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Nursing: A Review of the Literature

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SUPPLY

◊ Aging and retiring Nurse Educators
◊ Fewer young nurses becoming Nurse Educators
◊ More applicants than open positions in nursing schools
◊ Greater professional opportunities for women

DEMAND

◊ Aging population
◊ Increasing life expectancy
◊ Increasing numbers of chronic illness
◊ Many rural hospitals in Wyoming

Nursing Shortage affected by:

RETENTION

◊ Workplace satisfaction
◊ Wages and benefits
◊ Staff levels and workplace stress
◊ Workplace injuries
◊ Overtime
◊ Staff to patient ratios

According to the Bureau of Labor Statistics (2006, BLS), nurses treat, monitor, and educate patients; record medical histories; help to perform and analyze diagnostic tests; teach patients and family members how to manage illnesses and disorders; and provide patient and family support. Although three out of five registered nurse positions are found in hospitals, nurses also work in correctional institutions, schools, long-term care facilities, and pharmaceutical and medical research companies among others. They may also analyze health data, run educational seminars, or work in medical, legal, or investigative research areas (BLS, 2005).

Nursing shortages are not unusual occurrences. There have been recorded shortages of nurses in the 1950s, 1970s, 1980s, and the early 1990s. For the most part those shortages were remedied by offering better wages, better benefits, or by bringing in nurses from other countries (Berliner & Ginzberg, 2002). However, the current nursing shortage is different. It is still based, in part, on dissatisfaction with workplace issues such as wages. However, it is also due to an aging workforce and a decline in nursing school enrollment coupled with less space in nursing programs for new enrollees. These issues will be discussed later in this paper.

It is difficult to predict the exact shortage of nurses the U.S. will face in the future because it depends not only on the number of vacancies, but also on the projected number of new positions needed to meet the needs of the nation's aging population. The Health Resources and Services Administration (HRSA) has created a projection model which shows that, if current trends continue, there will be a shortage of up to 1 million full-time equivalent positions (HRSA, 2004). The BLS (2006) does not create projections for unfilled jobs, but modeling indicates that nursing jobs will grow "much faster than average" in the future.

A shortage of nurses can have negative consequences for both hospitals and patients. Studies have found that replacing a nurse can cost up to twice the nurse's salary with costs going to advertising, interviewing, increased use of traveling nurses, overtime payments for hospital staff, and money lost due to decreased productivity (Atencio, Cohen, & Gorenburg, 2003). Likewise, studies have shown that shortages of nurses in hospitals may cause emergency room overcrowding and fewer staffed beds, which, in turn, may cause the hospital to cancel services and programs or cancel some elective surgeries (Joint Commission on Accreditation of Organizations, 2005).

More serious, though, are the threats to patient health. Studies by Needleman, Buerhaus, Mattke, Stewart, and Zelvinsky (2002) found that

more nurses resulted in lower levels of "failure to rescue" among surgery patients. These researchers also found that patients who received more attention from nurses were less likely to suffer from several common, non-fatal illnesses that were associated with a lack of nurses in past literature, such as urinary tract infections, pneumonia, gastrointestinal bleeding, and shock. Patients with attentive nurses were also more likely to have shorter hospital stays (Needleman, Buerhaus, Mattke, Stewart, Zelvinsky, 2001). Finally, Aiken, Clarke, Sloane, Sochalski, and Silber (2002) found that there is a 7.0% increase in patient mortality for every patient added to the average nurse's workload.

Although most of the following research focuses on nurses in acute care facilities, a shortage of nurses will also have a sizeable effect on long-term care facilities. The Baby Boom generation, which is currently between the ages of 44 and 62, will be entering facilities in greater numbers in 15-20 years, the same time frame as the projected peak of the nursing shortage. Even now some nursing homes are experiencing problems with providing quality care. A recent article from the Government Accountability Office (GAO) (2005) found that although the proportion of nursing homes that offer poor quality care has declined since 1999, there are still quite a few, and this number might be higher due to poor reporting. This report states that better surveying of nursing homes needs to take place. However, it is difficult to hire the RN staff

necessary to survey these facilities due to the nurse shortage and the competition among hiring units. The report also states that the RNs that are hired to survey long term care facilities are often inexperienced at finding and reporting care-related problems and often do not stay long in the position.

