or obese and African Americans were also at an increased prevalence rate. In 2002, fifty-nine percent of adults in Georgia were overweight or obese with black and Hispanic races at an increased risk [15]. The state of Georgia is ranked forty-first in the percentage of residents who engage in regular exercise contributing to poor health outcomes and obesity [15].

Access to Care

Unfortunately, there are many extenuating factors that compound the problem of health literacy and ultimately access to healthcare. Georgia's high school completion rate is below the national average with seventeen percent of the population lacking the most basic prose literarily skills [16]. An estimated eighteen percent of Georgians ages 18-64 are currently lacking health insurance which is well above the national average despite state funded Medicaid programs [9]. The American Academy of Family Physicians laments that blacks and Hispanics topped the list of minorities living in poverty in the United States in 2008. According to the U.S. Health and Human Resources, Georgia

ranks thirty-seventh in the nation's poverty level at over fourteen percent with only thirteen states out of fifty have higher poverty rates [9]. Consequently, Georgia is at substantial risk for minority healthcare disparity solely based on poverty level and population makeup.

In Georgia, over 1,470,000 people, over fifteen percent of the state's population, live in an area with limited access to a primary healthcare provider. In the United States, over eleven percent of Americans live in areas where it is hard to find a primary care provider, supporting Georgia's increased need for safety net hospitals. An additional eighteen percent of Georgia residents were unable to access needed health services because of the high costs associated with care [9]. Medically Underserved Areas/Populations are areas or populations designated by Health Resource Service Association (HRSA) as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population [9]. The majority of service areas of the safety net hospitals in Georgia are HRSA designated Primary Care Health Professional Shortage Areas/Populations as of September 2011.

Issues with Supply

As the ninth most populous state, Georgia ranks forty second among all states in its supply of Registered Nurses (RNs) and forty eighth in advanced practice nursing care. By the year 2030, Georgia is expected to have a population increase of forty-six percent, thereby increasing the burden on an already established shortage of providers [17]. There are 266,000 employed nurse practitioners in the United States (U.S.) but only 4,596 employed nurse practitioners in Georgia to care for this population expansion [18]. The Georgia board of nursing does not collect data on how many are full time versus part time employed although it does report that sixty percent of its nurses are employed by hospitals. There was a nurse practitioner deficit of forty-four per 100,000 patients in Georgia as of 2009 with the average age over fifty-one [19].

The Georgia Board of Regents Task Force on Health Professionals Education's 2006 Task Force has deemed nursing as "The most fragile and in need of attention" of all medical professions in this state. Many efforts have been underway in the state to increase the number of nursing and allied health graduates. However, with the economic challenges facing Georgia, funding has been eliminated or reduced for service cancelable loans and other funding programs. In the Southeast, eighteen percent of nursing faculty is due to retire between 2002 and 2006. In Georgia alone, twenty-five percent of nursing school faculty will have retired or resigned in that same timeframe. Indeed, nursing school faculty members are "Aging in place," at an average age of fifty-one, eight years older than the average age of the bedside nurse. Alarming, doctoral prepared faculty is even older, with an average age of fifty-six for professors; fifty-four for associate professors; and fifty for assistant professors [20].

As nursing educator low attrition continues, it is unclear where future nursing school faculty will come from. Other challenges facing educators include admissions limitations in existing nursing programs, faculty recruitment and the lack of adequate clinical sites for nurse training [21]. In 2011, over 100,000 applications for undergraduate and graduate were accepted; over 75,000 were turned away due to lack of capacity [19]. In addition to scope-of-practice restrictions, some states use multiple bodies to regulate NPs. For example, Georgia and sixteen additional states, require both nursing and medical boards oversight of NPs. Using two regulatory bodies creates confusion and inefficiency. Legislators should consider adopting a simplified regulatory model such as the Advance Practice Registered Nurses (APRN) Consensus Model. This Institute of Medicine (IOM) recommended model identifies the Board of Nursing as the sole regulatory body for nurses [22].

The Institute of Medicine (IOM) in its 2010 report *The Future of Nursing* recommends that states increase the scope-of-practice for NPs enabling them to be more effective primary care providers and practice to the full extent of their advanced educational training. The IOM outlines steps to remove barriers to NP scope of practice that includes regulatory and insurance barriers in addition to legislative barriers [23]. Additionally, many state and national policy organizations, including the national office of the American Association of Retired Persons (AARP), also support Nurse Practitioners being used at full scope of practice to increase access to healthcare for Georgians [23].

