

RURAL COMMUNITY COLLEGES AND THE NURSING SHORTAGE IN
SEVERELY DISTRESSED COUNTIES

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The United States is in the middle of a gripping nursing shortage; a shortage that is putting patients' lives in danger. This study determined the impact community and tribal colleges in severely economically distressed counties of the United States have on the nursing shortage faced by health care facilities serving these areas. The initial sample of 24 institutions selected in the Ford Foundation's Rural Community College Initiative (RCCI) (1995-2000). Data were collected from the Fall 1998 National Study of Post Secondary Faculty to obtain characteristics of faculty and from the 2003 Integrated Postsecondary Education Data System (IPEDS) to obtain characteristics of students, both at all publicly-controlled community colleges, all tribal colleges, and the 24 RCCI colleges that included 18 community and six tribal colleges.

A survey was sent to the directors/deans/chairs of the nursing programs to ascertain issues related to the nursing program, nursing faculty, and nursing students. Respondents were asked to identify the healthcare facilities used for students' clinical experiences. A survey was then sent to each of these facilities asking about rural health, and source of nursing staff.

Findings: 1) 87% of these these rural healthcare facilities are experiencing a significant shortage of nurses, and they are challenged to recruit and retain nursing staff; 2) Nursing programs, including both Licensed Practical Nursing and Associate's Degree Nursing are important to these rural community and tribal colleges, have seen growth over the past 5 years and expect to continue growth (86%); 3) Financial aid for

nursing students is critically important; 4) Students are predominantly white and female; minorities are significantly under-represented; 5) Lack of subsidized public transportation and child care for nursing students even at tribal colleges are barriers that impact program completion; and 6) A shortage of nursing faculty exists at rural community and tribal colleges that negatively impacts student enrollment in these programs, thus reducing the rural nursing workforce pipeline.

It is the rural community and tribal college nursing programs help provide severely economically distressed counties of the United States with the nursing workforce needed to decrease the nurse to patient ratio.

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by

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I cannot imagine getting to this point, the completion of my dissertation, my degree, and not having had the support, guidance, direction of so many. This is a feat not to be achieved on one's own. I have been blessed with so many friends constantly wanting updates on my dissertation and giving me a hug when I needed them, and distance when I needed space. Karen Sullivan, you are my inspiration. You are my cheerleader in life, constantly telling me how great I am and how I am your role model, when it is you that I admire. You have been there for me through all the tough times these past three years.

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CHAPTER 1

INTRODUCTION

The United States is in the middle of a gripping nursing shortage. In a white paper released in August 2002 by the prestigious Joint Commission on Accreditation of Health Care Organizations (JCAHO), an independent, not-for-profit umbrella organization that sets standards for health care quality in the United States, upwards of 90% of the nation's long term healthcare facilities lacked adequate nursing staff to administer even the most basic of care. This same study also concluded that a shortage of nurses is putting patient lives in danger. JCAHO examined 1,609 hospital-reported patient deaths and injuries between 1996 and 2002 and ascertained that low nursing staff levels were a contributing factor in 24% of these cases. A distributing report, *Health Care Staffing Shortage*, released on June 27, 2001 by Fitch IBCA, Duff, and Phelps, estimated the percentage of working nurses will fall to 20% below demand by 2020.

The issues that have created this crisis are complex, interrelated and long term in nature. A number of recent studies and reports indicate a common set of concerns and causative factors including but not limited to an aging professional population, a shrinking group of entry-age workers, increasing demand caused by the aging baby boomer population, varied non-nursing employment alternatives, a mismatched diversity within the profession, and current workload pressures. The Tri-Council for Nursing is an Initiative of four autonomous nursing organizations: American Association of Colleges of Nursing (AACN), American Nurses Association (ANA), American Organization of Nurse Executives (AONE), and National League for Nursing (NLN). The Tri-Council identified

a decline of nurses entering the workforce, and revealed certain geographic areas with inadequate ratios of nurses to population exist with too few competently prepared nurses to meet society's changes in health care (AACN, 2001).

The combination of increasing demand for nursing services, the decreasing availability of nurses, and the disincentives for nurses to advance their education have also created a serious shortage of nurse educators. Schools of nursing report major vacancies in faculty driven by increasing retirements, competition with greater salaries in the provider settings, and limited numbers of masters and doctoral educated nurses resulting in the loss of faculty. Low salaries are a major problem: the American Association of Colleges of Nursing (AACN) reports that the average nurse practitioner's salary in 2000 was \$80,000, while the master's-prepared nurse faculty member only earned about \$48,000 (Larson, 2002). The AACN reported in 2004 that master's and doctoral program graduation rates declined by 2.5% and 9.9 percent, respectively, in 2003 alone, compared to 2002. There is also an increasing desire by service settings to have nurses who are prepared at the doctoral levels for positions in health care organizations. Thus, the competition for properly credentialed nursing faculty is sharp. While there has been an increase in the number of admissions, enrollments, and graduations in nursing programs nationwide in 2003, the 2004 AACN report also noted that more than 11,000 qualified students *were turned away* from baccalaureate nursing programs due to limited faculty, limited clinical sites and limited classroom space. Anecdotal reports indicate that nursing programs at community colleges face these same issues.

In a survey of nursing schools conducted by the American Association of Colleges of Nursing (AACN, 1999a), 37% of participating nursing colleges reported insufficient numbers of faculty. This persistent dilemma of a shortage of nurses will only be intensified by an expanding deficit of qualified full-time nursing faculty. According to the National Sample Survey of Registered Nurses for 2000, conducted by the United States Department of Health and Human Services, the average age of the registered nurse (RN) was 45.2 years. Like the overall nursing workforce, the mean age of faculty has increased steadily, from 49.7 years in 1993 to 53.3 in 2002 for faculty holding doctorates, and from 46 to 48.8 for faculty holding master's as their highest degrees earned. The AACN (1999b) associated the decrease in admissions in nursing baccalaureate programs with faculty shortages and budget constraints. It is important to note that this AACN report was released in 1999, well before the current recession, in which 34 states took midyear cuts in state appropriations in 2003-2004 (Katsinas & Palner, 2003). The present day shortages are different from those in the past, due to an aging work force both in nursing and of qualified faculty. At a time when society demands an increase in enrollment into schools of nursing, an increase in qualified faculty to educate these future nurses is required as well. Sadly, budget cuts and other factors are serving to worsen an already bad situation.

It is the rural areas of the nation that suffer the greatest in relation to the shortage of nurses and other health care providers. Rural facilities routinely take significantly longer to fill nursing vacancies than do urban facilities. This is true for 15 out of 22 nursing specialties, according to a February, 1999 survey released by the American Organization of Nurse Executives (AACN, 1999b). While the range of days varied,

healthcare facilities in rural areas took up to 60% longer to fill vacancies than their urban counterparts. The shortest recruiting time in rural healthcare facilities was for new nursing graduates at 21 days, compared with 14 days in urban facilities. The longest recruiting time in rural healthcare facilities was for clinical nurse specialists at 150 days, compared with 90 days in urban areas. In order to train new competent nurses, there must be adequate enrollment spaces in both two- and four-year institutions offering nursing programs. A good pipeline absolutely requires an adequate availability of nursing faculty. White (2003) stated rural hospitals in communities not near a nursing program were hurting because people will work near where they attended school. Referring to eastern Washington, he noted that Blue Mountain Community College, Eastern Oregon University, Walla Walla College and Washington State University, all of which were primarily located nearby, helped bring nurses into local hospitals that otherwise would have struggled to find employees. Not surprisingly, the literature reveals that in rural areas, most rural health care facilities are staffed by nurses trained at nearby community college nursing programs (White, 2003; Viterito & Teich, 2002). For this study, the author found few in depth studies of rural region nursing and allied health that treated the subject in a truly comprehensive systematic manner.

The United States' Native American population, which is clustered in geographically isolated rural areas, has even greater need with fewer options. The nation's American Indians have a higher disease occurrence than other racial/ethnic groups. Some of these diseases have become common only in this last generation, such as AIDS and diabetes. The disproportion in death rates between whites and American Indians, African-Americans, and Hispanics is widely recognized. Even within

these minority groups, however, it is the American Indian that ranks at the bottom. Native Americans are 650% more likely to die from tuberculosis than other Americans, 318% more likely to die from diabetes, 670% more likely to die from alcoholism, and 204% more likely to suffer accidental death when compared with other groups, according to a July 2003 report by the U.S. Civil Rights Commission. That report did not refer to HIV/AIDS, but recent research studies indicate this is a growing epidemic among American Indian people (Ambler, 2003). To people who live in such severely distressed communities, these are not just numbers but are the constant realities of alarms and telephones calling them to hospitals and funerals. They must witness a favorite relative losing his or her sight, or having a lower extremity amputated as a result of poorly controlled diabetes, or see the high school football star athlete or cheerleader having to move into the city for diagnosis and treatment of HIV because there are no nearby resources available to them.

In its entirety, the Native American population is growing at a faster rate than the U.S. population (U.S. Census Bureau, 2000). Between 1990 and 2000, there was a 26% increase in the Native American/Alaskan Native population, with a 110% increase just among all Native Americans alone. This is compared to the significant 13% increase in the U.S. population over the same period. Ranking at or near the bottom of nearly every social, health, and economic indicator, the socioeconomic conditions of the Native American population in the U.S. reveals a dire need for assistance. The national average of poverty rate for Native Americans between 1999 and 2001 was 24.5%, compared to the U.S. annual poverty rate of 11.6%. Various reports of the U.S. Commission on Civil Rights have continued to document dismal conditions in Native

communities for more than 40 years, initially attempting to address this with the passage of the Indian Civil Rights Act of 1968 (25 U.S.C. 1301-1303).

The unmet healthcare needs of the Native Americans remain among the most severe of any group in the U.S. The Indian Health Service (IHS) is the primary Native American health care provider, and the Department of Health and Human Services' largest recipient of Native American-specific funding. Its many responsibilities include clinical care, preventive health care, facility construction and maintenance, health professional development, and community sanitation improvement. Fifty-five percent of the U.S. Native American population depends on the IHS for all health care needs (IHS, 2005). The IHS supports 49 hospitals and more than 540 health clinics and other facilities, many of which are operated by the tribes themselves (IHS, 2005). The IHS is also experiencing critical shortages of nurses and health technicians. The 1976 Indian Health Care Improvement Act (P.L 94-437) authorizes the training of Native Americans to enter health professions through scholarships, loan repayment programs, recruitment and retention, and employment placement. Sadly, however, despite such critical need, funding invested in health professional training in 2002-2003 actually decreased (U.S. Commission on Civil Rights, 2003).

Native Americans tend to respond to a physician or nurse who looks more like them, and who understands them better than someone from the outside. By educating Indian health professionals - doctors, nurses, and nutritionists – these communities have the opportunity to *become* healthier. Several tribal colleges have developed new and critically important nursing programs; for example Salish Kootenai College in northern Montana trains dental assistant technicians which are also in great demand

(Ambler, 2003). Although many illnesses could be addressed by proper nutrition, reservations tend to lack trained nutritionists. Fond du Lac Tribal and Community College in Cloquet, Minnesota, is one tribal college that operates a two-year associate degree in nutrition (Ambler, 2003). More such programs are needed.

While the need for additional nurses continues to grow throughout the nation, the healthcare industry cannot fill the positions that are *currently* vacant. A recent national study projected the gap between the supply and demand for registered nurses to be 808,000 by 2020. The national Joint Commission on Accreditation of Health Care Organizations reports that as of 2002, over 126,000 nursing positions remain unfilled in hospitals nationally, with even more acute shortages in long term care and home-health care agencies. Inadequate numbers of healthcare providers has serious consequences. Some studies have even linked the shortage of nursing staff in hospitals to increased rates of patient mortality (Aiken et al., 2002).

Statement of the Problem

This study examines extent of the impact of the shortage of nurses focusing on rural areas in severely economically distressed counties of the United States as identified by the Appalachian Regional Commission (ARC) (2002). The federal government is considering decreasing what limit cost-reimbursement to critical access hospital funding it offers to these small rural hospitals if they try to expand (Rowley, 2005). The Prospective Payment System will require those not considered critical access hospitals to settle for typically lower pre-determined reimbursements (Rowley, 2005). These facilities will have to meet the financial challenges of providing high quality

health care to a population base that is smaller, older and sicker while receiving less financial support. Continued funding is needed for these facilities to update and expand their technology. They also need nurses. They will require funding to acquire more nurses to carry out the care of these patients at a time when nurses are a scarce commodity.

Community colleges would appear to be in the perfect position to assist these healthcare facilities to acquire the nurses needed to care for the patients. Designed to serve the community in which they are located, these rural colleges need to have adequate funding to offer nursing programs and other allied health programs to meet the demand of the communities. But severe budget cuts combined with internal budget inflexibility and lower economy of scale have challenged rural community colleges to deliver the nursing and allied health programs that urban and suburban Americans take for granted (Katsinas and Palmer, 2003).

This study investigated community colleges located in severely economically distressed regions of the United States. Do they offer nursing programs, and what issues do they face in meeting the needs of the students and faculty? The study identifies characteristics of the faculty and students at these community colleges and issues each face. This study also examines some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, while looking at the communities these facilities serve and the nurses employed.

Purposes of the Study

There are two main purposes to this study: First is to identify characteristics of nursing programs at community colleges serving severely economically distressed rural regions of the United States. This study looks at the characteristics of the nursing programs at these community colleges, the nursing faculty, and students in nursing and issues faced by the colleges, the faculty, and the students. These include the identification of:

1. Issues facing the nursing programs at these rural community colleges, including tribal colleges, serving severely distressed rural counties;
2. Issues in recruiting and retaining faculty, if any, and issues students face attending these rural community colleges, including tribal colleges, serving severely distressed rural counties;
3. Characteristics of the nursing faculty (gender, age, ethnicity, and salary) in rural community colleges, including tribal colleges, serving severely distressed rural counties;
4. General characteristics of students (gender, age, ethnicity, and degree awarded) and issues faced by these students in the nursing programs at rural community colleges, including tribal colleges, serving severely distressed rural counties; and
5. The impacts, if any, these rural community colleges, including tribal colleges located in the severely distressed rural counties, have in ameliorating the nursing shortage in hospitals and clinics located in the surrounding counties of the identified institutions.

To date, research examining the impact community colleges in severely economically distressed counties of the United States have on the healthcare workforce in the communities they serve has been quite limited. Though it is a well known fact that a nursing shortage throughout the world exists, the impact community college nursing programs and allied health programs have on the healthcare facilities they serve has not been fully examined. The purpose of this study is to examine 24 community colleges that serve severely economically distressed rural areas of the

United States and to ascertain how their nursing programs affect the nursing shortage, if any, in the healthcare facilities in their service areas.

Primary Research Questions

There are two primary research questions of this study:

1. What are the characteristics of nursing programs at community colleges, including tribal colleges, that serve severely economically distressed rural counties of the United States, in terms of characteristics of the nursing field of study, the faculty, and students?
2. What are some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, in terms of characteristics of the health care facilities, communities served by these facilities and the nurses employed?