Demand Issues

Several issues affect the current and future demand for nurses. The largest population in United States' history, the Baby Boomers, is aging, people are living longer today than ever before, and as people age they are more likely to suffer from one or more chronic diseases that require specialized care.

In the United States people age 65 or older make up approximately 12.5% of the population, but, as the Baby Boomers (born between 1946 and 1964) age, this is expected to increase to 20.2% by 2030. According to the Census Bureau (2005), Wyoming is one of 10 states in which the population older than 65 is predicted to be larger than the population under 18. In addition, the life expectancy of the average American has drastically increased over the past 100 years, from 46 years in 1900 to 76 years now, and is expected to further increase due to advances in medical technology and care techniques (Administration on Aging, 2002). Because of this trend, some groups estimate that the population over age

85 will increase 377.0% by 2050 (Center for Health Workforce Studies, 2006).

With age, however, comes an increased likelihood of experiencing a chronic health condition such as arthritis, hypertension, or heart disease. Research has shown that up to 74.0% of people over the age of 65 have at least one chronic health condition and 65.0% have at least two or more. These health conditions most often include diseases of the circulatory system, endocrine diseases such as diabetes or thyroid problems, and metabolic disorders that lead to high blood pressure or high lipid and cholesterol levels (Wolff, Starfield, & Anderson, 2002).

Older people, especially those who have one or more chronic health ailment, are more likely to utilize health care services. This is not only because those health conditions in general require more medical supervision, but also because older generations are more informed about medical options and are more willing to seek them out than younger people (Center for Health Workforce Studies, 2002). In fact, of all age groups older than one year, those age 65 or older were most likely to visit a physician's office 6.6 visits per person compared to approximately 4 visits per person for those ages 50-64 and less than 3 visits per person for those ages 22-49. Similarly, although the average length of a hospital stay for all age groups has declined over time, the average length of stay

for hospital patients over age 65 was longer at 5.4 days than that for all patients under age 65 (4.3 days) (National Center for Health Statistics, 2004).

Unfortunately, today's healthcare workforce is not prepared for the upcoming increase in older patients. According to the 2000 National Sample Survey of Registered Nurses (Spratley, Johnson, Solchalski, Fritz, & Spencer, 2000), of 2.2 million practicing registered nurses at the time, only 1.0% were certified to practice geriatrics. Additionally, only 4.0% of the nation's Bachelor's level nursing programs offered a comprehensive geriatrics program that included a course dedicated to geriatrics, clinical placements in geriatrics situations, and at least one faculty member certified in geriatrics nursing (Kovner, Mezey, & Harrington, 2002).

This lack of geriatric training, however, is not only a problem for the field of nursing, but also for physicians and other healthcare professionals. This type of training will become increasingly important in the near future not only because patients will be older, but because health problems in older adults may manifest themselves differently than in younger populations, and may therefore be misdiagnosed or overlooked altogether (Merck Institute of Aging and Health, 2004).

Supply Issues

An aging population not only affects those who need medical care, but also those who provide that medical care. A study by Buerhaus, Staiger, and Auerbach (2000) shows that registered nurses are aging at a faster rate than other professionals, and the percent of registered nurses under age 30, estimated to make up only 12.0% of the nursing labor force, has declined faster than in any other occupation in the past 20 years. In addition, the average age of registered nurses nationally is 43.3 years, but as of 2000 the average age of nurses in Wyoming was slightly higher at 44.5 years (Glover, 2002). This means that many nurses are quickly reaching retirement age, and not enough younger nurses are filling those positions. Although recent research showed an increase of nurses entering the workforce in 2002 and 2003, researchers have determined that many are older men and women who are returning to the labor force in response to relatively high unemployment rates and a weaker economy (Buerhaus, Staiger, & Auerbach, 2004).

