

A Critical Examination of the U.S. Nursing Shortage: Contributing Factors, Public Policy Implications

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BACKGROUND. *Despite short-lived periods of adequacy in nurse availability, the nursing shortage has endured. In order to better understand the myriad factors that influence the current shortage of nurses, as well as possible solutions, this project addresses the influence of social factors and government policy on nurse staffing inadequacy. When the government intervenes in a philosophically free-market economy, the assumption is that a problem, such as the current nursing shortage, could not be solved without such intervention.*

PURPOSE. *Nursing care arguably falls into the realm of protecting the common good, and therefore requires government oversight. We provide a critical analysis of policy intervention efforts into the nursing shortage debate by examining the passage of legislation, the provision of educational assistance, and the establishment of minimum staffing requirements and minimum quality standards for reimbursement, which all impact nursing supply and demand.*

RESULTS. *Arguments supporting and opposing policy intervention in general, and its impact on the overall provision of nursing care in the United States, were examined. Without policy incentive to place financial value on the quality of care provided by nurses, a simple increase in the number of available nurses is unlikely to solve the current problem.*

IMPLICATIONS. *Important considerations that should be factored into policy creation include measurement and compensation for quality care, the nature of recruitment efforts of new nurses, and the complex nature of a nursing work.*

Search terms: *Nursing shortage, policy*

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Introduction

“Although there are recurring reports of manpower shortages in many other professional fields, nursing seems to enjoy the dubious distinction of continually suffering from this condition” (Spohn, 1954, p. 865). Though this quote sounds like it fits into the contemporary nursing dialog, it was written 50 years ago. The author of the quote, Roberta Spohn, Assistant Executive Secretary of the American Nurses’ Association, Research and Statistics Unit, conveyed that the nursing shortage of the time was a complicated issue that required serious inquiry. Despite short-lived periods of adequacy in nurse availability, the nursing shortage has endured because of this complexity (Buerhaus, Staiger, & Auerbach, 2003; Goodin, 2003).

Spohn (1954), in her examination of the perceived nursing shortage between 1930 and 1950, found that from 1932 to 1952, the number of hospitals in the United States changed very little. What did increase was the number of beds within hospitals; 52% more beds were reported in 1952 than in 1932. The daily patient census of hospitals increased at the same percentage. On the surface, it would seem that the increase in hospital capacity alone could account for this period’s shortage of nurse caregivers, but Spohn saw that the problem was far more complex. Spohn argued that the increase in hospital capacity, and therefore patients, could not single-handedly have caused the shortage, because average length of stay had decreased significantly during this same time frame. As a result, many more patients were being seen annually, but were staying for shorter periods of time, which, in turn, did not increase the average number of patients requiring

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care on any given day (Spohn, 1954). Spohn was ahead of her time in making the claim that investigators cannot simply consider admission statistics as an accurate measure of nursing demand; the number of nurses necessary to adequately care for a population is a far more complex question (Spetz, 2005). This early research revealed that a number of societal factors influence the number of nurses entering or exiting the U.S. labor market, including accreditation policy, educational opportunities, U.S. entrance into foreign conflict, and cultural image of the profession. Perhaps most importantly, Spohn (1954) noted the changing nature of the work and function of nurses had helped to shape the nursing workforce.

To continue this line of research and better understand the myriad of factors that influence the current shortage of nurses, as well as possible solutions, our project addresses the influence of social factors and government policy on staffing inadequacy.

Thirty-three years later, Linda Aiken (1987) focused attention on organizational factors when she found that the prospective payment system introduced to hospitals in the late 1970s had an effect on the availability of nurses. Aiken noted that the legislation had a dampening effect on nurse salaries at a time when other professional salaries were rising, influencing nurses to leave the profession. She argued that public policy makers needed a better understanding of the

impact of cost containment strategies on the economic environment of nursing. To continue this line of research and better understand the myriad of factors that influence the current shortage of nurses, as well as possible solutions, our project addresses the influence of social factors and government policy on staffing inadequacy.

The Development of a Complex Issue

During the 1990s, hospitals experienced two major registered nurse (RN) shortages. The first shortage began in 1990 and was marked by an 11% vacancy rate of unfilled, full-time RN positions (Buerhaus, Donelan, Ulrich, Norman, & Dittus, 2005). However, by 1992, the shortage appeared to have subsided and the status of the nursing supply was optimistic. Only 5 years later, in 1997, hospitals began to feel the pressure of a shortage again. By 2001, the national average hospital RN vacancy rate was at 13% ("AHA Workforce Shortage Survey"). Unlike the shortages of the past, this shortage has not receded and remains a topic of current policy discussion.