Significance of the Study

This study is significant for several reasons. First, the nursing shortage appears to be at a crucial point in history. While found throughout the nation, it appears that counties in severe poverty, including most of America's Indians reservations, are perhaps the hardest hit by this shortage. There is great need for more students to choose the health care professions for their careers in these counties, and for rural community colleges, including tribal colleges, to provide those programs. If the present day student can be described, perhaps then these "types" of students can be targeted in the primary grades and middle school, and nurtured early to be encouraged to choose this challenging career. Second, if there is an increase in students, there must also necessarily be an increase in faculty. Teaching the Native American student, for example, requires knowledge in their culture and their history. Who are the faculty members that teach in these colleges? The faculty of the present must be examined to

assess how far off we are in having adequate numbers for these students. National faculty surveys indicate that faculty members are aging at most community colleges, so who will replace the current all-too-small nursing educator workforce as they retire? Thirdly, community colleges, and this certainly includes tribally controlled community colleges, are designed to serve the communities in which they reside. It is also well known anecdotally that most RNs in rural areas were trained by the nearby community colleges who are part and parcel of their communities and regions. The Native Americans prefer to be treated by their own kind who can understand their culture and their special needs. Native American nurses who have received their training at a nearby college of nursing are much more likely to be aware of these cultural and special needs of this special population.

Definition of Terms

For the purpose of this study, the following terms are defined:

- Associate Degree in Nursing (ADN) - A nursing degree granted by a two year college on successful completion of undergraduate course of study. The two year program is designed to prepare students to provide and manage client care and to become members within the discipline of nursing. Core components are introduced, developed, and built upon throughout the curriculum. Upon graduation, the graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).
- Nursing shortage - The decline of nurses entering the workforce, certain geographic areas with inadequate ratios of nurses to population, and too few competently prepared nurses to meet society's changes in health care.
- Community college – A comprehensive postsecondary higher education institution that offers a wide range of curriculum while awarding the associate's degree as the terminal credential. It includes academic courses that correspond with those offered in the first two years of a baccalaureate granting institution and a number of vocational/technical occupational programs. This term encompasses community colleges, junior colleges, and vocational/technical institutions.

- Faculty – Individuals identified as such by their institutions with assignments including instruction, research or public service as their primary activities. These individuals may hold titles as professor, associate professor, assistant professor, instructor, or lecturer, and may include any other employees of the institute if they maintain a separate responsibility at the institution in instruction, combined with research and/or public service (National Center for Education Statistics, 2004).
- Registered Nurses (RN) - Individuals graduating from a college of nursing and passing the licensure examination to become registered in that state. This includes both Associate Degree graduates from community colleges and Baccalaureate graduates from universities. There are still some diploma nursing schools within the hospital setting from which individuals graduate and take the same licensure exam as other RNs.
- Licensed Practical Nurse (LPN)_ - also referred to as Licensed Vocational Nurses (LVNs) in Texas and California. According to the U.S. Department of Labor Occupational Outlook Handbook, LPNs are individuals who care for the sick, injured, convalescent, and disabled while under supervision of the RN, advance practice RN, physician assistant, or physician, having one of these resource persons accessible by telephone or other similar means LPNs have completed training and have passed a state exam to practice under this title (Bureau of Labor Statistics, 2005). Some states vary slightly to the limitations of the LVN's scope of practice, however, LVNs cannot practice independently in any state.
- Publicly controlled community colleges – two-year educational institutions whose programs and activities are operated by elected or appointed officials and supported primarily by local, or public, funding.
- Severely distressed rural counties – The Appalachian Regional Commission (ARC) identifies these counties using five categories: poverty level - according to the 1990 census, the poverty rate was greater than or equal to 150% of the U. S.; unemployment rates - their 3 year unemployment average was greater than or equal to 150% of the United State (U.S.), and market income - the market income per capita was less than or equal to 67% of the U. S.; their relative level on each of these distress measures in comparison with U.S. averages; and how many of the three measures are below threshold values in comparison with national averages (AACC, 2003).
- Tribal colleges - According to the American Indian Higher Education Consortium (AIHEC), tribal colleges, mostly located on reservations, are community colleges which serve the isolated geographical populations that would have no other means of access education beyond high school level. These land grant institutions rebuild, reinforce and explore traditional cultural relevance using uniquely designed curriculum and institutional settings.

- Tri-Council for Nursing –The American Association of Colleges of Nursing, American Organization of Nurse Executives, the American Nurses Association, and the National League of Nursing formed in 1975 although it is not a decision-making body, the Tri-Council provides a forum for cooperation among and between the major nursing organizations, and has continued to serve as a voice for the entire profession in addressing policymakers, legislators, and the general public.
- Katsinas, Lacey and Hardy (2005) Classifications – A classification of publicly controlled community colleges by: location (urban-serving, suburban-serving and rural-serving), college governance (single and multi-campus among urban-serving and suburban-serving) and size (small, medium, and large rural-serving) (Katsinas, Lacey, and Hardy, 2005).

Limitations and Delimitations

Limitations

1. One of the primary limitations of the study relates to the availability and quality of the data available in the National Center for Educational Statistics' Integrated Postsecondary Education Data System (IPEDS) and National Study of Postsecondary Faculty (NSOPF) on the institutional populations being investigated.
2. The data in this study is limited by the survey instruments which were developed and administered especially for this study, relying on self report from individuals at the surveyed facilities.
3. The data in this study were collected from institutions that are fluid and changing. The data simply gives a picture of the institutions at the time the surveys were completed by the facilities.

Delimitations

1. The survey instrument named "A survey of community college healthcare program deans/directors on issues related to the shortage of nurses and other healthcare providers" was administered to only the 24 community colleges, including tribal colleges, were those selected in Ford Foundation's Rural Community College Initiative from 1995-2000 from a group of 90 community colleges servicing approximately 319 severely distressed counties in the United States. This study is delimited in the generalizability of the findings to beyond the population being studied; the 24 community colleges surveyed.

2. Only the community colleges that offer a nursing program in the sample of 24 will be used for the parts of the study that pertains to nursing issues.
3. The data from the survey instrument named “A survey of community healthcare clinics/hospitals on issues related to the shortage of nurses and other healthcare providers” were collected from only those healthcare facilities that returned the completed surveys from a larger population that had been identified in the surveys completed by the 24 community colleges. This study is delimited in the generalizability of the findings to beyond the population returning the surveys.
4. This study is not looking at allied health, or other healthcare providers other than nurses, though the survey tools will collect data on these for future research.

The following chapters will discuss the nursing shortage and causes for the shortage more in depth. The study will be described in detail displaying the results of the study in tables. Finally the findings will be discussed along with recommendations for further research.

CHAPTER 2

REVIEW OF RELATED RESEARCH AND LITERATURE

Introduction

The purpose of this study is to examine the impact that community colleges, including the tribal community colleges, have on the nursing shortage in severely distressed counties of the United States (US). The review of the literature presented in this chapter is formatted to first concentrate on the issue of the nursing shortage and secondly, the impact the shortage of competently prepared nursing faculty. The review will then examine the community colleges offering Licensed Vocational Nursing Certifications and Associated Degrees in Nursing located in severely distressed counties of the US, including the tribal colleges and the impact the community colleges has on the nursing shortage in these severely distressed counties.

America's Nursing Shortage

America's current nursing shortage is different from past nursing shortages of the 1960s and 1970s in two distinguishing ways: (1) the aging of the nursing workforce, and (2) the overall shrinking of the nursing workforce. The most recent National Sample Survey of Registered Nurses (2000), prepared by the United States Department of Health and Human Services, reports that the average age of the nation's working registered nurse (RN) population was 43.3 in March 2000. Some states possess an even older nursing workforce. In Massachusetts for example, the average age is even higher (45.7 years), while its RN population under the age of 30 dropped from 25.1% of

the nursing population in 1980 to just 9.1% in 2000 (Massachusetts Colleagues in Caring Collaborative, 2002).

Retention issues and turnover rates are also contributing to high current vacancy rates. The image of nursing as a demanding role with ever-increasing workload stress may be keeping qualified new recruits away. Currently, young people and in particular women are not choosing to become nurses in part because they have other more appealing career options from which to choose. The Massachusetts Colleagues in Caring Collaborative (2002) found that nurses typically leave their positions due to workplace issues that include greater workloads, inadequate staffing, changing roles, and workplace safety. Many employer-based solutions such as increased salaries, sign-on bonuses, referral bonuses, and flexible scheduling options are being utilized as short-term solutions to address these vacancy issues (AACN. 2004).

Long-term recruitment strategies are also being implemented to varying degrees. Marketing campaigns, such as that sponsored by Johnson & Johnson, a Fortune 100 corporation, are aimed at changing the image of the nursing profession in order to attract new recruits. Legislative efforts at the federal and state level have also been aimed at raising public awareness of the shortage, and providing direct funding to individuals interested in nursing careers (AACN, 2004). Collaborations between public and/or private entities including healthcare employers and schools of nursing are also being developed to bring students into nursing programs, and to build increased loyalty toward potential employers.

This is not the first time that America has been faced with the predicament of a shortage of nurses. Having enough competently prepared nurses has been a problem

dating back in the early 1900s. Yett reported in 1966 that there had been a national concern about the shortage of nurses for over 25 years, yet the problem had continued to grow. The 1960s brought to the attention of the federal government the critical shortage of competently trained nurses, which led to the federal Nurse Training Act of 1964 (PL – 79-725).

Though federal support of nursing started in 1933 with the employment of the U.S. Public Health Service's first nursing consultant, it was not until the early 1960s that the federal government was faced with the rising national concern toward the critical problems facing the nursing profession. A Consultant Group on Nursing was appointed by the Surgeon General of the Federal Public Health Service in 1961 to review nursing needs, and to identify what the federal government could do to ensure quality nursing service to society.

In 1963 the Consultant Group's report, *Toward Quality in Nursing: Needs and Goals*, cited two serious problems affecting the nursing profession: first, in its ability to deliver high-quality nursing care: critical shortage of well-educated nursing faculty; and second, the high proportion of direct care given to hospital patients by auxiliary nursing personnel. The Consultant Group developed a monitoring method that could be modified as conditions changed. It consisted of four steps: 1) assessment of the service-demand trends in the various healthcare settings; 2) determination of nurse staffing patterns for each of these settings; 3) application of the ratios determined in step 2 to future estimates of the population to be served (from step 1), so as to estimate the number of nursing personnel needed in each type of setting; and 4) determination of the educational preparation of the personnel estimated needed on the basis of

generally accepted criteria. The Consultant Group stressed the need for a considerable increase in baccalaureate and graduate level nurses. *Toward Quality in Nursing: Needs and Goals* made multiple recommendations which covered a broad range of activities directed toward the problems facing the nursing profession at all levels. It further stated that if the problem was to be resolved, substantial expansion of support from the federal government directed toward nursing and nursing education was required.

On September 4, 1964, President Lyndon B. Johnson signed the Nurse Training Act. This Act amended the 1936 Public Health Service Act, authorizing a five-year program of financial support in the expansion and improvement of nursing education. It approved \$283 million to be spent over four years to help strengthen the nation's nursing corps by: 1) allotting grants to assist in the construction and rehabilitation of nursing schools; 2) allotting grants for the purpose of defraying the additional costs of projects needed to strengthen and improve nursing educational programs at the nursing schools; 3) offering payments to diploma schools of nursing for the reimbursement of a portion of costs due to an expected increase in enrollments from the provisions offered by the Nurse Training Act; 4) extending the Professional Nurse Traineeship Program providing students with advanced training; and 5) offering loans to fulltime nursing students with debt forgiveness. Of the \$283 million, \$39 million was designated specifically for collegiate programs. This Act propelled nursing education into the community college and university systems as a financially feasible educational endeavor.

A statutory requirement in the Nurse Training Act of 1964 was that every three years, a review of its progress would be reported to Congress. The Secretary of Health,

Education and Welfare (HEW) appointed a Program Review Committee consisting of leaders from nursing, hospital administration, medical practice, economics, secondary and higher education, and the general public. In 1967, the Committee began to prepare a report after reviewing the programs authorized by Congress in 1964. The Committee recognized that a nurse needed to have a good understanding of basic science and medical practice to develop clear therapeutic goals for the patient. Noting that some limitations of the Act had already been identified by Congress in the amendments of 1966, it identified the continuation of the shortage of prepared faculty to teach in the nursing schools and to function as leaders in the field as a key challenge to the nursing profession (Notter, 1968).

The Program Review Committee presented its recommendations to the Secretary of HEW for use in reporting to Congress in January 1968. Their report urged that the Division of Nursing be fortified, supported, and given the prestige and organizational placement necessary within HEW to develop it into a national center for nursing, where the essential elements of education, service, research, and practice would be kept together. It emphasized national needs would be reviewed and assessed, and recommended adequate resources be made available to assure a balanced educational program to meet identified needs. The American Medical Association was well aware of the critical shortage of nursing in the 1960s, and agreed with the HEW Progress Review Committee that nurses needed to be educated in basic sciences and medical knowledge to deliver patient care (Yett, 1966).

Master's degree candidates had increased by 1,000 from 1962 to 1966, and doctoral students had increased from 116 to 200, due to the federally supported Long-

Term Traineeship Program authorized by the Nurse Training Act of 1964. However, Notter (1968) still acknowledged a critical shortage existed of both qualified nursing educators and researchers in the institutions of higher education. One of the problems that the Act ran into was the increasing demand for nursing faculty and the rising cost of advanced education to students and colleges, which rose more rapidly over the four years than did the availability of the financial resources.

The Health Manpower Act of 1968 authorized a two-year continuation of the Nurse Training Act of 1964, and expanded the boundaries set by the Act to include the following: grant eligibility to nursing schools accredited by other programs, support for special nursing educational projects and continuing research in nursing education, and establishing an order for prioritizing grants. It also authorized another \$10,727,000 in additional funds.

In 1970, the Nurse Training Act was re-evaluated by the HEW *Progress Report on Nurse Training B 1970*. Since the first report in 1965, *Toward Quality in Nursing* the total enrollment number in the Nation's nursing schools in the academic year 1969-1970 grew to 150,795, an estimated 13,195 higher than it would have been without the provisions provided by the Act. The number of registered nurses with bachelor's degrees had increased by 84 percent, while RNs with master's degrees increased by 63% and those with doctorates doubled to more than 700. In the 1970s, there was an increase in federal money for more nursing programs, especially at community colleges, and more money was invested into nursing education. The *Progress Report on Nurse Training - 1970* marked increase in graduate preparation with doctoral programs

becoming more widespread. There can be no question that the nearly \$11 million of targeted federal funds dramatically expanded the nursing educator pipeline.