An important factor that has impacted the supply of nurses in the United States is an aging nursing faculty. As with practical nurses, nursing faculty members are nearing retirement. The average age of nursing professors nationwide ranges from 49 to 52 years (American Association of Colleges of Nurses, 2001).

Job dissatisfaction, particularly with wages, is often cited as a reason for the lack of nursing faculty. Studies have shown that someone with a nursing degree often can earn more working in the field than in a college environment (American Association of Colleges of Nurses, 2003). A Master's degree, or preferably a doctorate, in nursing is required to teach at the college level. The cost of obtaining one of these degrees can be high and may seem non-essential to nurses who already make better wages as practical nurses than they might as nurse educators (Larson, 2002).

Heavy workloads are also cited as factors that contribute to job dissatisfaction by nursing faculty. The responsibilities of college staff in general, and nursing educators specifically, have changed substantially since the 1980s. In addition to the traditional role of teaching, nurse educators are also expected to procure and carry out research grants, participate in many extracurricular activities, and create new and up-to-date courses to incorporate new technology (Berberet and McMillan, 2002).

The lack of nursing faculty results in fewer people being accepted into nursing programs, which, in turn, limits the number of future graduates who will enter the workforce. It has been estimated that although college enrollments increased by 14.1% in 2004, 32,000 qualified applicants

were denied admission due to lack of space (American Association of Colleges of Nursing, 2005).

Although there are currently more nursing school applicants than positions to be filled, the number of people, and especially women, interested in nursing has declined over the past 40 years. Women have historically filled nursing positions but since the Civil Rights Movement of the 1960s women have become more likely to choose a career other than those traditionally considered "women's" jobs, such as nurse and teacher. A study by the GAO (2001) found that female high school graduates during the 1990's were 35.0% less likely to become nurses than similar high school graduates during the 1970s.

Retention Issues

Workplace satisfaction is important in explaining nursing staff shortages. Often, wages and benefits, workplace stress, high injury rates, and overtime demands can combine to create an unfavorable work environment. When this occurs, nurses often look for employment in other areas of healthcare, such as physician's offices, or with pharmaceutical companies, or they may leave the healthcare industry all together.

Nurses often cite their general work environment as a source of dissatisfaction. In particular, they state they no longer have enough time to spend on caring for patients due to both a shortage of nursing staff and a shortage of support staff (.....). In fact, one study has shown more than half of current nurses rate their satisfaction levels as low in regards to inadequate staff levels in the places they work (Peter D. Hart Research Associates, 2001). Because of this, nurses spend a greater share of their time on paperwork and other tasks such as ordering supplies and coordinating activities rather than caring for patients (Joint Commission on the Accreditation of Healthcare Organizations, 2005).

Additionally, nurses report they do not receive a proper level of respect from their employers and from the physicians and other staff that they work with. Some studies have found that nurses who work in environments with poor organizational support and those who don't get enough recognition from their employers are more likely to be dissatisfied (Aiken, Clarke, & Sloane, 2002; United States Government Accountability Office, 2001). Other studies show that verbal abuse by physicians increases nurse stress and job dissatisfaction levels (Joint Commission on Accreditation of Healthcare Organizations, 2005).

Dissatisfaction with work schedules is sometimes mentioned in nursing research (Easton, Rossin, & Borders, 1991). Nurses generally work eight

hour or 12 hour shifts, both of which were studied in a meta-analysis by Smith, Folkland, Tucker, and Macdonald (1998). The authors found that although 12 hour shifts are often associated with better employee morale and fewer absences due to illness among nurses, they are also associated with decreased alertness and increased levels of fatigue, increased work strain, and negative affects on family and social life.

Increasingly, the use of mandatory overtime is being used to offset the problems associated with a shortage of nurses (Lovell, 2006; Ginty, 2004; American Organization of Nurse Executives, 2003; United American Nurses, n.d.; United Nurses of America, n.d.). The Fair Labor Standards Act of 1938, amended, (FLSA) states that if an employee works more than 40 hours in a seven day period of time that employee must be paid no less than one and one half times his or her rate of pay. Because the work schedules in hospitals and other medical institutions tend to be varied and may be longer than 40 hours in one week, an exemption was made for these workers that states an employee must be paid time and a half if he or she works more than 80 hours in a 14 day period of time.