Although some interested parties have tried to isolate one factor as the reason for the shortage (i.e., low pay), the reality may be that a web of dysfunction exists that is far more complicated than any one single factor (Norris, 2003). Shortages in other skilled professions tend to be short lived, with supply catching up with demand as soon as potential employees receive information of incentives offered to attain market equilibrium (Goldfarb, Goldfarb, & Long, 2008). That this is not the case for nursing encourages further examination of the forces which permit the nursing shortage to endure.

The biggest factor in any labor shortage, lack of qualified potential applicants, surprisingly, is not a problem in nursing (Aiken, 2007). In fact, nursing schools are turning away qualified applicants because of lack of available faculty and resources (Aiken, 2007; Buerhaus et al., 2003; Goodin, 2003). There are enough licensed RNs and qualified nursing school applicants

in the United States that the United States has the potential to independently staff its healthcare facilities without drawing from foreign nurse labor markets (Aiken, 2007). Hundreds of thousands of RNs have removed themselves from the active nursing workforce, while an inadequate number of younger nurses are selecting nursing as a profession (Elgie, 2007). In order to alleviate staffing shortages, the societal and occupational factors which discourage people from choosing to practice nursing must be examined.

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Multiple Causes Influence the Shortage

Demographic Factors

Members of the baby-boomer generation were born roughly between 1946 and 1964. The high birth rate during this time resulted in a large population increase. However, after 1964, for the next 11 years, the birth rate

dropped dramatically. In the 1990 census, there were 77 million baby boomers compared with 44 million in the following generation, sometimes referred to as Generation X (Cooper, 2003). This population imbalance creates a challenge for the nursing profession. As baby-boomers age, their demands upon the healthcare system increase. The increase in patient census, along with the multisystem medical needs and function-based care required by an aging population, puts pressure on the professional nurse workforce. Conversely, nurses who themselves are members of the baby-boomer generation are aging. That means that “nearly half of RN’s are projected to be over age fifty by 2010 and the average age (of nurses) rises to above forty-five” (Buerhaus et al., 2003, p. 196). Retirees and aging nurses leaving the workforce are not being replaced in adequate numbers with newly trained, younger nurses (Buerhaus et al., 2003; Goodin, 2003). Thus, the current mechanisms for training nurses must be examined.

Nursing Education

Hospital-based diploma programs once served as the United States’ primary mechanism for training nurses. Hospitals came to depend on student nurses who were required to spend long hours providing care on the wards. As nursing education moved from primarily a hospital-based system to colleges and universities, a larger paid nursing staff became necessary to provide the same level of patient care (Elgie, 2007). This put pressure on fledgling university-based programs, which struggled, and continue to struggle, with attaining adequate numbers of graduate degreed nurse faculty (Aiken, 2007; Buerhaus et al., 2003; Goodin, 2003). In the 2005–2006 academic year, at least 41,683 qualified applicants were turned away from baccalaureate, master’s, and doctoral nursing programs. This is a major increase from the approximately 32,797 qualified applicants turned away in 2004 (Fang, Wilsey-Wisniewski, & Bednash, 2006). Of those schools that turned applicants away, more than 74% cited lack of faculty as the primary reason (Fang et al., 2006).

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Female college graduates, historically the population most likely to select nursing as a profession, have seen their educational options and professional opportunities expand in recent decades. A recent survey of adult Americans found that “although 83% of respondents would encourage a loved one to pursue a career as an RN, only 21% would consider this career for themselves,” and “only one in ten male respondents would consider a career in nursing” (Penn, Schoen, & Berland Associates, 2001, p. 3). Increased diversity of career options, coupled with a tightened admission structure in nursing programs because of lack of university level resources, has resulted in an educational system which is contributing to the shortage of available nursing staff.

Nursing Work

Turnover of hospital nurses is costly both in terms of economics and care quality, and contributes to the decreased availability of hospital-based nursing care (Buerhaus et al., 2003; Goldfarb et al., 2008). Nursing work is stressful, and because other professional options are available, it is challenging to argue for the selection of a profession which fails to compensate financially for this daily stress (Kaestner, 2005). Changes in the healthcare system have resulted in high patient acuity paired with shorter patient stays in an environment of resource constraints. These factors combine to increase the stress of nursing work (Goodin, 2003). Nurses who have left the profession, a major contributing factor to the underavailability of bedside nurses, often cite poor work environment coupled with poor compensation as the primary motivation to leave nursing (Elgie, 2007).