The nursing shortage of the 1970s was met by increasing the number of nursing programs, especially at community colleges, financed by more federal money made available for nursing education. In the early 1980s, the nursing shortage supposedly came to a halt with nurse layoffs and cutbacks due to the introduction of diagnose-related groups (DRGs). The DRGs resulted in a decrease in the amount of financial reimbursement from the healthcare insurance companies and Medicare to the providers related to a diagnosed illness, resulting in a significant drop in profits for hospitals. In order to counter the decrease in profits, hospitals decreased their workforces which consist predominantly of nurses. This also led to a decrease in nursing faculty positions due to declines in student enrollments (DeYoung and Bliss, 1995).

However, by the late 1980s, the ever-present shortage generated innovative programs to recruit and retain nurses with newly developed nursing care delivery systems. Unfortunately these gains were largely halted with the expansion of managed care groups, and the resulting changes that soon occurred in healthcare reimbursement. The shortage of nurses continued on into 1990s. Talented women in particular were choosing more lucrative, autonomous careers that had become available to them. By the late 1980s, nursing salaries were increasing and new practice careers were opening in nursing. The enrollment into nursing schools climbed, but enrollment was limited to the clinical placement availability, qualified clinical instructors, and budgetary support (Brendtro & Hegge, 2000).

America's Shortage of Nursing Faculty

The 1990s found nursing schools unable to fill full-time faculty positions. The response was to increase the number of part-time and adjunct faculty, and eliminate the full-time positions. In 1993, the National League of Nurses found that colleges of nursing appeared to be utilizing part-time and adjunct faculty as a means of reducing their costs, and restricting the number of full-time and tenure track faculty positions. A 2003 American Association of Critical Care Nurses' survey on vacant faculty positions found 614 faculty vacancies at 300 of the country's nursing schools, and a total nurse faculty vacancy rate of 8.6 percent. According to the same poll, more than 200 doctorally prepared faculty instructors will be eligible for retirement annually between 2004 and 2012.

As with the nursing shortage, the faculty shortage is the result of a number of complex factors. In 2002, Joint Committee on Accreditation of Healthcare Organizations (JCAHO) identified these factors to include the aging of faculty, increasing retirements, lower salary levels compared to clinical roles, the challenges in an academic environment, the length of time it takes to get a graduate or doctoral degree in nursing, the lack of graduate programs with educator tracks, and the fiscal crisis in the states throughout the nation.

The American Association of Colleges of Nursing's *Nursing Faculty Shortage* Fact Sheet (2004) identified the national median age of nursing faculty to be 51.5 years. Informal survey data collected from the publicly funded schools of nursing indicates that the average for nursing faculty at state colleges and the University of Massachusetts campuses is between 50-55, while at the community colleges, the age may be slightly

younger. The current faculty vacancy rate in Massachusetts averages approximately 17% at ADN programs and 6% at BSN programs. The vacancy rate is expected to remain at this level or increase over the next several years (AACN, 2004).

The problem is that there are minimal numbers of individuals in the nurse educator pipeline to replace those who do retire. Many nurses are also not choosing to further their education. In fact, many nurses report there are inherent disincentives in salary and advancement opportunities if they leave their positions to acquire advanced degrees. Unlike other professions that have built-in incentives such as promotions and higher rates of pay correlating to educational advancement, nurses are rewarded financially and professionally only for their time on the job. A nurse who leaves practice to obtain an advanced degree usually loses ground to her colleagues who remain in practice over the same time period. In addition, there appears to be limited capacity in nursing graduate programs to support nursing education programs (DeYoung and Bliss, 1995).

The Nurse Education and Practice Improvement Act of 1998 (Public Health Service Act, Title VIII), known as the Nurse Education Act (NEA), provided federal support for nursing education programs at several points beginning at entry-level through graduate education. The NEA encompasses three grant programs, Advanced Education Nursing, Nursing Workforce Diversity, and Basic Nurse Education and Practice with two loan programs, the Nursing Education Loan Repayment Program (NELRP) and the Nursing Student Loan (NSL) Program. In Fiscal Year (FY) 2001 Congress provided approximately \$78 million.

The AACN, American Nurses Association (ANA), American Organization of Nurse Executives (AONE), and the National League of Nursing (NLN) formed the Tri-Council for Nursing for the purpose of finding focus and a unified voice to issues that include leadership for education, practice, and research. The Tri-Council recommended \$103.7 million for the funding of the NEA grant programs and an additional \$20 million for student loans for FY 2002. The increase in NEA funding was to support the capability of nursing programs to prepare more faculty to educate nurses to meet the nation's health care needs. It is the Advanced Education Nursing Grants which support the majority of programs that prepare graduate-level nurses for faculty positions (AACN, 2001).

In 1952, the Associate Degree Nursing (ADN) education was developed as a result of a research project conducted by Dr. Mildred Montag of Teachers College, Columbia University, New York. The purpose of Montag's study was to examine a means to alleviate a critical shortage of nurses through decreasing the length of the educational process to two years, while still providing a sound nursing educational base by placing the program in community/junior colleges (Haase, 1990). Funded by the W.K. Kellogg Foundation in 1958, seven pilot sites were implemented in four states. The success of the study was phenomenal, resulting in a growth from seven pilot sites in 1958 to more than 880 in 2002. Over 600 of those were located in community colleges. ADN programs prepare the largest number of new graduates for RN licensure. These programs also have a high rate of passage in first attempts on the NCLEX-RN exam which is one criterion all states require for licensure as a Registered Nurse. The

Table 1

Graduate Numbers and Passage Rates of Three Different Nursing Programs

| Program Type | Number of Graduates | NCLEX-RN Passage Rate |
|----------------------|---------------------|-----------------------|
| Diploma | 2,565 | 89.9% |
| Associate Degree | 47,423 | 87.0% |
| Baccalaureate Degree | 26,630 | 86.9% |

Source: National Council of State Boards of Nursing, 2003

passage rates the three different types of nursing programs for the January to December 2003 is in the table below. (Haase, 1990)

Not surprisingly, most ADN programs are located in community colleges and many are located in rural settings. Besides the proximity of the program, an ADN education is cost effective and accessible to diverse populations such as the adult learners making a career move, males, married students, and minority populations. This holds true for those located in the severely distressed counties of the United States.

For many years Licensed Practical Nurses (LPNs) have worked with registered nurses and physicians in multiple settings. Many years ago, some women referred to themselves as practical nurses though they had no formal education. The first documented schools for training nurses were founded around 1873. These were Bellevue Hospital in New York City, Massachusetts General Hospital in Boston, and New Haven Hospital in Connecticut. These were followed by the Ballard School in New York City, founded in 1892 and the Thompson Practical Nursing School in Vermont, founded in 1907 (White & Duncan, 2001).

In 1941, the LPNs organized and their own professional organization, the National Association for Practical Nurse Education & Services (NAPNES). A successor organization, the National Federation of Licensed Practical Nurses (FLPN) was founded in 1949. The NAPNES recommended in 1946 that the states require a licensure examination for these nurses. Not all states jumped on board right away, but gradually, state by state, the LPN nurses were recognized as a part of the nursing profession. Some were waived in by utilizing the “grandfather clause” required that the nurses have letters of recommendation from a physician or supervisor, while others required 5 year work experience.

Each state has its own practice act that establishes appropriate scopes of practice for LPNs along with the education and training of LPNs. Typically LPNs can apply to take a licensing examination after having completed 1 or 2 years of training at a community college program, adult educational program, or a private vocational school. Though it varies state to state, LPNs are almost always required to be supervised by an RN, advance practice nurse, physician assistant or physician (National Center for Health Workforce Analysis, November, 2004).

There is limited research literature about the LPN’s practice or the effective utilization of the individuals in the healthcare systems. According to the Bureau of Labor Statistics (2000), 39% of licensed nurses in hospitals and 46% of licensed nurses in long-term care setting are LPNs. Their growth and demand have remained constant throughout the 1990s, though less in areas of health maintenance organizations (HMOs). There is an increase demand in nursing homes for LPNs, however LPNs are still limited in their scope of practice as compared to RNs (Buerhaus, 1996).

The demographic characteristics of LPNs and RNs are very similar. Both are an aging workforce with the average LPN's age of 49 being slightly older than RNs of 48. The ethnicity divisions for LPNs are comparable to RNs. At 67% in 2001, LPNs are primarily white, with the largest minority group of LPNs being black, comprising 26% of the workforce in 2001. Hispanics comprise 3%, Asians are 3%, with Native Americans about 1% of the LPN workforce (National Center for Health Workforce Analysis, November, 2004).

Table 2 lists the number of LPNs and RNs per 100,000 population range as set by the 2000 U.S. Bureau of the Census. These numbers ranged from a low of 88 in Oregon to a high of 365 in Arkansas. Alaska, Nevada, Colorado also listed low numbers of LPNs - 90, 102, and 118, respectively, with Utah, and Hawaii LPN numbers in the 120s. It appears that the Western part of the U.S. has the lowest concentration of LPNs, while the South and Midwest have the highest. This pattern is similar to that reflected in the data for RNs (U.S. Bureau of the Census, 2000). States with the lowest numbers of RNs per 100,000 individuals in the population are mostly located in the western region. These include Nevada, California, Utah, Idaho, and Texas. The highest numbers are in the Northeast and Midwest.

Table 2

LPNs and RNs Per 100,000 Population

| State | Estimated Number of LPNs Per 100,000 Population | State Rank - LPNs Per 100,000 Population | Estimated Number of RNs Per 100,000 Population | State Rank - RNs Per 100,000 Population |
|---------|---|--|--|---|
| Alabama | 303.6 | 7 | 852.1 | 24 |
| Alaska | 90.0 | 50 | 793.5 | 33 |

(table continues)

Table 2 (continued).

| State | Estimated Number of LPNs Per 100,000 Population | State Rank - LPNs Per 100,000 Population | Estimated Number of RNs Per 100,000 Population | State Rank - RNs Per 100,000 Population |
|---------------|---|--|--|---|
| Arizona | 134.2 | 45 | 664.2 | 45 |
| Arkansas | 365.3 | 1 | 772.3 | 35 |
| California | 135.9 | 43 | 596.8 | 49 |
| Colorado | 118.8 | 48 | 716.8 | 41 |
| Connecticut | 187.0 | 31 | 977.1 | 8 |
| Delaware | 179.9 | 33 | 964.5 | 9 |
| D. C. | 161.9 | 40 | 303.6 | 51 |
| Florida | 234.8 | 20 | 801.4 | 32 |
| Georgia | 223.4 | 22 | 717.1 | 40 |
| Hawaii | 129.5 | 46 | 709.8 | 42 |
| Idaho | 194.7 | 28 | 641.0 | 47 |
| Illinois | 166.8 | 39 | 861.1 | 22 |
| Indiana | 245.0 | 15 | 867.2 | 21 |
| Iowa | 210.7 | 26 | 998.6 | 3 |
| Kansas | 237.9 | 19 | 947.0 | 13 |
| Kentucky | 243.4 | 17 | 858.3 | 23 |
| Louisiana | 324.6 | 3 | 760.1 | 37 |
| Maine | 176.9 | 35 | 952.0 | 12 |
| Maryland | 175.7 | 36 | 935.7 | 15 |
| Massachusetts | 190.9 | 30 | 1099.0 | 1 |
| Michigan | 182.4 | 32 | 803.8 | 31 |

(table continues)

Table 2 (continued).

| State | Estimated Number of LPNs Per 100,000 Population | State Rank - LPNs Per 100,000 Population | Estimated Number of RNs Per 100,000 Population | State Rank - RNs Per 100,000 Population |
|----------------|---|--|--|---|
| Minnesota | 321.8 | 4 | 954.7 | 11 |
| Mississippi | 307.2 | 6 | 824.0 | 27 |
| Missouri | 274.2 | 11 | 878.3 | 20 |
| Montana | 213.6 | 23 | 805.9 | 30 |
| Nebraska | 290.7 | 10 | 943.0 | 14 |
| Nevada | 102.3 | 49 | 568.9 | 50 |
| New Hampshire | 172.9 | 38 | 1059.3 | 2 |
| New Jersey | 179.2 | 34 | 880.4 | 19 |
| New Mexico | 145.2 | 42 | 672.0 | 44 |
| New York | 213.4 | 24 | 883.0 | 18 |
| North Carolina | 192.6 | 29 | 849.8 | 25 |
| North Dakota | 315.9 | 5 | 992.9 | 6 |
| Ohio | 263.7 | 14 | 914.7 | 16 |
| Oklahoma | 333.2 | 2 | 706.9 | 43 |
| Oregon | 87.6 | 51 | 725.7 | 39 |
| Pennsylvania | 266.9 | 12 | 988.8 | 7 |
| Rhode Island | 174.7 | 37 | 997.5 | 5 |
| South Carolina | 244.6 | 16 | 811.8 | 29 |
| South Dakota | 211.7 | 25 | 997.8 | 4 |
| Tennessee | 298.5 | 9 | 821.5 | 28 |

(table continues)

Table 2 (continues).

| State | Estimated Number of LPNs Per 100,000 Population | State Rank - LPNs Per 100,000 Population | Estimated Number of RNs Per 100,000 Population | State Rank - RNs Per 100,000 Population |
|---------------|---|--|--|---|
| Texas | 232.8 | 21 | 653.5 | 46 |
| Utah | 120.1 | 47 | 614.8 | 48 |
| Vermont | 265.6 | 13 | 958.3 | 10 |
| Virginia | 241.9 | 18 | 780.8 | 34 |
| Washington | 159.2 | 41 | 769.8 | 36 |
| West Virginia | 302.7 | 8 | 846.8 | 26 |
| Wisconsin | 194.7 | 27 | 891.2 | 17 |
| Wyoming | 134.6 | 44 | 740.8 | 38 |

Sources: U.S. Bureau of the Census, 2000) (2) (U.S. Bureau of the Census, 2003

The proportion of LPNs working in hospitals declined from 54% in 1984 to 32% in 2001. During this same time period, the percentage of LPNs working in nursing and personal care facilities grew from 26% to 32%. As identified in the paper by the National Center for Health Workforce Analysis (2004), LPNs are critical to the function of nursing homes.

For a LPN to become a RN, it requires returning to school depending on the state and the popularity comes and goes depending on the labor market for nurses and the economic climate. These individuals are faced with multiple barriers including variation in requirements and funding, preventing them from ascending the career ladder.

LPNs are now and have historically been a necessary critically important component of the healthcare workforce in U.S. hospitals, long-term care facilities, and

other organizations that provide health care. There are differences in the training, skill, and ability of RNs and LPNs, which limit the flexibility of the LPN. LPNs will not substitute for RNs in the workplace, but much of the work that RNs perform can be performed by LPNs. It is very clear that long-term care institutions in the U.S. could not function without LPNs.

Community Colleges in Severely Distressed Counties

Formed in 1965, the Appalachian Regional Commission (ARC) has worked to improve the socioeconomic conditions and alleviate poverty in regions of the U.S. with relatively high levels of poverty. There are 399 federally designated counties comprising Appalachia. The ARC identified counties with relatively higher rates of poverty concentrated in eastern Kentucky, as well as West Virginia, southern parts of Ohio, and Mississippi. Construction of highways consumed 85% of the original funding in the 1960s. This was needed to overcome the region's remoteness and isolation from the rest of the country. Though highway construction continues to remain an important activity of the ARC, it has also expanded the focus to improvement of the regions with appropriations for other important community needs including hospitals and treatment centers and vocational education facilities (ARC, 2000).