Mandatory overtime in hospitals has become more prevalent in part because of insufficient staffing levels and in part because of the belief that it is less expensive to require nurses to work overtime than to spend money on recruiting (United Nurses of America, n.d.). One study by the

Joint Commission on Accreditation of Healthcare Organizations (2005) found that nurses work more than an estimated eight weeks of overtime per year. Another study (Berney, Needleman, & Kovener, 2005) found that the average nurse works up to an extra 4.5% of their work week as overtime.

A 2000 study by the U.S. Department of Labor (DOL) found that 40.0% of long-term care facilities failed to comply with FLSA regulations governing overtime pay, minimum wages, and child labor laws. In particular, they found that these facilities did not pay overtime to employees due to misclassification, failure to pay for time worked during meals, and general failure to pay time and one-half for extra hours worked.

In reaction to the growing use of overtime in healthcare, many nurses increasingly search for work with pharmaceutical companies, insurance companies, medical device vendors, and consulting firms that are more likely to offer higher wages (IWPR, 2006), regular shifts with little or no overtime, and weekends off (Joint Commission on Accreditation of Healthcare Organizations, 2005). In 2005, members of Congress introduced the Safe Nursing and Patient Care Act (H.R. 791, 2005). Although this bill did not pass, it was intended to increase patient safety by limiting the number of overtime hours nurses may work.

Nursing can be a hazardous occupation. Studies have shown that at least one-third of on-the-job injuries suffered by nurses are musculoskeletal (Joint Commission on Accreditation of Healthcare Organizations, 2005) such as sprained backs or necks, joint problems, and repetitive movement injuries (American Nurses Association, n.d.). Other injuries and illnesses include cardiovascular disease, hypertension, stress, and depression (United American Nurses, n.d.).

Although healthcare settings have not been specifically studied for these adverse reactions, other industries such as transportation and manufacturing have been studied and similar effects have been noted (Agency for Healthcare Research and Quality, 2004). Many occupations in these industries now have regulations on the length of time an employee is allowed to work due to the negative effects that long hours have on workers (United Nurses of America, n.d.). In addition, 10 states have enacted statutes regulating how hospitals use overtime, and 15 other states have considered similar legislation (United American Nurses, 2005).

Another source of job dissatisfaction among nurses involves wages. According to research by the American Hospital Association and the Lewin Group (2005), 64.0% of the money hospitals spend on purchases of goods and services goes to pay staff salaries and benefits. As hospital

income is downsized by smaller Medicare payments, less repayment by insurance groups, and more consumer demand for lower costs (cite), hospital executives argue that there is less money to spend on employee pay raises (cite).

Many factors have led to the decreased financial capabilities of hospitals and other healthcare providers. The Balanced Budget Act of 1997, which was created to control the amount of money spent on Medicare payments (Welensky, 2000), is one of the most important factors for the decrease. Demands by managed-care organizations, insurance companies, and private parties to lower healthcare costs also contribute to the decrease (Needleman, Buerhaus, et.al., 2002; Peterson, 2001). In addition, pharmaceutical and supply costs have steadily increased as have the costs of new technology (American Hospital Association, n.d.). The combination of these factors has led hospitals to claim they have less expendable income.

According to Levine (2002), during the most recent past nursing shortage, from 1989 to 1993, nursing wages increased at a faster pace (20.7%) than wages in other professional occupations (16.0%). Recent research by the Institute for Women's Policy Research (2006) shows that although hospitals started to report shortages of nurses in 1997, adjusted wages for nurses between 1996 and 2000 actually fell. In

addition, Shumacher (2001), reports that nurses' inflation-adjusted wages fell in comparison to the wages of both other female college graduates and other healthcare professionals. It has been found that nurses' wages do not increase substantially in relation to years of service. The United States Department of Health and Human Services (2002) found that, on average, wages for nurses with 20 years of service tended to only be up to 3.0% higher than those of nurses with only five years of experience. Similarly, it appears that education level does not have a significant effect on nurse wages (Ault & Rutman, 2002).