The strain caused by the nature of shift work also impacts nurses' longevity in the profession. According to Cooper (2003), “RN's are experiencing the physical, cognitive, and emotional challenges of growing older while the profession demands more” (p. 3). Physical fatigue along with orthopedic problems of the back, feet, knees, and wrists are common. The interruption of

circadian rhythms, as well as family schedules, caused by working night and evening shifts affect nurse performance and lifestyle, encouraging many to move into positions outside the hospital setting.

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In addition to the physical demands of nursing, the frequent introduction of new technologies can also cause stress. In order to increase efficiency, hospital administrators have restructured tasks and integrated new technologies into the nursing workday. According to Kirchbaum et al. (2007), “The phenomenon is complexity compression—what nurses experience when expected to assume additional, unplanned responsibilities while simultaneously conducting their multiple responsibilities in a condensed time frame” (p. 1). Complexity compression can be an extremely distressing workplace situation, especially in a climate of low nurse to patient ratios. It is this type of workplace stress which contributes to nurses exiting the profession.

If the day-to-day work of nurses is not enough, our U.S. healthcare system contains a safety climate which blames individuals for errors instead of the system or organizational failures that may really be at fault. Many nurses experience additional stress because of the idea that if they do make an error, punitive action may be taken against them. When asked to identify which

profession is primarily responsible for ensuring patient safety, "96% of nurse and more than 90% of physicians, administrators, and pharmacists assigned primary responsibility to nurses" (Ramsey, 2005, p. 20). Nurses are accountable for patient safety without adequate decision-making authority or equitable wages.

Nurse Wages

Inflation-adjusted RN hourly wages rose an average of 3% each year from 1983 to 1991. By 1994, however, nurse wages began to decrease (Buerhaus, 1998). Buerhaus (1998) attributed the decrease in earnings to the spread of resource restricting managed care systems, hospital restructuring, and an overall economic recession. Average hospital hourly nurse wages increased by 1.8% to \$24.22 per hour in 2003, followed by a 10% increase in annual nurse wages between 2003 and 2004 (Windham, 2004). One would expect nurse wages to continue to rise in light of the intensifying nurse shortage. However, according to the National Institute for Women's Policy Research, wages began to fall in 2004 (Lovell, 2006).

Ironically, nurse wages began to fall just as factors in the U.S. system of healthcare delivery were negatively influencing the work environment of nurses (Kaestner, 2005). Some argue that government policies designed to intervene in the worsening shortage of direct care nurses have caused this depression of nurse wages at a time when market factors would logically call for increased compensation. An example of a Federal policy intervention effort to reduce the shortage of RNs is the Nursing Education Loan Repayment Program, which pays 60% of student loan principle and interest in exchange for a 2-year clinical commitment in an area determined to have a critical shortage of nurses (Nursing Education Loan Repayment Fact Sheet, 2002). Policies such as tuition vouchers and loan repayment programs add a third party to what would be a two party negotiation between nurses and employers in a free market system. Tuition vouchers and loan repayment "cheapen" entry into nursing,

allowing employers to offer lower starting wages than would be expected in other skilled professions. Programs which require nurses to work for certain entities in order to pay back voucher money or receive the loan repayment also depress wages by eliminating competition for nurses among employers. Nurses who work the required period of time in stressful environments for depressed wages may then be more likely to exit the field (Elgie, 2007). Policy designed to end the shortage may in this case be a contributing factor to the shortage's endurance.

The Quality Question

Much of the concern surrounding hospital nurse staffing is related to research which links nurse staffing levels to both adequate customer service and patient safety (Buerhaus et al., 2003; Goldfarb et al., 2008; Spetz, 2005; Sugrue, 2005). Currently in the United States, there is little difference in facility reimbursement for care between providing care of moderate quality and care which is excellent. Cost recovery for hospitals is often based on patient diagnosis or a prospective rate for services provided. Therefore, financial incentive to invest in RN staffing beyond the minimum necessary level is low (Kaestner, 2005; Spetz, 2005). Staffing at minimum levels decreases the quality of the nursing work environment, contributing to nurse exit. If research linking nurse staffing to patient care is accurate, which we believe it is, linking availability of adequate staff with the provision of excellent quality care would move nurses from the cost category toward being considered an asset, which may lead to increased wages and an improved practice environment (Elgie, 2007).

Redefining the Shortage

The first, and perhaps most troubling, aspect of solving the nursing shortage is defining what is meant by a nursing shortage. There is currently little research on how many nurses are actually needed to provide

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quality care in a cost effective manner to meet the needs of the United States' population. It is therefore difficult to measure the magnitude of a shortage or even to say with empirical certainty that a shortage exists (Kaestner, 2005; Spetz, 2005). The "shortage" may simply be perceived; an assumption based upon the low quality of healthcare delivery in many sectors of the U.S. healthcare system (Spetz, 2005).