For the past twenty years, the ARC has used the distressed county designation to identify counties with the most structurally disadvantaged economies. The ARC updates the distressed status of counties based yearly on more current information on unemployment and per capita income. Until recently, reliable county-level poverty rates have only been available from the decennial census at the beginning of each decade

collected by the U.S. Census Bureau. However, the Census Bureau's Small Area and Income Poverty Estimates (SAIPE) program has produced county-level poverty estimates for 1989, 1993 and 1995, giving the ARC the ability to use more recent poverty data to classify counties. The SAIPE estimates are created for states, counties, and school districts with the main objective of this program being to provide updated estimates of income and poverty statistics for the administration of federal programs and the allocation of federal funds to local jurisdictions. Using these estimates of poverty on the traditional distressed county classification, which uses only the estimates of poverty from the most recent census, both the 1980s and the early 1990s the number designated as distressed increased between 1980 and 1990 by 50% (ARC, 2000).

Community colleges have emerged as local centers for educational opportunity. Joliet Junior College was instituted over 100 years ago as a publicly funded higher education facility located "close to home" for students. Today, community colleges have opened doors to all who desire to learn, regardless of wealth, heritage, or previous academic experience. The process of making higher education available to the maximum number of people continues to evolve at the 860 discrete publicly controlled community college districts, which include 1552 discrete campuses (Katsinas, Lacy and Hardy, 2005, forthcoming)

A vital factor associated with economic development of a community is a well-trained, well-educated work force. The fundamental nature of economic development is education, which prepares people through job training and retraining, to effectively perform on the job. Most institutions of higher education are involved in economic development efforts to some degree. Each community college varies in its pursuit of

economic development responsibilities. All who educate and train individuals for employment opportunities within that community are involved in the economic development and growth of the community. Community colleges are uniquely positioned by their local ties and their commitment to assist their communities in terms of growth, prosperity, and quality of life. It is a well-trained, well-educated work force that can assist a community in attracting new business investment, but most importantly, assist in the retention and expansion of existing businesses and industries already operating.

The 1988 AACC's report, *Building Communities: A Vision for a New Century*, presented by the Commission of the Future of Community Colleges, contained several recommendations relating to the future of community colleges. It was recommended that the resources of community, technical, and junior colleges be used to promote the economic development within the states. It was also suggested that regional clearing houses be established for the purpose of keeping track of emerging work force needs in the areas served by the community college; these centers would take inventory to assist in determining future work place patterns and describe educational resources that are available in the surrounding educational institutions. Katsinas and Lacey (1990) further described ways the community colleges can be involved in the economic development of the surrounding regions through small business assistance and planning, research, and information centers along with customized contracts and continuing education programs. From 1989 to 1995, the American Association of Community Colleges managed the Beacon Colleges project funded by the W. K. Kellogg Foundation. This project was developed from the information gathered in *Building Communities: A Vision for a New Century*. It supported the statement that a community is a climate to be

created, not just a region to be served. The project developed programs addressing challenges faced in the classroom, college, and community through school and work force participation. Community colleges were urged to evaluate the needs and assets of their communities, developing and implementing programs that would augment and nurture present and future community leaders.

The Rural Community College Initiative (RCCI) began as the Beacon Colleges project ended. Managed by MDC, Inc of Chapel Hill, North Carolina through funding by the Ford Foundation, the RCCI began to stretch the concept of community even further into these severely distressed and isolated rural communities that had been identified by the ARC. RCCI identified 85 community colleges that served 206 severely distressed rural counties in four regions of the country: Appalachia, the Lower Mississippi Valley, the Southwest, and the tribal lands of Montana, South Dakota, and North Dakota. Fifteen colleges from the 85 participated in the study along with 11 more rural counties that still served poor communities. The 1992 planning study performed by community colleges of Appalachia through West Virginia found: 1) these community colleges were in a good position to assist these economically distressed rural counties (EDRC) in meeting the long-term development goals; 2) community colleges serving the EDRC had similar challenges: typically small size, isolation, and overwhelming community needs; and 3) university centers and other resources were located at great distances, limiting access of key faculty and staff to appropriate “grow your own” professional development in these severely distressed regions. The list of these original 24 Rural Community college Initiative colleges can be found in Appendix A (AACC, 2003).

From this, a basic component of RCCI was identified: economic development had to be coupled with increasing access to education. RCCI was based on the concept that in severely distressed regions, it is the community college that is the most crucial institution which makes the biggest difference in the community it serves (AACC, 2003).

Indian reservations are included in these severely distressed counties and in the RCCI. Tribal colleges are typically located in geographically isolated populations that have no other means of accessing education. They were created in response to meet the unique higher education needs of American Indians. All of these colleges began as two-year institutions. Most of these colleges are located on remote reservations, with limited access to other institutions of higher education, and several have evolved to deliver four-year degree programs, though all still deliver substantial numbers of associate degree programs (AIHEC, 1999).

Tribal Community Colleges

In 1968, the Navajo Nation established the first tribally-controlled college, Dine College located in Tsaile, Arizona. Other tribal colleges quickly followed in California, North Dakota, and South Dakota. The development of twenty-eight tribally chartered colleges and three federally chartered Indian colleges since 1969 represents an exciting new development in American higher education. The list of the 31 Tribal colleges in existence as of 2003 can be found in Appendix AI. In a little over 30 years, these unique institutions have established a precedent of success that stands in stark contrast to 480 years of failure to provide quality higher education services to American Indians (AIHEC, 1999). In 1979, the colleges of the American Indian Higher Education

Consortium persuaded Congress to pass and fund the Tribally Controlled Community College Act, allowing for direct funding from the federal government.

One of the major factors for the Tribal Colleges' success has been that students can “remain Indian,” practicing tribal traditions and retaining tribal values while attending college. These colleges have become centers of Indian research, scholarship, and repositories of tribal knowledge. While several tribal colleges award four-year and master's degrees and one has attained university status, these institutions are some of the most community-oriented in higher education. The tribal community colleges, as with all community colleges throughout the US, are expected to serve the needs of both individuals and communities, yet they differ from the mainstream community colleges in their cultural orientations, which are unique to the tribes they serve (Carnegie Foundation for the Advancement of Teaching, 1989).

The philosophy of tribal colleges interweaves distinctive cultural elements and a practical approach into the postsecondary process. The curriculum emphasizes not only the academic requirements of future educational and occupational success, but also the cultural contributions and philosophies of the tribal community. At these tribal colleges, students obtain a strong foundation in who they are and that what they believe has great value. These colleges represent a reinforcement of customs and values inherent in the tribal community (Carnegie Foundation for the Advancement of Teaching, 1989). With this preparation and sense of self-worth, many tribal college graduates have gone on for further study or found meaningful work in geographic areas where low educational attainment levels and high unemployment rates are the norm (Wright and Weasel Head, 1990).

According to a report by the U.S. Commission on Civil Rights (2003), tribal colleges educate the poorest, smallest, and most underrepresented group in higher education. However, without these tribal colleges, this group might otherwise not participate at all in higher education. The enrollment at the tribal colleges has increased at a rapid rate since the initial years of establishment in the late 1970s and 1980s. The number of undergraduates ranged from less than 200 at the Institute of American Indian Arts to several thousand at Dine College in the Navaho Nation. Between 1990 and 1996, fall enrollment of American Indian students at tribal colleges had increased by 62% in comparison to an increase in American Indian enrollment of 36% at the mainstream colleges over the same period (NCES, 1990-1997). Not surprisingly, the enrollment growth was concentrated in California, Montana, New Mexico, North Dakota, and South Dakota, where accessible tribal colleges spurred American Indian enrollment increases at a faster rate than at mainstream institutions.

Students at the tribal colleges share many traits with those in the mainstream, such as family obligations and low household incomes. Tribal colleges provide access for local students who might not otherwise participate in higher education. Most of those enrolling are the first generation in their family to go to college. The typical student is a single mother in her early thirties. The American Indian College Fund estimates that over half of the tribal college students are single female parents who attend part-time as cited by Wright and Weasel Head (1990).

Even though family income levels are comparatively low, the students attending Tribal Colleges have less access to the range of financial aid available to other students. State and institutional sources account for 25% of aid provided to all U.S.

college students, but less than 1% of aid to tribal college students (AIHEC and The Institute, 1996). The majority of the financial aid for tribal college students comes through the federal Pell Grant program which had remained largely flat since 1999-2000. Many tribal college students fail to apply for financial aid; those that do often have difficulty in maintaining enough student hours and have tuition levels too low to be able to receive Pell Grants (Wright and Weasel Head, 1990).

There are many American Indian “role models” at the tribal colleges. In the fall of 1995, 30% of the full-time faculty members at the tribal colleges were of American Indian/Alaskan Native, ethnicity in comparison to less than 1% at all public institutions. Classes are frequently taught by tribal elders and other non-traditional faculty members.

Hospitals and clinics in these severely distressed regions rely upon the community colleges for their staffs. Several of these tribal colleges play a vital role in offering nursing programs to service the surrounding communities. For example, Sisseton Wahpeton Community College in South Dakota has offered an associate of arts degree with a major in nursing since the fall of 1992. By the spring of 1998, the program had graduated 88 individuals. It is designed to prepare students to be eligible to write the state examination for licensure as a Registered Nurse (RN).

In 2001, 67% of the nation’s nurses held degrees other than bachelor's degrees, and that number is considerably larger (85%) in the areas around the tribal colleges. For example, a new Indian Health Service hospital constructed in Winnebago, Nebraska, has increased the need for nurses - nurses who were not outsiders (Wright and Weasel Head, 1990).

There are few, if any, nursing programs in the United States that can match the number of nurses Oglala Lakota College (OLC, Kyle, SD) has produced for the Indian Health Service. The Oglala Lakota College Nursing Program was started in 1986, after the University of South Dakota's satellite program at this tribal college closed in 1984. The new program was developed to serve residents of the Pine Ridge and Rosebud Reservations and rural border communities in Nebraska and South Dakota. The program's curriculum is presented with traditional Lakota values which define the individuals and families promoting, maintaining and restoring balance and well-being and is accomplished within the cultural framework. On the Pine Ridge Reservation, 36 of the 71 nurses working at the Pine Ridge Hospital and Kyle Health Clinics are graduates of OLC's Nursing Program (The Tribal College Journal, 2004).

In the summer of 2004, former NBC News anchor Tom Brokaw donated \$25,000 to the Nursing Faculty Endowment Fund at Oglala Lakota College (OLC, Kyle, SD). The OLC Nursing Faculty Endowment Fund is very important due to the critical shortage of nurses in the Oglala Lakota Nation and especially on American Indian reservations. The life expectancy of Lakota men and women on the Pine Ridge Reservation is the lowest in the United States and lowest in the Western Hemisphere, except for Haiti. The life expectancy of an Oglala Lakota man is 61 and 70 for a woman, far behind the 77.5 and 83 years in the rest of the nation. The Pine Ridge Reservation has higher rates of diabetes, alcoholism, heart disease, infant mortality, and tuberculosis than all other races (The Tribal College Journal, 2004).

Summary

In summary, healthcare in America is facing a crisis. The aging workforce of nurses soon to retire coupled with a decrease in graduating nurses will only lead to a further drop in the number of working nurses. Low-density population areas will most likely be hit the hardest as the supply of nurses dwindles. Not only is the workforce aging but so is the faculty teaching in nursing programs at the colleges. With little incentives to teach recruiting younger staff is difficult. Nursing programs have to limit their enrollment due to limited faculty.

At a time when nurses are in short supply, it is the community colleges that supplied 60% of the RNs in 2000 (AHA, 2001). Viterito & Teich, (2002) stressed that the Associate Degree in Nursing (ADN) programs provide an important entrance to the nursing profession for underrepresented groups. They went on to maintain that in 1997, 66% of Native American and 61% Hispanic nursing graduates received associates degrees. In 2000, 73% of all nursing graduates in rural setting in America came from ADN programs. The continued initiatives by organizations such as the American Nurses Association to confine the scope of practice for RNs who have associate degrees will only intensify the nursing shortage especially in the rural areas and for minorities, such as Native Americans.

This study examined 24 rural community colleges servicing severely distressed counties of the United States that were previously selected by the Rural Community College Initiative funded by the Ford Foundation 1994-1997. These colleges were sent a survey to be completed. From these surveys, healthcare facilities were identified. These healthcare facilities serving these severely economically distressed counties

were sent a survey asking questions about the economic stability of the area, if they had a shortage of nurses, and addressing issues in recruitment and retention of nurses.

The following chapters will detail the process of this study.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the methodological research steps utilized in the collection of data for this study. The process consisted of obtaining information from two different samples. The first sample consisted of the 24 community colleges the Rural Community College Initiative (RCCI) utilized in the pilot study from 1994-1997. These colleges are listed in Appendix A. Data from the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) 2003, and National Study of Postsecondary Faculty (NSOPF) from the 1998 survey were also obtained. The second sample consisted of a survey the healthcare facilities identified in the first survey tool completed by the colleges as clinical sites for their nursing students. These healthcare facilities were sent the second survey tool for completion. This study had four phases.

Phases 1 of this study required collecting data from NSOPF and analyzing it. Phase 2 required obtaining data from IPEDS and analyzing it. Phase 3 required sending a survey tool to the 24 RCCI colleges in the sample as listed in Appendix A. The data in these three phases were used to answer the first research question. Phase four collected data for the second research question. A second survey tool, was sent to hospitals and other healthcare facilities identified in the community college surveys as being used as clinical sites for their healthcare students. This chapter will describe each phase more completely and the processes in the collection of the data.

Research Questions

As noted in Chapter 1, the two research questions investigated in this study are:

1. What are the characteristics of nursing programs at community colleges, including tribal colleges, that serve severely economically distressed rural counties of the United States, in terms of characteristics of the nursing field of study, the faculty, and students?
2. What are some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, in terms of characteristics of the health care facilities, communities served by these facilities and the nurses employed?

Research Design – Phase 1

In Phase 1, data from NSOPF were extracted and analyzed to determine characteristics for the faculty and students attending all public two-year community colleges, the 24 community colleges in the sample, including 6 tribal colleges, and all tribal colleges. Faculty characteristics collected from NSOPF included: average age, gender, ethnicity, and annual salary.

Definition and Selection of Population

The 932 publicly controlled two-year community colleges were those reported in the IPEDS survey collection system when asked for the two- and four-year publicly controlled community colleges offering Associate Degrees and certificates. The 31 tribal colleges are listed in Appendix A1. The smaller sampled population researched in this part of the study focused on the 24 rural community colleges located in areas of severe economic poverty as identified by the Appalachian Regional Commission in 1992. These colleges were chosen by the RCCI in 1994-1997 for a pilot study as mentioned in Chapter 2. These 24 colleges are listed in Appendix A. The RCCI selected these

colleges in the late 1990s for their variation in local economies, institutional and presidential experiences, and cultural perspectives. Clustered in four regions of the United States, these colleges represented: six in Appalachia, seven in the Mississippi Delta/South, five in the Southwest and six (tribal colleges) in the Northern Plains. This population will be further delineated in Chapter 4. These 24 colleges were examined as one group and then examined as two groups – separating the six tribal colleges and the 18 publicly controlled colleges in the sample.