Rural Nursing and Migration

****Intro about Rural/Migration and effect on Wyo****

In rural areas issues with recruitment and retention of nurses are more pronounced. In fact, Bushy (2004) lists five major obstacles that rural nurses may face: scarce resources, the need to be a generalist, social isolation, lack of anonymity and confidentiality, and differences in views on gender roles.

Nurse wages in rural areas can be a detriment to attracting and retaining nurses. Studies have found that nurses in rural settings earn less than their urban counterparts regardless of education level (Skillman, Palazzo, Keepnews, & Hart, 2005). In addition, it is difficult for rural healthcare

providers to offer wages or bonuses that are competitive to those offered by urban healthcare providers. This is due, in part, to firm size since rural providers tend to be smaller and care for fewer paying patients than their urban counter parts, and in part to a lower level of funding received from the federal government in the form of Medicare reimbursements (Trossman, 2001; Bushy, 2004; Frontier Education Center, 2004). Even though the lower cost of living may balance out the pay difference between rural and urban settings, bigger paychecks combined with more social activities and less isolation can make urban areas more appealing (Skillman, Palazzo, Keepnews, & Hart, 2005).

Rural nurses often are expected to become generalists with the ability to care for people in many areas of healthcare rather than specializing in one area, as urban nurses often do. Many nursing programs emphasize choosing a specialty. Consequently, nurses starting work in a rural facility tend to feel they have not been properly prepared for the work (Frontier Education Center, 2004; Bushy, 2004).

Another issue associated with rural nursing is that nurses in these settings tend to have lower levels of education than urban nurses. For example, the Frontier Education Center (2004) found that more rural nurses than urban nurses had Associate's degrees, while more urban than rural nurses had Bachelor's degrees. While this is not a major

problem, research has shown that higher levels of education result in more positive patient outcomes (cite).

Other factors that pose problems for recruiting and retaining nurses in rural areas are social and physical isolation. When nurses and other medical professionals work near medical facilities in urban areas, they have greater opportunities to consult and network with other professionals. This tends to be more difficult for rural nurses although advances in telecommunication equipment and computers have eased some of the difficulty (Bushy, 2004). A contributing factor is the lack of job opportunities for spouses. A nurse interested in working in a rural setting may choose not to do so if his or her spouse is unable to find employment (Tone, 1999). Isolation also creates a problem for obtaining necessary continuing education credits. Although advanced telecommunications and computer systems help to ease this problem, proximity makes it easier for an urban nurse to access educational programs (Bushy 2004).

Finally, social and geographic isolation are factors that dissuade many people. Nurses in rural areas complain that they have lost their anonymity and often get accosted in stores or at home by people wanting ailments diagnosed (Bushy, 2004). Trossman (2001) points out there are three types of people who generally want to work in rural settings: those

with spouses who are employed in the area, those who grew up in a rural area and wish to return, and those who move to rural areas in order to escape "big-city life."

In 1997 Congress implemented the Rural Hospital Flexibility Program (FLEX) as part of the Balanced Budget Act of 1997. Part of this program allowed for the designation of "Critical Access Hospital" (CAH) in order to increase funding to rural hospitals through cost-based medical reimbursements rather than basing repayments on the typical Medicare reimbursement schedule (Stensland, Davidson, & Moscovice, 2003). Prior to this program, rural hospitals suffered from financial issues and many faced closure (Henderson & Coopey, 2000). Reasons for this include a Medicare repayment system that was structured for larger hospitals, the costs of meeting minimum staffing levels even when patient levels are low (Hagopian, Johnson, Fordyce, Blades, & Hart, 2003), and a lack of income caused by people choosing to go to larger hospitals (Henderson & Coopey, 2000).

In order to be designated a CAH, a rural hospital may only have up to 15 beds or up to 25 beds if 10 are swing beds. Additionally, patients cannot be admitted for more than 96 hours, the hospital must provide 24-hour emergency services, and they must apply for and be granted designation

by the state (Henderson & Coopey, 2000). Currently, in Wyoming, there are 14 CAHs (McLean, 2006).