Role of Nurse Practitioners

Nurse Practitioners have been providing safe, effective healthcare for Americans for over forty years. The quality of care and level of patient satisfaction provided by NPs has been well documented in multiple research studies and found to be comparable to that of their physician counterparts. For example, utilizing Nurse Practitioners (NP) as primary care providers was shown to decrease Medicaid costs in Tennessee by over twenty percent [23]. Nurse practitioners have been recognized in the Affordable Care Act as being the key to filling the gaps in care and chronic care coordination in rural and underserved populations but are not allowed to practice to the fullest extent of their training and education [24].

Recent review of the literature reveals that clinical quality of care outcomes improve and costs are reduced when acutely ill patients receive management from an acute care nurse practitioner-physician team [25]. Rosenthal and Guerrasio [26] describe the role of the acute care nurse practitioner as hospitalist to meet the needs of hospitalized patients in community hospitals and postulate that the training the NP receives is comparable to medical residents. This data lends its support of using NP's to address the health disparities in the safety net hospitals. In summary, Georgia's

complexity of health disparities, shortage of qualified nurse practitioners as well as faculty to increase applicants, restrictions on practice and overall access to healthcare are significant barriers for safety net hospitals to overcome provide positive health outcomes for its vulnerable populations. The data has become clear that any solution to these issues must include more nurse practitioners in safety net hospitals.

Creative Solution

Healthcare reform and the growing aging population are expected to increase demand for nurse practitioners in safety net hospitals as well as primary care; thereby necessitating a more diverse, educated, and highly trained workforce. In order to accomplish these goals, safety net hospitals in Georgia need to plan and implement strategies now in order to meet new expectations from payers, consumers, physicians and their communities. An example of an effective strategy is demonstrated when hospital leaders work with education and community partners to prepare the healthcare workforce.

A solution to the health disparity caused by the nurse practitioner in a safety net hospital is a well-organized collaborative cooperatives or "co-op's" to address the main barriers that keep the disparity alive. Faculty shortages, lack of clinical sites and preceptors for NPs, cost of graduate nursing education, issues with access to care are just a few of the barriers already identified. Cooperatives are member-owned and governed businesses that operate for the benefit of their members that engage in the production and/or distribution of goods and services in a way that keeps community resources in the community [27]. Many of these organizations are mandated under state laws to be non-profit in nature. Over the last twenty years, healthcare cooperatives have emerged as key strategies for: keeping healthcare costs and insurance premiums affordable, controlling the high cost of prescription drugs, and helping community-owned, non-profit hospitals remain independent [28].

The purpose of the proposed cooperative would be to provide financial, clinical, and academic assistance in order to address the nurse practitioner shortages in Georgia. Membership would include: University systems, physician practices and groups, Georgia Nurses Association, Georgia Medical Association, hospital systems, health departments, board of nursing, state and local legislators, professional nursing organizations, patients, payer sources representation, and nurse practitioners. The cooperative could impact clinical locations for NP training, fund faculty for the NP programs, reduce the restrictions on the scope of practice currently in place that keeps NP's from their full extent of training (such as ordering diagnostic tests), offering scholarships to students wishing to enter NP programs, and share resources to staff the safety net hospitals.

Complex Adaptive Systems Theory

Complex Adaptive Systems (CAS) are networks consisting of many agents that follow simple rules, are in constant interaction with each other, and can generate complex structures [29]. It has a high degree of adaptive capacity and can be used to understand and explain the behavior and dynamics of systems composed of many interacting elements and to uncover the principles and processes that explain how order and change emerge in these dynamic, non-linear systems. It is not a single theory but a collection of overlapping and complementary theories from a variety of sciences.

In a CAS, control is shared by many elements, rather than centralized in a single command center. Examples of this type of control would include shared governance models where outcomes are unpredictable and emerge through a process of self-organization rather than through centrally planned or directed processes [29]. In a healthy adaptive system, order and disorder coexist. For example, a small change may produce a large effect, or a large change may produce a small or no effect. The ability of a CAS (let's say a hospital) to adapt and change during both emergent and long term changes is described as its self-organization [29]. In a CAS focus remains on the relationships between people/teams, processes, management/organization, equipment, environment and regulation in an organization. They are not about the people and things themselves. The idea is to uncover the principles and processes that explain how order and change emerge in these dynamic, non-linear systems [29].