These 24 rural community colleges ranged in size of their student enrollment range size from just over 500 students at the tribal institutions to almost 5,000 students at the larger rural-serving community colleges. All tribal colleges had enrollments listed less than 1,000 at the time of the study. These colleges also varied in their geographic focal point, the economic framework in which they operated, and their authority systems under which they functioned, except for the tribal colleges (2003, AACC).

Instrumentation

Identification of NSOPF Data Used

The faculty characteristics of the population, the sample, and all tribal colleges of interest to this researcher included age, gender, ethnicity, and annual salary. This was the starting point from which the data extractions were performed from the National Center for Education Statistics' Fall 1998 National Study of Postsecondary Faculty (NCES NSOPF) database creating descriptive tables. The researcher was also interested in these characteristics for just the nursing faculties, but was unable to collect

the data due to being limited by the unavailability of this specific data for use by the public.

Data Extraction Procedures

The appropriate data elements of interest for this part of the study were extracted from the NCES' Fall 1998 NSOPF data. Once the sample was identified, the process for extraction and preparation of the necessary data used in this study employed the following steps:

1. Information from National Center for Educational Statistics' National Study of Postsecondary Faculty (NSOPF), conducted Fall of 1998, found at <http://www.nces.ed.gov/das/>, was gathered on all two-and four-year publicly controlled community controlled community colleges in the United States, all 31 tribal colleges as listed in Appendix AI, the 24 community colleges identified by Rural Community College Initiative, the 18 publicly controlled colleges in the sample and the six tribal colleges listed in the 24. The data on the population was collected from NSOPF survey collection system, however, not all institutions reported all data elements via the survey so the elements may vary. The primary year of study for this sample was Fall of 1998. This study included all faculties that reported during that year.
2. The data was then collected using the requested variables for the requested characteristics and the elements were then imported into Excel[®] as single spread sheets containing all the data elements for each characteristic.
3. The worksheets were then filtered to include only the data pertinent to each of the five divisions: all public, all tribal, the 24, the 18 publicly controlled colleges in the sample, and the six tribal colleges included in the 24.

Data Analysis and Output

To analyze the data for each element extracted from NSOPF in Phase 1 of this study, tables were created. The data were aggregated to the characteristics of the faculties in each group. Calculations included simple calculations such as numbers and

percentages of each characteristics divided into the five groups. The extracted data are presented in a series of tables in Chapter 4.

Research Design - Phase 2

In Phase 2 of the study, data from 2003 IPEDS were extracted and analyzed to determine characteristics for the students attending all public two- and four-year community colleges, the 31 tribal colleges, the 24 community colleges in the sample, the 18 publicly controlled colleges in the sample and the six tribal colleges included in the 24. Student characteristics collected from included: enrollment numbers for each group mentioned above, most populous age, gender, and ethnicity. These data were further analyzed to be more specific, looking at student enrollment in nursing programs and their gender and ethnicity and the nursing program in which they were enrolled – Licensed Practical Nursing (LPN) or Associate’s Degree Nursing (ADN) programs.

Definition and Selection of Population

The definition and the selection of the population for Phase 2 were identical to the definition and population used in Phase 1. This phase, however, examined data on students attending all public two- and four-year community colleges, the 31 tribal colleges, the 24 community colleges in the sample, the 18 publicly controlled colleges in the sample and the six tribal colleges included in the 24.

Instrumentation

Identification of IPEDS Data Used

The student characteristics of the population and the sample of interest to this researcher included student age, gender, ethnicity, and major being nursing, both Licensed Practical Nursing (LPN) programs and Associate Degree Nursing (ADN) programs. Data extractions were performed from the National Center for Education Statistics' 2003 Integrated Postsecondary Education Data System (NCES IPEDS) database creating descriptive tables. The data were listed into five separate groups: all 932 publicly controlled two- and four- community colleges as specified above, the 31 tribal colleges, all 24 colleges in the group, the 18 publicly controlled colleges, and the six tribal colleges.

Data Extraction Procedures

The process for extraction and preparation of the necessary data used in this part of the study employed the following steps:

1. Information was gathered from National Center for Educational Statistics' 2003 Integrated Postsecondary Education Data System (IPEDS) on the specified characteristics of students from these community colleges and compared to all public community colleges. The data from IPEDS Dataset Cutting Tool, found at <http://nces.ed.gov/ipedspas/index.asp>, were obtained for the all two-year public institutions in the United States, the 24 community colleges identified by RCCI, and all 31 tribal colleges, the 24 rural community colleges in the sample, the 18 publicly controlled colleges in the sample, and the six tribal colleges in the 24.. The data on the population was collected from IPEDS survey collection system, however, not all institutions reported all data elements via the survey each year so the elements may vary. The primary year of study for this sample was 2003. This study included all institutions that reported during that year.
2. Master lists were created using the Unit ID numbers assigned to each college for ease of collecting the data using comma-separated value files.

3. The data were then collected using the requested variables and were then imported into Excel[®] as single spread sheets containing all the data elements.
4. The worksheets were then filtered to include only the data pertinent to each division: all public, all 31 tribal colleges, the 24 rural community colleges, the 18 publicly controlled colleges in the sample of 24, and the six tribal colleges also included in the 24.
5. These elements were then further broken down into students who complete their nursing degrees/certifications at the identified two-year public community colleges, comparing to those students who complete their nursing degrees/certifications at the 31 tribal colleges, the 24 community colleges in severe poverty counties and the 18 publicly controlled and only the three tribal colleges in the sample that were denoted to have nursing programs in the IPEDS data. Three of the tribal colleges did not have nursing data in IPEDS so they were not considered in this portion of the data collection nor are they included in tables that display data concerning nursing. Student characteristics examined include: age, gender, ethnicity, and nursing degree sought.

Data Analysis and Output

The data used for each element for extraction were aggregated and inserted into a series of tables using simple calculations such as numbers and percentages of the five groups. The data were also further broken the characteristics of students enrolled in nursing programs, both ADN and LPN, across the same institutions as mentioned above and divided into the same five groups. Only three of the tribal colleges offered a program in nursing. Only data from those colleges are used in tables addressing nursing. The data are displayed in tables in Chapter 4 using simple numbers and percentages.

Research Design - Phase 3

In Phase 3 of the study, a survey was sent to 24 RCCI rural community colleges that serve severely economically distressed counties of the United States that

participated in the RCCI program 1995-2000. This tool asked questions concerning the person completing the survey, the field of nursing, issues with faculty, and student characteristics and issues as reported by these leaders in the colleges.

Definition and Selection of Population

The population for the third phase was the 1994-1997 Rural Community College Initiative 24 rural community colleges that serve severely economically distressed counties in the United States per the Appalachian Regional Commission. Each of the 24 rural community colleges was sent a survey. The list of the 24 colleges can be found in Appendix A.

Instrumentation

As no survey instrument or data currently exist that include items related to all of the components of the research question one and areas of interest being explored in this study, the researcher developed an original instrument with the guidance from Dr. Keith Muller, Director of the Leadership Team at the Rural Policy Research Institute Center for Rural Health Policy Analysis, which is housed at the University of Nebraska Medical Center, and M. Charles “Chuck” Fluharty, Director of RUPRI. A copy of the cover letter and the survey instrument are included in Appendices IV and V respectively. The survey asked questions concerning: a) demographics on the person reporting, b) the field of nursing at the institution, including its economic environment, c) economic environment of the service area, d) financial support, e) recruitment/retention and other

issues facing nursing faculty, f) issues facing the nursing students, and g) ethnicity of the students.

Data Extraction

Once the survey instrument and cover letter was finalized and had been approved through the Internal Review Board (IRB), the survey was sent to each of the 24 colleges. The process for extraction and preparation of the necessary data used in this part of the study employed the following steps:

1. Deans/directors/chairs of the nursing programs and/or allied health programs at each of the 24 community colleges were contacted.
2. After obtaining informed consent was received, the survey was relayed via e-mail or conducted as a telephone survey by the primary researcher. Nine of the colleges completed the survey via the telephone. Fourteen requested the survey be sent to them via the internet as an e-mail attachment. Only one requested the tool and cover letter be faxed. A survey tool was returned completed by all 24 colleges.
3. The data was then downloaded into Excel[®] spread sheets where the numbers were listed along with percentages according to the responses on the survey tool. These responses pertained to financial support, faculty issues, and student issues and ethnicity.

Data Analysis and Output

Once the completed 24 surveys were returned, data from responses were exported into spread sheets. The data were then put into a series of tables as related to the key issues in the first research question examining the field of study, the faculty, and the students while comparing the results from the 18 publicly controlled colleges in the sample, the 6 tribal colleges, and the total 24 colleges.

Research Design - Phase 4

Phase 4 attempted to answer the second research question: “What are some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, in terms of characteristics of the health care facilities, communities served by these facilities and the nurses employed?” This sample population from which the data for this phase was obtained from the Phase 3 survey tool sent to the 24 community colleges. The colleges identified nearby healthcare facilities used as clinical sites for their nursing students. Once these sites were identified, they were sent a survey instrument. Dr. Muller and Dr. Fluharty added suggestions to the questions on the instrument for the data collection.

Definition and Selection of Population

Phase 3’s survey tool sent to the 24 community colleges serving severely distressed counties requested clinical sites used by their nursing and/or allied health programs. A list was developed with contact information obtained from the internet and the facilities’ web page if there was one. Besides the healthcare facilities listed by the colleges, other facilities were identified by their locations listed on their web sites. From this survey tool and use of the internet, 144 names of healthcare facilities were obtained. These consisted of hospitals, clinics, nursing homes, long term care facilities, retirement facilities, health departments and agencies. Thus the population of healthcare facilities to be surveyed in Phase 4 included 49 facilities in the Appalachia

Region; 48 in the Mississippi Delta/South Region, 23 in the Northern Plains, and 24 in the Southwest Region.

Instrumentation

As no survey instrument or data currently exist that included items related to all of the components of the research question two and areas of interest being explored in this study, the researcher developed an original instrument with the guidance from Dr. Keith Muller, Director of the Leadership Team at the RUPRI Center for Rural Health Policy Analysis, University of Nebraska Medical Center and Dr. M. Charles “Chuck” Fluharty, Director of the Rural Policy Research Institute. A copy of the cover letter and the survey instrument are included in Appendices VI and VII respectively.

Data Extraction Procedures

Once the survey instrument and cover letter were finalized and had been approved by the IRB, each of the healthcare facilities was contacted. The process for extraction and preparation of the necessary data used in this part of the study employed the following steps:

1. The directors of Nursing/Human Resources at the healthcare facilities that were identified in the previous tool were contacted and asked to complete the survey tool, as shown in Appendix G after obtaining informed consent. This tool was read to the individual, sent to their e-mail address, mailed to the individual or faxed depending on their request.
2. The data from the completed surveys were entered into Excel[®] as single spread sheets containing all the data elements using numbers and percentages.
3. The worksheets were then filtered to include only the data pertinent to each division: all public, the 24, all tribal, and the six tribal colleges included in the 24.

Data Analysis and Output

This tool collected data that examined some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, in terms of characteristics of the health care facilities, communities served by these facilities and the nurses employed at these facilities. This tool asked for information concerning: a) demographics on the person reporting, b) the facility looking at size and specialty, c) economic environment of the facility, d) economic environment of the service area, e) community service, f) percentages of different levels of nurses, g) recruitment/retention and other issues facing the facilities, and h) ethnicity of the staff.

The participation in Phase 4's survey was very light. From the list of 144 names of hospitals, clinics, nursing homes, long term care facilities, retirement facilities, health departments and agencies, only approximately 30% responded from each region after weeks of repeated telephone calls, e-mails, faxes, and postal mailings. The facilities responding were divided into the regions they service according to how the colleges were assigned. The responses were as follows: 16 of the 49 facilities in the Appalachia Region; 14 of the 48 in the Mississippi Delta/South Region, 9 of the 23 in the Northern Plains, and 7 of the 24 in the Southwest Region. The facilities in the Northern Plains Region were more responsive in taking the time to answer the survey.

Summary

A variety of resources were used to collect the data to answer the two research questions posed in this study. The first three phases of this research were used to

address the first research question concerning community colleges, faculty and students. The populations in these three phases of the study consisted of 932 publicly controlled two-and four year community colleges, 31 tribal colleges, and the 24 community colleges identified as the sample, breaking it into two groups: the 18 publicly controlled colleges and the six tribal colleges. From this data, along with data extraction procedures for both IPEDS and NSOPF, a set of quantitative data in the form of numbers and percentages were listed in tables for review and analysis. In the final phase, more data was collected from healthcare facilities by regions in which they were located in order to address the second research question. All results from these procedures will be discussed in Chapter 4, with findings, conclusions, and recommendations for policy and practice presented in the final chapter that follows.

CHAPTER 4

ANALYSIS OF RESULTS

Introduction

This study contained two primary research questions: “What are the characteristics of nursing programs at community colleges, including tribal colleges, that serve severely economically distressed rural counties of the United States, in terms of characteristics of the nursing field of study, the faculty, and students?” and “What are some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, in terms of characteristics of the health care facilities, communities served by these facilities and the nurses employed?” These two questions were the basis for the research for this dissertation and around which the data was collected.

Community colleges are seen as the vehicle in the revitalization of a community. With ties to the local businesses and organizations, community colleges are in the position to train people for the workplace while developing a trust and cooperation of the community it serves. This holds true for nurses being trained at these community colleges to meet the need of the community at a time when there is a shortage of nurses.

This study had two samples. The first sample consisted of the 24 rural community colleges the Rural Community College Initiative (RCCI) used in a pilot study 1994-1997. The second sample was provided by the responses from the 24 community colleges as sites used for clinical experiences for the nursing students. The data was collected in four phases. The first three phases collected the data for the first

research questions while the last phase collected the data for the second research question. Phase 1 required collecting data from National Center for Education Statistics' National Study of Postsecondary Faculty (NSOPF) Fall, 1998 for characteristics about faculty at public community colleges, tribal colleges, and the 24 community colleges of the sample. Phase 2 collected and analyzed data from the Integrated Postsecondary Education Data System (IPEDS). This data along with the responses from the first of two survey tools (see Appendix E) were analyzed to obtain data for the first research question for Phase 3. All of the 24 community colleges selected as the sample group responded in the completion of the first survey instrument. The data from IPEDS is from the 2003 survey, which had the most complete and current information available at the time this study, was conducted. IPEDS generally has about a two year delay between collection of data from colleges and public access to the data. The NSOPF data was from the 1998 survey, which was the most current information available to the public at the time of this study. The second survey tool collected the data needed for the second research question.