The FLEX program was created not only to keep small rural hospitals viable and increase funding for better services and technology (Henderson & Coopey, 2000), but also to increase funding for staff, particularly nursing staff. Rural administrators have long stated that they have problems recruiting and retaining nurses, especially nurses with experience (RUPRI, 2003). With the additional funds provided by Medicare, CAHs have been able to increase nurse wages although rural nursing wages are still not as high as non-rural nursing wages (Stensland, Davidson, & Muscovice, 2003). In order to balance out the lower wages when retaining nurses, rural hospital administrators have also applied strategies such as extensive networking, "grow your own" training programs, and improved work environments (Hagopian, Johnson, Fordyce, Blades, and Hart, 2003).

Migration, both in and out of the state, is also a topic of concern with regard to nurses. Historically, migration patterns have flowed from nonmetropolitan areas to metropolitan areas, but there was a shift in the 1970s and the 1990s during which more people moved into nonmetropolitan places (Fuguitt, Beale, Fulton, and Gibson, 1998). Wyoming has seen in-migration in recent years, mostly due to jobs in the

Natural Resources and Construction industries, and may see in-migration in the near future due to Baby Boom retirees seeking retirement locations featuring natural amenities. However, there is also a high rate of out-migration, especially among younger people who leave the state, often in search of better paying jobs. Both of these patterns will have an effect on the future supply of nurses in Wyoming.

Research has shown that younger people are more likely to migrate than older people (Sandefur & Scott, 1981), usually for education or career purposes. Cohort analysis by Jones (2005), which examined the appearance of one group of individuals in the Wyoming wage records between 1993 and 2003, found that by 2003, 56.6% of people age 18-24 in 1992 no longer worked in the state. This research also found that although 56.6% of the cohort left the state, there was significant in-migration to fill the gap.

The type and education of workers entering and leaving the state may help explain this. Baron, Glover, & Henderson (1998) found that University of Wyoming graduates who left the state were often in white-collar professions such as engineering, physical sciences, and health professions. Because recent job growth in the state has occurred predominately in the Natural Resources & Mining and the Construction industries (Bullard, 2006), it may be that white-collar workers are leaving

the state in search of better paying jobs in their fields while skilled laborers are moving into the state to fill high paying blue-collar jobs.

Just as out-migration of young professionals can impact nursing in the state, so can in-migration of retirees. Research by Conway and Houtenville (2003) found that, among other things, retirees tend to move to states with favorable income tax laws. According to Kiplinger (...), Cheyenne was named a top retirement location, and .....In addition, Baby Boom retirees are different than previous generations in that they are looking for retirement places that offer outdoor recreation, natural amenities, and opportunities for education. The combination of these factors is making Wyoming and other Western states very appealing to older migrants.

Solutions

There have been several suggestions to fix the nursing shortage including improved work conditions, minimized stress and work injuries, and increased wages. These fixes have worked in the past, and could potentially work now, but because this nursing shortage is based not only on nurse dissatisfaction but also on an aging population, other solutions will also be necessary.

One suggestion is to improve the retention levels of older nurses, past the age of typical retirement. Older nurses tend to have worked in the field longer and are a valuable source of experience and knowledge. The factors that may entice an older nurse to remain employed are somewhat different than those aimed at retaining younger workers. In general, older people are more susceptible to workplace injuries, allergies and other sensitivities, foot or leg pain, or vision problems (Hatcher, 2006). Policies that create a safer, more ergonomic workplace would therefore likely be important to older nurses. Flexible or part-time work schedules are also important to older nurses (Holtom & O'Neill, 2004), as are phased retirement plans (Hatcher, 2006). Although wages are an important factor, especially since research shows that the wages of more experienced nurses are only 1.0-3.0% greater than newly hired nurses (Cohen, 2006, Norman, et al., 2005), benefits packages are often considered more important (Letvak, 2002, Hatcher, 2006).