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Additionally, clearly defining the shortage becomes even more difficult when the complexity of labor-based data collection is taken into account (Goldfarb et al., 2008). For example, a rise in RN hires was noted in 2002. On the surface, it appears to be an optimistic finding. However, Buerhaus et al. (2003) note the increase in hires can almost wholly be accounted for by the immigration of foreign-born nurses and older nurses returning to the workforce as a result of difficult economic conditions. The lack of new nurses in the pool of new hires means that the

basic foundation of the shortage still exists. Thus, how data is examined strongly influences the perception of shortage severity.

Goldfarb et al. (2008) describe two means of defining a nursing shortage. Using the professional standards definition, a shortage is when there are not as many nurses as needed to provide a certain level of quality. A professional standards definition of shortage is highly dependent upon the source of the professional standard. A challenge in taking a professional standards approach is that there is not yet clarity among healthcare administrators as to how many staff are needed to provide quality care, or even what defines nursing care as quality care.

In economic terms, a nursing shortage exists when there are not enough nurses to fill open and budgeted positions. Thus, a facility may desire more nurses to provide a certain level of patient care, meeting the professional standards definition of a shortage, yet if there are no funds to open additional positions, an economically defined nursing shortage does not exist. Assessment of shortage severity may vary a great deal depending on the defining terms, adding to the complexity of "solving" the nurse shortage issue (Goldfarb et al., 2008).

Yet in the daily lives of nurses, there is evidence that a nursing shortage is real. The United States has become the largest global importer of foreign-born nursing staff, indicating that the supply of U.S.-born nurses available or willing to work at the current wage level is inadequate (Aiken, 2007). Nurses are leaving the profession partially because of increased stress and heavy workloads, signs that more help is needed. The federal government, as well as a number of state legislatures, has developed policy providing short-term relief for sectors of healthcare delivery particularly burdened by a shortage of nurses (Elgie, 2007). The widespread perception of a nursing shortage has also prompted the government to become involved in mandating nurse staffing levels to reduce the risk to public safety and to promote the common good (Goodin, 2003). Regardless of the technical definition, it appears

that the perception of a nursing shortage is strong enough to move the government to act.

An Examination of Solutions

Some Attempts May Have Aggravated the Shortage

As was noted earlier, government intervention designed to alleviate the nursing shortage may in fact have acted as a contributing factor. By intervening with educational vouchers and incentives for nurses to remain in one workplace for a specified period of time, policy has interfered with the free market stride toward equilibrium between supply and demand (Elgie, 2007; Kaestner, 2005). Because this intervention has taken place, it is uncertain what would have happened to the nursing labor market had the government not stepped in.

Another policy design at the state level is mandated nurse–patient ratios. Though on the surface these mandates appear to solve the problem, mandating staffing ratios in an environment of too few available nurses places pressure on the current nursing staff to work overtime, perhaps to the point of fatigue. It is this type of workplace stress that nurses cite as a reason to leave the profession, thus ultimately these policies may contribute to the continued existence of a nursing shortage (Spetz, 2005; Sugrue, 2005).

Although foreign nurses have been a part of the U.S. nursing force for over 50 years, an increased dependence on foreign-born nurses to staff U.S. hospitals is opposed by patient advocates, labor unions, and foreign governments. Though many foreign nurses and employers positively view immigration laws which promote the movement of nurses to the United States., this phenomenon depresses U.S. nurse wages and places a burden on the healthcare systems of developing nations without truly addressing the underlying causes and long-term solutions of the U.S. nursing shortage (Aiken, 2007; Buerhaus et al., 2003). Additionally, some have considered decreasing the amount of training required to become an RN.

A decrease in education and licensure requirements would put more nurses into the field quickly, but in the long run would decrease care quality, patient safety, and the professional status of nursing (Aiken, 2007).

Attempts That May Alleviate the Shortage

In an attempt to better address the complexity of assuring adequate nurses and address societal need, social science research has put forth a number of policy-based interventions which focus on insuring quality care despite the enduring shortage of available nurses. First, in the absence of additional nurses, development of labor saving technology which provides nurses with increased efficiency may allow fewer nurses to effectively care for more patients (Goldfarb et al., 2008). Increased focus on quality in the reimbursement process, both from governmental and non-governmental payment sources, would increase the value of nurses in a cost/benefit analysis (Aiken, 2007; Spetz, 2005). Hospitals have found that the principles put forth in the Magnet Status program, which focuses upon improved patient outcomes on quality indicators and increased innovation and professionalism among nurses, can significantly improve both the focus on quality and improvement of the work environment of nurses, thus decreasing a major source of our current shortage, exit from the field (American Nurse Credentialing Center, 2008; Elgie, 2007).