In the survey sent to the 24 community colleges, one question asked the respondent to list the sites used for clinical experience for the students. This list of clinical sites was the sample for Phase 4. Contact of each facility was attempted, however, there was limited response by these healthcare facilities in the completion of the second survey instrument (see Appendix G) so the data may not be a true impression of the population it was meant to represent. Simple calculations of the numbers and percentages were used to report the data in a series of tables. The following sections in Chapter 4 will further describe the population responding to the

surveys. Tables are used throughout the chapter to further demonstrate and explain the data. Chapter 5 will discuss the findings, conclusions, and recommendations from the data presented in this chapter.

Sample

In 1994 the Ford Foundation started a national pilot project with the intention of helping community colleges in severely distressed rural areas of the United States move the community they serve, and more specifically the people in these communities, toward a more prosperous life (AACC, 2003). This was the birth of the Rural Community College Initiative (RCCI). Nine colleges were selected for the initial pilot study in 1994 and another 15 were added in 1997 to total 18 community colleges and six tribal colleges. These colleges were taken from a total population of 90 potential colleges that serve the 319 counties identified by the Appalachian Region Center (ARC) as economically distressed according to the 1990 census. These rural community colleges were selected for their variation in economics, institutional and presidential experiences, cultural perspectives and sizes (AACC, 2003). The percentage of persons living in these rural counties with income below poverty level in 1999 was 28.4% compared to the 12.4% national average (AACC, 2003). These 24 rural community colleges serve areas with higher poverty rates, lower education levels, and more unemployment than in the rest of rural America and nationally.

Table 3 lists the 24 community colleges distributed by regions, listing their location and student enrollment according to IPEDS 2003 data. The Rural Community

College Classification codes according to Katsinas, Lacey, and Hardy, 2005 are also listed. This classification system will be explained shortly.

At the time in 1997, the IPEDS data indicated student enrollment at these colleges ranged from just over 200 students at tribal colleges to about 7,400 at the larger of the rural community colleges. At that time all tribal colleges had less than 1,000 student enrollment. In 2003 IPEDS data, these 24 community colleges varied in student enrollment range size from just over 500 students at the tribal institutions to over 10,000 students at the larger community colleges as displayed in Table 3. All tribal colleges had enrollments listed less than 1,700 at the time of this study. These findings indicated growth in these colleges since the time of the RCCI 1997 study.

The researcher chose to use these already selected colleges for the sample in this study. These colleges have also been identified according to the rural community college classifications code (Katsinas, Lacey, and Hardy, 2005). Four colleges are classed as rural small (RS), ten are classified as rural medium (RM), and one as rural large (RL). These are classified according to an annual headcount of student enrollment to classify within the rural sub-classification (Katsinas, Lacey, and Hardy, 2005).

Three colleges are classified as public “2 under 4” which are community colleges listed under public 4 year universities (2U4). These 2U4 community colleges have their governance by public state universities and not by trustees of a locally controlled public community college controlled from the service area of the college. It is doubtful that this impacted the response to the questions, but the IPEDS and NSOPF data may not be just inclusive of the individual colleges. For example, the enrollment

numbers for Phillips Community College did not specify the DeWitt campus. Six of the colleges, as indicated earlier, are tribal colleges which are classified under their own code (TC), regardless of size.

Table 3

The Rural Community Collage Initiative's 24 Community Colleges by Regions and by Rural Community Colleges Classification System

| Region | College | Class | City/State | Annual enrollment |
|-------------|-------------------------------------|-------|-------------------|-------------------|
| Appalachia | Danville Community College | (RM) | Danville, VA | 1,325 |
| | Hazard Community College | (RM) | Hazard, KY | 875 |
| | Mountain Empire Community College | (RM) | Big Stone Gap, VA | 4,810 |
| | Prestonsburg Community College | (RM) | Prestonsburg, KY | 3,059 |
| | Somerset Community College | (RM) | Somerset, KY | 918 |
| | Southeast community College | (RM) | Cumberland, KY | 841 |
| Delta/South | Alabama Southern Community College | (RS) | Monroeville, AL | 1,885 |
| | Coahoma Community College | (RS) | Clarksdale, MS | 1,325 |
| | Meridian Community College | (RM) | Meridian, MS | 4,068 |
| | Phillips Community College | (2U4) | DeWitt, AR | 3,813 |
| | Southeastern Community Colleges | (RS) | Whiteville, NC | 934 |
| | Technical College of the Lowcountry | (RM) | Beaufort, SC | 2,857 |
| | Wallace community College | (RS) | Selma, AL | 2,401 |

(table continues)

Table 3 (continued).

| Region | College | Class | City/State | Annual enrollment |
|--------------------------------------|-----------------------------------|-------|----------------|-------------------|
| Northern Plains (Tribal colleges) | Blackfeet Community College | (TC) | Browning, MT | 574 |
| | Fort Belknap Community College | (TC) | Harlem, MT | 504 |
| | Fort Peck Community College | (TC) | Poplar, MT | 679 |
| | Salish Kootenai community College | (TC) | Pablo, MT | 1,641 |
| | Sinte Gleska University | (TC) | Rosebud, SD | 1,221 |
| | Sitting Bull Community College | (TC) | Fort Yates, ND | 317 |
| Southwest | Laredo Community College | (RL) | Laredo, TX | 10,341 |
| | New Mexico State University | (2U4) | Carlsbad, NM | 1,543 |
| | No. New Mexico Community College | (RM) | Espanola, NM | 3,912 |
| | Southwest Texas junior College | (RM) | Uvalde, TX | 5,283 |
| | University of New Mexico | (2U4) | Gallup, NM | 3,852 |

Notes:

1. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Alliance from 1995-2000
2. All 24 institutions' physical addresses were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
3. The college class is the rural classification according to Katsinas, Lacey, and Hardy's classification system of rural community colleges: Rural Small (RS), Rural Medium (RM), and Rural Large (RL) all classified according to student enrollment numbers, Public 2-4 year colleges under public 4 year universities (2U4), and Tribal Colleges (TC) which are a separate classification regardless of their size.

Contact information about each of the 24 community colleges was obtained initially from their web pages through an internet search, followed with phone calls for specific individuals' contact information. Once the informed consent script and the tool had been approved through the researching institution's Internal Review Board (see

Appendix All for approval letter), all 24 of the community colleges servicing severely economically depressed counties of the United States were contacted and asked to complete a survey. Several colleges asked to complete the survey as an e-mail attachment while others were asked the questions via the telephone. The returned e-mailed surveys had only the information requested with little “other” responses while the surveys completed via the telephone allowed the researcher to clarify some answers and gave the respondent the opportunity to expound on “other” responses. Primarily the deans, directors or chairs of the nursing/allied health programs were contacted. Those completing the survey by telephone interviews offered up more detailed answers to the “other” parts of the survey than those responding by e-mail. The survey cover letter included a request to consult with nursing or allied health leaders in their institution to answer such questions as related to those areas. All 24 colleges responded, completing and returning a survey, though seven of the colleges needed repeated e-mail and telephone call reminders before the completed surveys were sent.

Since the focus of this dissertation is on nursing, the researcher wanted to know how many of these 24 colleges offered nursing programs. Initially only the Associates Degree Nursing programs were to be considered for the study, however the initial data collected from the 24 community colleges revealed that 19 of the 24, or 79%, offered Licensed Practical Nurse (LPN) programs, and 16 of the 24, or 67%, offered ADN programs. One offered a Baccalaureate in Science in Nursing (BSN) along with an ADN program through its association with a university. Due to the high number of LPN programs offered at these community colleges, the researcher felt their data had to be included. Three of the colleges, all tribal colleges, specified they had no nursing

programs, though one did indicate the college offered prerequisite courses for a nursing program. The surveys from these three tribal colleges are included in the data of this research study except for when the parts pertain to nursing only. The survey tool also included questions concerning allied health programs. This information was collected for another study and the data will not be included in this paper.

Information on the previously identified characteristics of faculty (age, gender, ethnicity, and average annual salary) was gathered on all public 2-year community colleges, all 31 tribal colleges, the 24 RCCI colleges in the sample, the 18 in the sample that are publicly controlled, and the six tribal colleges in the 24 . This data was collected from NCES' NSOPF data for the Fall of 1998 so the data may not represent current findings. This is the most recent data available to the public at the time of the study.

The data on the characteristics of the students identified in chapter 3 (age, gender, ethnicity, and nursing degree/certification) were collected from the NCES' 2003 IPEDS data on all public 2-year community colleges, all 31 tribal colleges, the 24 RCCI colleges in the sample, the 18 in the sample that are publicly controlled, and the six tribal colleges in the 24 . Since 2003 was the most current data available, the data may not be a true representation of the characteristics at this present time.

The survey tool completed by the colleges requested information about sites used for clinical experience of their nursing and allied health programs. These 144 healthcare facilities comprised the sample for Phase 4 of the research. The returned completed survey responses from these facilities were very limited. Several indicated they were not allowed to complete external surveys. Many did not return the phone call messages nor the e-mails requesting assistance in the completion of the survey tool.

Forty-three accepted the survey tool via e-mail, fax, or postal mail, but never returned the completed surveys even after repeated phone calls. This resulted in a total response rate of approximately 30% from each region upon which all inferences, findings, conclusions, and recommendation from Phase 4 in this study are based. This data will be displayed by the regions in which the community colleges identifying the sites are located: Appalachia, Mississippi Delta/South, Northern Plains (tribal colleges) and Southwest and will be further defined later in the chapter.

Results of Surveys Outcomes and Data from NSOPF and IPEDS

Research Question 1: What are the characteristics of nursing programs at community colleges, including tribal colleges, that serve severely economically distressed rural counties of the United States, in terms of characteristics of the nursing field of study, the faculty, and students?

The survey instrument used in this part of the study can be found in Appendix E. The survey that was sent to the 24 rural community college sample contained 41 questions but only 31 of the questions were used in this study. Questions 5, 7, 8, 9, 10, 11, 13, 15, 18, and 23 pertained to allied health programs and are not used in this study. These data were collected at the request of the Rural Policy Research Institute (RUPRI) and will be used in a future study. As previously mentioned, there was a 100% return rate of the completed survey of the 24 RCCI colleges.

The first three questions on the survey were background information about the person completing the survey. Questions 4, 6, 12, 16, 17, 19-21, and 28 examine the field of nursing at these community colleges. Questions 22, 24 – 27 look at issues pertaining to nursing faculty. Questions 30 - 41 examined issues faced by and characteristics of the students at these institutions. Question 29 was used for Phase 4.

The data from the completed survey tools were used to identify characteristics pertinent to these colleges. The data are divided into three groups: the 18 publicly controlled colleges in the 24, the 6 tribal colleges, and the total group of all 24. When information pertains to just nursing, only the three tribal colleges' data that have a nursing program are presented.

As previously mentioned the first three questions of the survey address the background of the persons completing the survey tool. The first question asked for their title at the 24 colleges. There were eight deans of nursing, six deans of allied health, six directors of other departments and four chairs of their departments. It appears "dean" is the most common title in these rural community colleges. The second question asked for how long they had been at their institution; 10 had been at their college for 10 years or less (42%) while the other 14 had been at their facilities for over 10 years (58%). When asked how long they had been in their position at the college, the responses were greater in the ten or less years. Fifteen or 63% indicated they had held their present position in the college for 10 years or less. Only 9 or 37% of the respondents indicated they had been in their position for more than 10 years.

The following questions addressed the characteristics of the field of nursing at these 24 rural community colleges, including the six tribal colleges, serving severely economically distressed counties of the United States. Question 4 asked the respondent which type of nursing programs, if any, were offered at their institutions. These included Licensed Practical Nurse (LPN) Certifications, Associates Degree Nursing (ADN) programs, and prerequisite programming for nursing. Only three of the tribal colleges indicated they did not offer any nursing program. As previously mentioned, 19 of the 24,

or 79%, offered Licensed Practical Nurse (LPN) programs, and 16 of the 24, or 67%, offered ADN programs. One of the colleges offered a Baccalaureate in Science in Nursing (BSN) along with an ADN program due to its association with a university. When displaying characteristics of those programs with nursing programs, the three tribal colleges not having a nursing program are not included. The sample drops from $N = 24$ to $N = 21$ for the total sample, and for the tribal colleges $N = 6$ drops to $N = 3$. The following tables display characteristics about the field of nursing at these colleges. In some of the tables, all 24 will be used as the information is general about the service area and the colleges in general.

Question 6 addressed years the colleges had offered a nursing program. Table 4 below presents the results of the surveys from the colleges for this question and for question 17. The researcher especially wanted to know if these nursing programs had experienced growth over the past 5 years with the nursing shortage, and if these institutions expect their nursing program to experience growth over the next 5 years. Ninety-five percent of the 21 colleges (20 of the 21) indicated their nursing program had experienced growth over the previous 5 years, and 91% stated they expected the growth to continue over the next 5 years. All of the three tribal colleges surveyed indicated they had experienced growth in their nursing programs and all three expected that growth to continue. One college stated their nursing program had not experienced growth due to lack of nursing faculty and lack of space at the college for any expansion so this institution did not expect growth either. Only two of the respondents in the nursing programs indicated they did not expect growth in their programs, leaving 91% expecting their nursing programs to experience growth over the next 5 years.

Table 4

Characteristics of the Nursing Programs at Publicly-Controlled Community and Tribal Colleges Serving Economically Distressed Regions of the United States

| | Community Colleges Serving Severely Distressed Counties | | | | | | | | |
|---|---|----|-----|-------------------|---|------|------------------------|----|-----|
| | Public (N = 18) | | | Tribal (N = 3) | | | Total RCCI (N = 21) | | |
| | Y/N | n | % | Y/N | n | % | Y/N | n | % |
| Years nursing program offered | | | | | | | | | |
| 6 years or less | | 1 | 6% | | 2 | 67% | | 3 | 14% |
| 7 – 12 years | | 0 | 0% | | 0 | 0% | | 0 | 0% |
| > 12 years | | 17 | 94% | | 1 | 33% | | 18 | 86% |
| Experienced growth over past 5 years? | Y | 17 | 94% | Y | 3 | 100% | Y | 20 | 95% |
| Expect growth over next 5 years? | Y | 16 | 89% | Y | 3 | 100% | Y | 19 | 91% |
| Estimated enrollment trend nursing program (2000 to 2004) | | | | | | | | | |
| Slight to significant increase ($\geq +4\%$) | | 15 | 83% | | 3 | 100% | | 18 | 86% |
| Flat/Stable (+ or -3) | | 3 | 17% | | 0 | 0% | | 14 | 14% |
| Slight to significant decrease ($\leq -4\%$) | | 0 | 0% | | 0 | 0% | | 0 | 0% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Questions 6, 12, 14, and 17 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the Shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3 Tribal colleges that did not have such programs were not used.

Table 5 illustrates the data taken from questions 16, 19, 20, and 21.