Magnet Hospital status is often discussed as a means of attracting and retaining nursing staff. Magnet Hospitals must pass a certification process through the American Nurses Credentialing Center that includes documentation of nurse satisfaction levels, patient safety records, and fair labor practices. Magnet Hospitals have existed for the last 20 years, and research about them has shown that these hospitals have less turnover and greater levels of nurse satisfaction than non-Magnet

Hospitals (Aiken, Havens, & Sloane, 2000). These hospitals are known for offering an environment of autonomy that allows nurses to participate in decision making, has career advancement programs in place, allows for a regular exchange of information among nurses, and has adequate nurse to patient staffing ratios (Upenieks, 2003).

The recruitment of foreign trained nurses to fill nursing shortages has been used in the United States and other developed nations for decades (Brush, Solchaski, & Berger, 2004). In general, foreign trained nurses come to the U.S. in order to improve their personal and professional lives through better wages as well as better working and living environments. Additionally, foreign-trained nurses often send part of their pay back home to family members, which becomes a source of income that developing nations are dependent on. This practice is so important to some countries, such as the Philippines, that they train nurses expressly to work in other countries (Aiken, Buchan, Sochalski, Nichols, & Powell, 2004).

Although foreign nurses are useful in filling a hole in the workforce, there are some issues associated with their recruitment. Specifically, there are language and cultural barriers that often must be overcome. In the United States foreign-trained nurses must pass the National Council Licensure Examination for Registered Nurses (NCLEX-RN) as well as the

Test of English as Foreign Language (TOEFL) to become a registered nurse (Brush, Solchaski, & Berger, 2004; Davis & Nichols, 2002). Even those that pass these tests experience difficulties with language barriers that include trouble understanding unfamiliar slang or medical jargon. Likewise, adjusting to cultural differences in such things as body language, eye contact, and various forms of communication is seen as difficult for some (Davis & Nichols, 2002).

Perhaps more importantly, though, are the ethical considerations involved with the recruitment of foreign-trained nurses from nations without enough nurses to spare. The impending nursing shortage is not unique to the United States; rather it is occurring in most developed nations for many of the same reasons (Aiken, Buchan, Sochalski, Nichols, & Powell, 2004). Recruiting creates a more pronounced shortage among impoverished, at-risk populations from which the nurses are taken (Brush, Sochalski, & Berger, 2004). This is true for most African nations and some, like Ghana, have requested that recruitment stop in their country *(Shamash, 2002, in Bush, Sochalski, & Berger, 2004).* Even countries like the Philippines, which have policies aimed specifically at training and exporting nurses, are feeling a strain on their own healthcare workforce (Aiken, Buchan, Sochalski, Nichols, & Powell, 2004; Brush, Sochalski, & Berger, 2004).

Several states have recently passsed legislation allowing the use of medication aides in an attempt to lighten nurse workloads (McDermott, ….). These aides are tasked with administering routine medications to patients, usually in long-term care settings (Wood, …..). Many states require that medication aides be certified and some states require that they be certified nurses assistants before completing training to dispense medications, but the education requirements are not uniform across states (McDermott, ….).

There is very little research on the effectiveness or safety of having medication aides (Wood, …), but they tend to be controversial, especially among the nursing community. Because medication aides are unlicensed and require minimal training, there are questions regarding the medication aides' ability to judge a situation or patient's health well enough to recognize adverse effects caused by medications (Glazer, 2002). One recent study by Scott-Cawiezell, Pepper, Madsen, Petroski, Vogelsmeier, & Zellmer (2007), found that medication aides were actually less likely to make errors than registered nurses, probably because the medication aide is less likely to be interrupted or distracted. The authors point out, though, that this study involved a very small sample and based their conclusions on "naive observation." Because medication aides are so new to the field of healthcare, much more research will be

necessary to determine what effect these aides have on both patient outcomes and on decreasing nurse workloads.