Healthcare organizations and the profession of nursing including safety net hospitals are examples of complex adaptive systems because they typically contain systems embedded in other systems. For example, there are patient care units within the hospital structure and nurse units within the patient care unit. Additionally, the inability for predictable outcomes in a CAS adequately describes patient satisfaction studies since patient responses are seldom able to be adequately predicted. NPs are appropriately trained to look at the patient holistically and thus not as likely to expect all patients to react the same way to interventions. For example, the NP may determine that an antihypertensive patient may not be appropriate for both an eighty-five-year-old woman and a thirty-six-year-old black man. Because the nature of the sexual side effects is common for these meds, the NP, taking this into consideration, may change the type of medication which would improve patient compliance.

Nurse practitioners by their scope of practice are empowered to affect major changes in patient care and systems. With an environment void of autocracy, the NP thrives and is able to be creative in ways to improve the profession of nursing and patient health outcomes. For example, the NP may conduct research studies to determine more effective means of patient care delivery, treatment methods, or medication regimens. Finally, recognizing patterns within a safety net CAS are important for the nurse practitioner.

Patterns of infection rates, readmission rates, and length of stay are just a few that guide NPs in acute care settings when making changes in care to affect improved patient outcomes.

Applying CAS theory to the issues of vulnerability and health disparities as described in this paper, allows insights and a general understanding of nurse practitioners role in the healthcare system. The insights in this analysis include the fact that relationships rule, unpredictability must be expected, decentralization and empowerment thrive, autocratic leadership doesn't work, and recognizing patterns is important in a CAS [30]. The relationships NPs have with their patients have been demonstrated to improve patient satisfaction and compliance with their medical regimen. This is an important trait for a safety net hospital employing an NP because of regulatory mandates for patient safety and outcomes.

Research Barriers

Barriers to researching the safety net hospital as a vulnerable population are multifactorial. Definitions of what constitutes a safety net hospital are varying and there are vulnerabilities in hospitals that are difficult to quantify. For example, tracking how many full time NPs in acute care by state is difficult to measure since many states don't track this data. These numbers can be estimated but can make it difficult to make generalizations about the impact or lack of impact this role can make in the safety net hospital.

The politically charged environment caused by the recently passage of the Affordable Healthcare Act and its implications as well as the timing of being a presidential election cycle, make it very difficult to research healthcare issues and potential solutions because each political party is focused only on the issues that are favorable or popular with their respective constituency. This and other reasons impact the integrity with which statistics are reported. Sometimes, a "Spin" is put on the interpretation of the data to "swing" voters towards a particular issue that is the current "hot button" topic. A good example of this would be the unemployment rate. One can say that the unemployment is low or high, but totally ignore how many Americans are unemployed and have stopped looking for work (which is typically left out of the base unemployment rate figure).

Strategies to address these barriers include: identify limitations of research availability, use broad sources of literature for analysis, use respected sources, and identify a consistent definition of vulnerable population and safety net hospital. Careful critique of the literature to eliminate potential sources or data that lacks integrity and applicability is crucial to the process. Finally, a thorough assessment of the facts and logical deductive reasoning lends a strong attack to the barriers identified to researching these barriers.

The proposed solution of increasing the presence of nurse practitioners in safety net hospitals is crucial to the success of reducing the vulnerability and improving viability of safety net

hospitals in Georgia. These measures, in turn, protect vulnerable populations in the state by addressing health disparities, access to care, and cost of healthcare. The necessary tools for this project include increases in numbers, role, and funding; reducing the barriers to recruitment, education, and regulatory processes of nurse practitioners. Creative cooperative programs have the unique potential of addressing all of the issues presented as threats to safety net hospitals as vulnerable populations. Ideally, the cooperatives would be designed as a CAS, much as the current healthcare system is functioning.

The DNP nurse practitioner would be extremely important to a safety net hospital in conducting high level performance improvement and evidence based practice to improve quality of care, reduce length of stay, and improve patient satisfaction. Additional benefits would be regulatory compliance, revenue generation and/or cost avoidance, and access to and continuity of care. Research and program development and analysis are also key areas that could be addressed by a DNP in the facility. Review of literature surrounding the practice of DNP nurse practitioners is limited and almost nonexistent in relationship to implications for safety net hospitals. Capstone projects for DNP NPs are published in the literature and the improvements to patient care, system care, safety, quality, education, and research are demonstrated in these projects [12]. The paucity of DNP NP studies in safety net hospitals should drastically increase in this decade as the numbers of DNP graduates increase and are utilized to transform our current healthcare system. The remainder of this paper will discuss the need for nurse practitioners as hospitalists in safety net hospitals without distinguishing between the master's and doctoral preparation since the published data is still in development stages [13].

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