Respondents were asked questions about the economic health of their college and the primary service area it serves. When asked if the respondents felt their college lacked financial support from the local area, from the state, and from the federal government, the majority agreed (>60%) that they lacked local and state financial support. All 24 indicated they lacked the support they need. Of the 24, 62% indicated they lacked support for their local area, 67% indicated they lacked state support, and 42% lacked federal support. Of the six tribal colleges, 50% lack local area support, 64% state support, and 33% lack federal government support. The 18 publicly controlled colleges of the 24 indicated that 67% of them lack both local area and state support and 44% lack federal support. When asked to describe the economic health of their colleges' service areas, 50% of the respondents described it as "distressed to severely distressed." Respondents were also asked if they have limited slots at area hospitals/clinics for student clinical experiences. As demonstrated in the Table 5, all 24 of the colleges agreed that slots were limited. Many of the regional hospitals and healthcare facilities have small patient numbers which in turn limits the number of students that can be assigned for their clinical experiences at these sites.

Table 5

Assessment of the General Economic Health of Public Community and Tribal Colleges in Regions served by Economically Distressed Regions of the United States

| | Community Colleges Serving Severely Distressed Counties | | | | | | | | |
|---|---|----|------|-------------------|---|------|------------------------|----|------|
| | Public (N = 18) | | | Tribal (N = 6) | | | Total RCCI (N = 21) | | |
| | Y/N | n | % | Y/N | n | % | Y/N | n | % |
| Economic health of service area over past 5 years | | | | | | | | | |
| Strong - Very strong | | 3 | 17% | | 0 | 0% | | 3 | 12% |
| Flat, stable | | 7 | 39% | | 2 | 33% | | 9 | 38% |
| Distressed - Severely distressed | | 8 | 44% | | 4 | 67% | | 12 | 50% |
| Lack of local financial support? | Y | 12 | 67% | Y | 3 | 50% | Y | 15 | 62% |
| Lack of state financial support? | Y | 12 | 67% | Y | 4 | 64% | Y | 16 | 67% |
| Lack of federal financial support? | Y | 8 | 44% | Y | 2 | 33% | Y | 10 | 42% |
| Limited slots for student clinical experiences | Y | 18 | 100% | Y | 3 | 100% | Y | 21 | 100% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Questions 6, 12, 14, and 17 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the Shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3 Tribal colleges that did not have such programs were not used.

Having already identified a shortage of nursing faculty in Chapter 2, the researcher wanted to know if this was also an issue in the rural areas served by community colleges in high poverty rural regions of the county. Table 6 contains the data pertaining to issues impacting nursing faculty at these 21 colleges. Question 22 asked if respondents felt they had the number of faculty needed for their nursing programs. Over 75% of the colleges indicated they lacked the number of nursing faculty they needed for their institutions. Only 28% said they had enough nursing faculty that they needed and only two of these indicate though they had enough “faculty,” many were not properly credentialed with master’s degree. This may be due to the fact that LPN programs do not require master’s prepared faculty. The three tribal colleges that offer nursing programs all indicated that none of them had enough faculty for their programs.

Question 27 investigated the impact lack of nursing faculty had on these nursing programs. Because of a lack of faculty, 76% of the community colleges have to limit slots for their ADN nursing students. One tribal college pointed out they had enough faculty, but stated their program had just started one year prior, so they had yet not opened to new students, but stated when they do open for the next group, they were expecting to have to limit the numbers due to only having very few faculty.

Questions 24 and 25 asked about barriers when trying to recruit and retain nursing faculty. The survey included factors listed in Table 6. All of the factors were noted to have an impact on recruiting faculty to these colleges. Lower salaries offered at these rural community colleges was the issue for 67% of those surveyed. Yet, there were

Table 6

Issues Impacting the Recruitment and Retention of Nursing Faculty at Public Community and Tribal Colleges Serving Economically Distressed Regions of the United States

| | Community Colleges Serving Severely Distressed Counties | | | | | | | | |
|--|---|----|-----|-------------------|---|------|------------------------|----|-----|
| | Public (N = 18) | | | Tribal (N = 3) | | | Total RCCI (N = 21) | | |
| | Y/N | n | % | Y/N | n | % | Y/N | n | % |
| Have the number of nursing faculty needed? | N | 13 | 72% | N | 3 | 100% | N | 16 | 76% |
| Limit number of students due to lack of faculty? | Y | 14 | 78% | Y | 2 | 67% | Y | 16 | 76% |
| Factors when recruiting faculty | | | | | | | | | |
| Remoteness of the institution | | 12 | 67% | | 3 | 100% | | 15 | 71% |
| Limited social activities | | 11 | 61% | | 1 | 33% | | 12 | 57% |
| Severity of the poverty | | 9 | 50% | | 1 | 33% | | 10 | 48% |
| Lower salaries | | 11 | 61% | | 3 | 100% | | 14 | 67% |
| Factors when retaining faculty | | | | | | | | | |
| Remoteness of the institution | | 5 | 24% | | 3 | 100% | | 8 | 38% |
| Limited social activities | | 8 | 44% | | 0 | 0% | | 8 | 38% |
| Severity of the poverty | | 2 | 11% | | 0 | 0% | | 2 | 10% |
| Lower salaries | | 11 | 52% | | 3 | 100% | | 14 | 67% |
| Assisting factors in retaining faculty | | | | | | | | | |
| Remoteness of the institution | | 2 | 11% | | 0 | 0% | | 2 | 10% |
| Small town environment of the area | | 16 | 89% | | 2 | 67% | | 10 | 86% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Questions 6, 12, 14, and 17 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the Shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3Tribal colleges that did not have such programs were not used.

many other factors given in response to “other” on the survey, such as at the tribal colleges, the vast different cultural experience at these colleges and in the communities was identified as a “major shock” to those entering these areas near or on the Indian reservation, however other colleges indicated the cultural difference from the socioeconomic status of the regions were sometimes too much for faculty to handle.

From the survey respondents’ strong acknowledgement of a shortage of nursing faculty, it logically follows that the rest of their nursing faculty experience very heavy work loads and overloaded semesters with students that had multiple needs. Many times getting to the clinical site to supervise nursing students required the need to travel distances. Another frequently mentioned issue was the fact that there was limited or no opportunity for advancing their education at these geographically isolated facilities. The lack of adequate housing along with the high cost of living and a high unemployment level leaves few or no jobs for spouses. Another important detriment to acquiring and retaining faculty was identified as having very poor elementary and secondary school systems in these areas for the children of the faculty. One respondent noted that the spouses of faculty would take turns driving other faculty children to a nearby larger town so the children could have more opportunities for a better education than offered in their own community.

The respondents were also asked about factors that helped when trying to retain faculty. The survey tool listed two factors as listed in Table 6. The small town environment was selected as a positive factor by 86% by those surveyed. As with the section on issues, there were numerous “other” factors given by these institutions. Several listed the support and camaraderie of other faculty in the college and the people

in the community as an important factor in keeping faculty. Five colleges described their institution as a positive work environment - a "work place of choice" which goes along with the previous factor in keeping faculty. Those colleges that did not select the lower salary as a reason for faculty not staying identified that the nursing faculty were given a stipend or extra money to work there, while one college listed having competitive salaries with private sector. One of the factors that the researcher found to be significant was the frequent citing of the importance of the faculty being geographically bound to the area or close family ties to the community. This supports the need to grow their own so they stay.

Further data was collected on the faculty. Phase 1 of the study accessed the data on characteristics of the faculty from the National Center for Education Statistics' National Study of Postsecondary Faculty (NSOPF). The NSOPF data was obtained in the Fall, 1998. These data may not be a true representation of the present situation, however these are the most recent data available to the public. The researcher had wanted to look also at just the nursing faculty, but this was not obtainable at this time from the NSOPF database.

The characteristics of interest to this researcher were the ethnicity, gender, age, and annual salaries of the faculty at the sampled community colleges. This data was downloaded from NSOPF for all two-year publicly controlled community colleges, the 24 RCCI community colleges of the sample, the 18 publicly controlled colleges in the sample, all 31 tribal colleges and the 6 tribal colleges included in the 24. The following tables demonstrate the results and will be discussed in the following sections.

The results of the data analyzed in Phase 1 were not unexpected. The faculty at all public community colleges are somewhat similar to those in the 24 community colleges that service the severely distressed counties of the US. Table 7 illustrates the average age of faculty, the gender of the faculty and their annual salary for all two-year publicly controlled community colleges, the 24 RCCI community colleges of the sample, the 18 publicly controlled colleges in the sample, all tribal colleges and the 6 tribal colleges included in the 24.

The average age of the faculty was consistent in the low to mid forties. The faculty at the colleges in the distressed regions appears to be a few years older. As discussed in Chapter 2, the average age for faculty in nursing programs nationally is in the early fifties.

There being more male faculty (52%) than female faculty (48%) is almost identical all two-year publicly controlled community colleges, the 24 RCCI community colleges of the sample, the 18 publicly controlled colleges in the sample, all tribal colleges and the 6 tribal colleges included in the 24. Across each type of college, male faculty make higher annual salaries (50.4% to 52%) than do female faculty (48% to 49.6%). The base salary data are from NSOPF for Fall 1988, and do not include “fringe” benefits or additions to base salary such as overload assignments or summer classes. Salaries may differ at the time of this study.

Table 7

Faculty at Two-Year, Public Community Colleges and the RCCI Sample of Publicly-Controlled Community Colleges, Including the Tribal Colleges, Serving Economically Distressed Regions of the United States

| | All Two Year | | All Tribal | | Community Colleges Serving Severely Distressed Counties.... | | | | | |
|-----------------------|------------------|-----|------------|-------|---|-----|----------------|-----|-------------------|-----|
| | Public (N = 932) | | (N = 31) | | Public (N=18) | | Tribal (N = 3) | | Total RCCI (N=21) | |
| | n | % | n | % | n | % | n | % | n | % |
| Average age | 41 | | 45 | | 44 | | 45 | | 44 | |
| Gender | | | | | | | | | | |
| Female | | 48% | | 49% | | 49% | | 49% | | 48% |
| Male | | 52% | | 51% | | 51% | | 51% | | 52% |
| Average Annual Salary | | | | | | | | | | |
| Female | \$42,183 | 48% | \$31,608 | 49.6% | \$38,258 | 49% | \$29,093 | 49% | \$30,942 | 49% |
| Male | \$45,525 | 52% | \$32,017 | 50.4% | \$40,026 | 51% | \$30,676 | 51% | \$38,712 | 51% |

Notes:

1. Percentages were rounded up or down when appropriate so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Questions 22, 24, 25, 26, and 27 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the Shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3 Tribal colleges that did not have such programs were not used.
6. Data taken from the National Center for Education Statistics' National Study of Postsecondary Faculty, 1998 statistics
7. The data may not be a true representation of the present statistics. This is the most recent data available to the public from NSOPF
8. Only percentages and averages were available from the NSOPF data.

Table 8 presents data from Fall 1998 on the race and ethnicity of faculty at all two-year publicly controlled community colleges, the 24 RCCI community colleges of the sample, the 18 publicly controlled colleges in the sample, all tribal colleges and the 6 tribal colleges included in the 24. White, Non-Hispanic faculty comprise the larger percentage of use in the all of the populations investigated except at the six tribal colleges within the 24 sample colleges where the Native American population is higher. At all two-year publicly controlled community colleges, at the 24 RCCI community colleges of the sample, and at the 18 publicly controlled colleges within the sample, Black faculty have the next highest percentages, yet they remain minimally represented (<1%) at all of the tribal colleges. There were none listed as faculty at the six tribal colleges within the sampled 24.

Though faculty of Asian/Pacific Islander ethnicity make up 8.6% of the population of faculty at all two-year publicly controlled community colleges, very few if any are represented at the 24 RCCI community colleges of the sample, the 18 publicly controlled colleges in the sample, all tribal colleges and the 6 tribal colleges included in the 24. There are almost no Asian/Pacific Islander faculty at the publicly controlled colleges, and none at the tribal colleges.

Minimally represented across all two-year publicly controlled community colleges (5.9%), American Indian/Alaskan Native faculty have a larger presence in tribal colleges, which is to be expected. These colleges are tribally controlled, and are required to teach their tribal culture as part of the basics in their college curricula. As place based institutions, owned by their tribes and adjacent to substantial Native American populations, this comes as no surprise.

Table 8

Faculty Characteristics at Public Community Colleges, Tribal Colleges, and the RCCI Sample of Publicly-Controlled Community and Tribal Colleges that Serve Economically Distressed Regions of the United States

| Ethnicity | All Two Year | All Tribal | Community Colleges Serving Severely Distressed Counties.... | | |
|------------------------------------|------------------|------------|---|----------------|-------------------|
| | Public (N = 932) | (N = 31) | Public (N=18) | Tribal (N = 3) | Total RCCI (N=21) |
| | % | % | % | % | % |
| White, Non-Hispanic | 40.1% | 53.6% | 49.5% | 33% | 47.8% |
| American Indian/ Alaskan Native | 5.9% | 36.4% | 31.4% | 66% | 33.6% |
| Hispanic | 15.5% | 6% | 1% | <1% | <1% |
| Asian/Pacific Islander | 8.6% | 0% | <1% | 0% | <1% |
| Black, Non-Hispanic | 21.5% | <1% | 14.1% | <1% | 13.8% |
| Other | 8.4% | 3% | 4.1% | 0% | 3.8% |

Notes:

1. Data taken from the National Center for Education Statistics' National Study of Postsecondary Faculty, 1998 statistics
2. The data may not be a true representation of the present statistics. This is the most recent data available to the public from NSOPF.
3. Only percentages and averages were available from the NSOPF data.

Phase 3 of this study was to examine the issues and characteristics of students from the perspective of the persons charged with directing nursing programs. The researcher wanted to know what issues impact the students at these institutions and barriers students may have to conquer to attend the college such as transportation, on campus residences, and child care. Questions 30, 31, 32, and 33 address these issues faced by students at these 24 rural community colleges.

Table 9 illustrates specific barriers the students face while attending these institutions. There were multiple issues identified in the surveys. All 24 colleges are located in rural area with limited transit systems if any exist at all. The colleges were asked in question 30 if transportation was a barrier for their students. Many times, students have to travel to clinical site, so transportation can impact their ability to get to their clinical sites. All of the tribal colleges indicated that transportation was an issue, while 15 of the remaining 18 publicly controlled community colleges (83%) also agreed that transportation was a barrier. In rural areas, the roads to these community colleges and to the clinical sites may not be well maintained especially during inclement weather. Students may be required to navigate through snow, over mountains, through rural back roads along with the ever climbing price of gasoline and car repairs that account for some unexpected expenses. On rural America, Pedersen was quoted as saying that given the option of spending \$2000 on one year of college education or spending the same amount of money on a reliable used car, students (and possibly parents of student) would choose the car (Katsinas, Alexander, and Opp, 2003), and rightly so when travel is required to arrive at any destination in rural America.