Certified Nurse Aides

Certified Nurse Aides (CNAs) are also predicted to be in short supply in the near future for similar reasons as nurses. According to the BLS (2006), CNAs perform routine patient care tasks such as helping patients with activities of daily life such as eating, bathing and dressing as well as helping to stock supplies and set up equipment. Although CNAs are found in all health care industries, they typically make up a majority of the caretaking staff in nursing homes (Gregory, 2001). Educational requirements for CNAs are far less stringent than those for registered nurses. Federal laws require that a CNA have at least 75 hours of training and pass a certification exam, but some states have laws requiring more hours of training (BLS, 2006).

Although it is predicted that there will be far fewer CNAs than needed in the future, there is much less research on them than on registered nurses (GAO, 2001). What research there is, though, has found that the turnover rates of CNAs, especially those working in long-term care, is very high. Turnover, which in these reports is generally calculated as the number of CNAs who leave their positions at a facility during a period of time divided by the average number that were employed in the facility

during the same time period (Konrad & Morgan, ????), falls between 45 and 105 percent in most studies (Stone, 2001).

High turnover has a negative effect on both the facility and on the patient. As with nurses, recruitment costs to replace lost CNAs tends to be high. Costs include job advertisement, orientation, and training, as well as possible staff overtime costs. In addition, patient care can suffer when a facility experiences high turnover ( ). Because CNAs are in charge of most daily patient activities, they are most likely to notice changes in patient well-being. When turnover is high, not only are patient-caregiver bonds less likely to be formed but patient care may become more rushed and perhaps unsafe as the remaining staff members take on more duties ( ). Although research has shown that CNAs are more likely to work at a nursing home because of "intrinsic reasons" such as the desire to help people (Riggs & Rantz, 2001), turnover among CNAs is often related to three factors: low wages, lack of benefits, and poor work environments.

CNAs are among the lowest paid workers in the healthcare industry and earn only marginally higher wages than similar low-skill or entry-level positions in other industries. For example, the average 2005 hourly wage in Wyoming for all CNAs was $10.21, compared to an average 2005 hourly wage of $9.57 for retail salespersons, $7.97 for maids and

housekeeping cleaners, and $7.93 for cashiers (OES, 2005). The difference, however, is that CNAs generally have more responsibility than workers in comparable positions in that they are responsible for most of the care of nursing home patients (Riggs & Rantz, 2001).

According to the GAO (2001) low wages and limited access to benefits such as employer provided medical insurance and retirement funds are often cited as reasons for high turnover, especially in long-term care settings. The same study found that not only are CNAs more likely to earn lower wages, but their wages are in fact low enough to qualify them for government assistance such as Food Stamps and Medicare. Similar findings by Riggs and Rantz (2001) found that CNAs often have incomes that fall near or below the federal poverty line. Worries about one's financial situation can raise stress levels, and Noelker and Ejaz (2001) found that nurse aides who are stressed about family or financial problems are more likely to be dissatisfied with their jobs.

There is a combination of issues that creates a poor work environment for CNAs and leads to high levels of turnover. The issues include poor management, increase propensity for injury, and a lack of opportunities for job advancement.

A common complaint among dissatisfied CNAs is that management treats them poorly. Because CNA positions are typically low-skill or entry-level, they rarely offer a challenging work environment or much work autonomy. Research by Siefert, Jaratne, and Chess (1991) has shown that a challenging work environment, in particular, has a positive affect on a worker's satisfaction level. Similarly, CNAs cite a lack of respect from management as a reason for dissatisfaction. This leads them to feel taken for granted, especially because they could be an excellent source of information on patients' well being since they spend the most time with residents (Fitzpatrick, 2002).

A study by Eaton (2000) compared "low-quality" and "high-quality" long-term care centers. They found that management in low-quality facilities was not concerned with improving work environments or offering better benefits for CNAs since high turnover levels guaranteed a steady supply of people to fill open positions. Alternatively, institutions with lower patient-loads, higher wages, and better benefit packages not only experience comparatively lower turnover rates, but also had better patient outcomes such as fewer bed sores and fewer hospitalizations. Likewise, a study by the GAO (2001) recommends better wages and benefits, better advancement opportunities, and increased social supports as means to improve CNA retention.

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