Along with decreasing the number of nurses who exit the field, recruiting new nurses is also a priority. As retiring older nurses are a major labor concern for healthcare providers, targeting recruitment to younger students and increasing the availability and flexibility of training programs may encourage a generation with a diverse set of options to select nursing (Goodin, 2003).

The nursing profession wrestles with its public image, which can be unrealistic for a variety of reasons. Nurses are often viewed as caring do-gooders, angels of mercy, or quite the opposite, as having wildly exciting lives. Public service programs designed to recruit

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nurses which promote a positive, yet realistic view of nursing as a sensible career path can assist in transforming nursing's public image from feel-good task, to rewarding profession (Goodin, 2003; Sugrue, 2005). However, recruiting efforts can only do so much. The current shortage is not driven by a lack of interested nursing school applicants, but by a shortage of those who are choosing to work in patient care environments. Most importantly, the work environments of nurses must be designed in a way which is sensitive to nursing practice and the stresses inherent in this physically and emotionally challenging profession. Technology and work redesign which limit lifting and excessive walking, and provide nurses with easy access to equipment and information is needed to keep the nurses who are currently providing care from leaving the profession (Goodin, 2003).

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Will Additional Government Intervention Solve the Shortage?

Without data which clearly indicates that the fluctuation in nursing supply and demand are greater than in any other skilled profession, advocates of free market forces will argue that government intervention

is not warranted. There is reason, however, to argue that need for nursing care enters the realm of providing for the common good, a public safety issue, and therefore requires government intervention. Policy must be carefully executed, however, as far-reaching policy changes could result in market overcorrection, further reducing the wages and status of RNs (Goldfarb et al., 2008).

There is reason, however, to argue that need for nursing care enters the realm of providing for the common good, a public safety issue, and therefore requires government intervention.

When the government intervenes in a philosophically free-market economy, the assumption is that a problem, such as the current nursing shortage, could not be solved without such intervention (Spetz, 2005). If the issue is simply solving an economic shortage, or in other words, supplying enough nurses to fill budgeted positions, then market forces could potentially be sufficient. However, if the issue is quality based, the government and/or regulatory bodies need to become more involved and encourage appropriate levels of nurse staffing to provide quality care (Goldfarb et al., 2008). The market, by itself, will only respond to cost/benefit factors. Without policy incentive to place financial value on the quality of care provided by nurses, a simple increase in the number of available nurses is unlikely to solve the problem because, from an economic perspective, there can be too many nurses (Spetz, 2005). One promising policy solution is the emergence of Pay for Performance programs, where

facilities are reimbursed for providing high quality, excellent care. Because research shows that nurses contribute heavily to the quality of patient care, reimbursement based upon performance outcomes would likely increase the economic value of nurses, thus improving wages, work environments, and recruitment/retention efforts (Aiken, 2007; Spetz, 2005). The policy challenge lies in finding the balance between having adequate staffing to provide quality care and allowing for a cost-effective caregiving environment.

One promising policy solution is the emergence of Pay for Performance programs, where facilities are reimbursed for providing high quality, excellent care. Because research shows that nurses contribute heavily to the quality of patient care, reimbursement based upon performance outcomes would likely increase the economic value of nurses, thus improving wages, work environments, and recruitment/retention efforts (Aiken, 2007; Spetz, 2005).

Though some argue government intervention is unnecessary and inappropriate, as in other areas of public service, government intervention may be neces-

sary to redistribute resources to underserved areas and populations (Spetz, 2005). Because defining the nursing shortage empirically is a complex problem, Kaestner (2005) calls for government intervention which is slow to develop but has a heavy emphasis on the evaluative component. For example, programs could be developed to recruit young persons into training programs that include frequent evaluation to ensure such programs are not suppressing the wages of experienced nurses. Policymakers must acknowledge they are entering and altering what was formally a two-party relationship between nurses and employers, and that such interference may have unexpected and unwanted effects (Elgie, 2007).

What is clear is that any policy solution that focuses on one contributing factor, such as low pay, or high stress levels, will fail to solve this complex problem. Policy makers should recognize unique characteristics of the nursing workforce, as well as the reality of a nurse's work, when attempting to manage a supply-side shortage. When policy does not take into account the needs of nurses, it is likely to fail. A strong commitment to understanding the nursing environment and to valuing the quality of care provided by nurses will aid in successful policy development concerning the nursing shortage.

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