Table 9

Barriers Facing Students at Public Community and Tribal Colleges Serving Economically Distressed Regions of the United States

| Barriers | Community Colleges Serving Severely Distressed Counties | | | | | | | | |
|--|---|----|-----|-------------------|---|------|------------------------|----|-----|
| | Public (N = 18) | | | Tribal (N = 6) | | | Total RCCI (N = 21) | | |
| | Y/N | n | % | Y/N | n | % | Y/N | n | % |
| Is transportation a barrier? | Y | 15 | 83% | Y | 6 | 100% | Y | 21 | 88% |
| Is on campus residences offered? | Y | 4 | 22% | Y | 2 | 33% | Y | 7 | 29% |
| Are/Is child care an issue | Y | 16 | 89% | Y | 5 | 83% | Y | 21 | 88% |
| Is low cost, on campus child care offered? | Y | 6 | 33% | Y | 3 | 50% | Y | 9 | 38% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Questions 30-33 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3 Tribal colleges that did not have such programs were not used.

Transportation also has a major impact on the students' ability to get to class and to then get to the clinical sight. These students may have to drive over 30 miles to their clinical. The tribal colleges indicated transportation to their institution was an issue. With the severe poverty on most reservations, access to adequate transportation to these tribal colleges appears to be more of a burden than at the other colleges.

Question 31 examined on campus residences at these institutions. Of the 24 colleges surveyed, only 7 or 29% said yes they have on campus residences. Two of

the tribal colleges indicated they had on campus residences, but all said, the number of available spaces was very limited. Four (22%) of the 18 publicly controlled colleges had residences. What the researcher did not ask were questions concerning specialized housing such as residences for married students, students with children, or students with physical handicaps or if there is a waiting list. One recent national study indicated 87% of community colleges serving the rural areas were filled to capacity (Moeck, 2005). This same study suggested asking from where are the students traveling from to attend classes, how far do they drive. Moeck found that 45% of on campus residents lived outside the primary service area of the college. By having limited or no on campus residences, this population cannot be accessed. Is it possible that the residence halls located on campuses in these remote rural areas can contribute to the total enrollment of these colleges? Though the community college is located within the service area of within a certain number of miles from the student's home, it does not necessarily follow that this is a reasonable commute for students. At a community college such as Fort Peck, a tribal college, the nearest public community college is a 162 mile one way drive. In rural America, on rural roads, this could easily be a well over three hour drive one way.

Another major issue for many students is childcare. Twenty-one (88%) of the colleges said that childcare is an issue for their students. Five of the six tribal colleges identified childcare as an issue for their students. The institutions were asked if low cost, on campus childcare services were offered on campus. Only 38% of the 24 surveyed colleges offer low cost, on campus childcare. Three tribal colleges indicated they offered childcare, but two indicated the spaces were very limited, and were not low

in cost to the student. Though childcare was offered, many times it came with limitations. The childcare facilities were open during the week days only and only during certain hours, with limited slots for their children and did not allow children that might be ill.

Financial assistance is important for the students to have the resources to attend these colleges. This inordinately high percentage also justifies the need for place-based strategies. The colleges were asked to estimate the percentage of nursing students receiving student financial aid. Table 10 recounts their responses to question 34. Of the total 21 community college responses, 91% indicated that over 60% of their nursing students were receiving direct grant student financial aid; 62% indicated that over 80% of their nursing students were receiving financial assistance. Without this financial support these students may be hard pressed to attend these colleges, which would certainly over time further impact the nursing shortage.

Table 10

Financial Issues Facing Students at Public Community and Tribal Colleges Serving Economically Distressed Regions of the United States

| Estimated percentage of students receiving financial aid in your nursing program. | Community Colleges Serving Severely Distressed Counties | | | | | |
|---|---|-----|----------------|-----|---------------------|-----|
| | Public (N = 18) | | Tribal (N = 3) | | Total RCCI (N = 21) | |
| | n | % | n | % | n | % |
| Under 60% | 2 | 11% | 0 | 0% | 2 | 10% |
| 61-80% | 5 | 28% | 1 | 33% | 6 | 29% |
| Over 80% | 11 | 61% | 2 | 67% | 13 | 62% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000.
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Question 34 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3 Tribal colleges that did not have such programs were not used.

Question 35 asked about the percentage of minorities in the nursing programs at the 21 community colleges in the sample. This data is displayed in Table 11. Thirty-three percent of the 21 community colleges surveyed indicated minorities make up over 50% of their nursing student population. The tribal colleges indicated that all three had over 50% minorities, which is different from the IPEDS data that indicated 60% were White, Non-Hispanic. The 18 publicly controlled colleges in the 21 were diverse in their number of minorities: two had under 5% minorities in their nursing program, while four indicated over 50% of their nursing students are minorities.

Table 11

Estimated Percentage of Ethnicity of Nursing Students at Public Community and Tribal Colleges Serving Economically Distressed Regions of the United States

| Estimated Percentages | Community Colleges Serving Severely Distressed Counties | | | | | |
|-----------------------|---|-----|----------------|------|---------------------|-----|
| | Public (N = 18) | | Tribal (N = 3) | | Total RCCI (N = 21) | |
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Under 5% | 2 | 11% | 0 | 0% | 2 | 10% |
| 5% - 10% | 2 | 11% | 0 | 0% | 2 | 10% |
| 11% - 20% | 2 | 11% | 0 | 0% | 2 | 10% |
| 21% - 30% | 2 | 11% | 0 | 0% | 2 | 10% |
| 31% - 40% | 4 | 22% | 0 | 0% | 4 | 19% |
| 41% - 50% | 2 | 11% | 0 | 0% | 2 | 10% |
| Over 50% | 4 | 22% | 3 | 100% | 7 | 33% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000.
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Question 34 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3 Tribal colleges that did not have such programs were not used.

Additional information was obtained on characteristics of students enrolled at all public 2-year community colleges, all 31 tribal colleges, the 24 in the sample, the 18 publicly controlled colleges in the sample, and the six tribal colleges included in the 24. The data were obtained through NCES' 2003 IPEDS database. These characteristics consisted of age, gender, ethnicity and degree/certification awarded.

The IPEDS age ranges for the students in the colleges started at below 18 years of age and extended to over 65 years of age. These were divided in to the following ranges: <18 years of age, 18 – 19 years, 20 – 21 years, 22 – 24 years, 25 – 29 years,

30 – 34 years, 35 – 39 years, 40 – 49 years, 50 – 64 years, and 65 years and older. The population in each group was spread out across the ages. The ages were fairly consistent amongst all public 2-year community colleges, the 34 tribal colleges, the 24 colleges in the sample, the 18 publicly controlled colleges within the sample, and the six tribal colleges within the sample. For the public 2-year community colleges, the 24 colleges in the sample, and the 18 publicly controlled colleges within the sample, the age range with the largest population was the 18 – 19 years of age, with 20% in the 2-year public community colleges and 18% in both the 24 community colleges in the sample and the 18 publicly controlled colleges within the sample. The age range with the largest population slightly older was found in the tribal colleges. The age range with the largest part of the population was 25 – 29 with 16% for both the 34 tribal colleges and the 6 tribal colleges within the sample of 24.

Table 12 addresses the gender of the student population for all public community colleges, the 24 in the sample, all tribal colleges, and the six tribal colleges included in the sample. The data indicates about 20% more females attend two-year publicly controlled community colleges than males. In the tribal colleges two-thirds of the students attending are female. This holds true for the 24 community colleges serving distressed counties in the sample. Table 12 also demonstrates an overview of the ethnicity of the student population for all two-year publicly controlled community colleges, the 24 in the sample, the 18 publicly controlled colleges in the sample, the six tribal colleges in the sample, and all tribal colleges which included in the 6 tribal colleges in the sample. This data was collected from NCES' IPEDS 2003 data.

Table 12

Characteristics of Students at Public Community Colleges and the RCCI Sample of Publicly-Controlled Community Colleges, Including the Tribal Colleges, Serving Economically Distressed Regions of the United States

| | All Two Year | | All Tribal | | Community Colleges Serving Severely Distressed Counties.... | | | | | |
|------------------------------------|------------------|------|------------|------|---|------|----------------|-----|-------------------|------|
| | Public (N = 932) | | (N = 31) | | Public (N=18) | | Tribal (N = 3) | | Total RCCI (N=21) | |
| | n | % | n | % | n | % | n | % | n | % |
| Gender | | | | | | | | | | |
| Total Females | 3,522,703 | 60% | 11,863 | 67% | 35,348 | 64% | 2,465 | 67% | 37,815 | 64% |
| Total Males | 2,484,582 | 40% | 5,924 | 33% | 20,337 | 36% | 1,187 | | 21,524 | 36% |
| Total Students | 6,007,285 | 100% | 17,787 | 100% | 55,685 | 100% | 3,652 | | 59,339 | 100% |
| Ethnicity | | | | | | | | | | |
| White, Non-Hispanic | 3,570,790 | 60% | 3,162 | 18% | 27,108 | 49% | 698 | 19% | 27,806 | 47% |
| American Indian/ Alaskan Native | 65,608 | 1% | 14,143 | 80% | 2,726 | 5% | 2,920 | 80% | 5,646 | 9% |
| Hispanic | 826,723 | 14% | 238 | 1% | 14,039 | 25% | 14 | <1% | 14,053 | 24% |
| Asian/Pacific islander | 385,640 | 6% | 40 | 1% | 191 | <1% | 1 | <1% | 192 | <1% |
| Black, Non-Hispanic | 749,621 | 12% | 62 | <1% | 8,875 | 16% | 1 | <1% | 8,876 | 15% |
| Other | 405,903 | 7% | 142 | <1% | 2,461 | 4% | 18 | <1% | 2,479 | 4% |

Notes:

1. Data taken from the National Center for Education Statistics' National Study of Postsecondary Faculty, 1998 statistics
2. The data may not be a true representation of the present statistics. This is the most recent data available to the public from NSOPF.
3. Only percentages and averages were available from the NSOPF data.

The ethnicity with the largest number is White, Non-Hispanic in all two-year publicly controlled two year colleges (60%), in the 24 community colleges in the sample (47%), and in the 18 of these colleges that are publicly controlled (49%). Only in the tribal colleges including the 6 in the sample is the percentage low, 18% and 19% respectively.

The Hispanic group has the second higher percentage at all public community colleges at 14%. This group has even a higher representation in the 24 community colleges in the sample (24%), and in the 18 of these colleges that are publicly controlled (25%). Less than 1% of the total population of students attending the tribal colleges is Hispanic. The Black, Non-Hispanic group is third with 12% of the total population at all public two-year community colleges. In the sample of the 24 community colleges servicing economically distressed regions of the United States, Blacks make up 15% of the student population, 16% at the 18 publicly controlled community colleges in this sample. Less than 1% of the total population of students attending the tribal colleges is Black. The Asian/Pacific Islander population makes up 6% of the total population of students attending all two-year publicly controlled community colleges. Only up to 1% attend the other three groups of colleges: <1% at all 24 community colleges in the sample; <1% at the 18 publicly controlled community colleges in the sample; <1% in the 6 tribal colleges included in

The ethnic group with the least percentage of the total population at all public community colleges is the American Indian/Alaskan Native at 1%. Though the group is identified as American Indian/Alaskan native, it is assumed in this study it is the

American Indians that make up this population due to the close proximity to Indian Reservations and the distance to Alaska.

This group has a much higher number among the 31 tribal colleges which includes the 6 tribal colleges of the 24 community college sample. Tribal colleges are required to have at least 50% Native American students to receive funding. As indicated in the table, they meet the requirement according to the data reported to IPEDS. In the sample of the 24 community colleges servicing economically distressed regions of the United States, the Native American population is at 9% due to the tribal colleges. The 18 publicly controlled colleges in the 24 had a Native American student population percentage of 5%; and 1% at all publicly controlled colleges.

The ethnic group classified as “other” contained about 7% of the population at all two-year publicly controlled colleges and 4% of the population at the sample of 24 community colleges and the 18 that are publicly controlled. There was less than 1% at the tribal colleges.

Table 13 further disaggregates the gender representation among nursing students enrolled in both ADN and LPN programs. Nursing, has been predominantly a female occupation throughout its history, and continues to have a low percentage of males entering the field. As the data clearly indicates, less than 10% of the nursing students are males, indicating very few males choose nursing as a career even at the 24 community colleges and tribal colleges. Even fewer males chose to be a LPN. In fact, at the tribal colleges, no males selected the LPN route at all. About 3% more males chose nursing at the sample colleges (13%) than at public community colleges in general (10%).

Table 13

Characteristics of Students at Public Community Colleges and the RCCI Sample of Public Community Colleges, Including the Tribal Colleges, Serving Economically Distressed Regions of the United States

| Gender | All Two Year | | All Tribal | | Community Colleges Serving Severely Distressed Counties.... | | | | | |
|----------------|------------------|------|------------|------|---|------|----------------|------|-------------------|------|
| | Public (N = 932) | | (N = 31) | | Public (N=18) | | Tribal (N = 3) | | Total RCCI (N=21) | |
| | n | % | n | % | n | % | n | % | n | % |
| ADN programs | | | | | | | | | | |
| Total Females | 36,204 | 90% | 39 | 93% | 498 | 87% | 27 | 90% | 471 | 87% |
| Total Males | 4,162 | 10% | 3 | 7% | 72 | 13% | 3 | 10% | 69 | 13% |
| Total Students | 40,366 | 100% | 42 | 100% | 570 | 100% | 30 | 100% | 540 | 100% |
| LPN programs | | | | | | | | | | |
| Total Females | 10,748 | 92% | 7 | 100% | 375 | 92% | 0 | 0% | 368 | 92% |
| Total Males | 908 | 8% | 0 | 0% | 34 | 8% | 0 | 0% | 34 | 8% |
| Total Students | 11,656 | 100% | 7 | 100% | 409 | 100% | 0 | 0% | 402 | 100% |

Notes:

1. Data taken from the National Center for Education Statistics' National Study of Postsecondary Faculty, 1998 statistics
2. The data may not be a true representation of the present statistics. This is the most recent data available to the public from NSOPF
3. Only percentages and averages were available from the NSOPF data.

In Table 14, data from questions 36 through 41 are listed. The data was condensed from the original seven ranges to just three for the table. As indicated 46% of the 24 colleges indicated that over 50% of their student population is White, Non-Hispanic, 60% of the 18 publicly controlled colleges of the group indicated the same. The six tribal colleges indicated 20% or less of their student population is White, Non-Hispanic.

All six tribal colleges plus one other of the publicly controlled community colleges indicated greater than 50% of the total population was American Indian/Alaskan Native, while the other 17 community colleges reported to IPEDS that less than 5% of their student population was American Indian.

There are few minorities other than Native Americans that attend tribal colleges. The six tribal colleges list under than 20% Hispanics in their student population. Two of the 18 publicly controlled colleges in the 24 sample have over 50% Hispanic student population, while two others indicate they have between 41% and 50% Hispanic population. The 5 colleges of the sample located in the Southwest region have a higher percentage of Hispanic student population. A majority of the 24 (76%) have under 5% Hispanic student population.

Table 14 clearly demonstrates that few Asian/Pacific islanders attend any of these 24 colleges that serve economically distressed regions. All 24 colleges (100%) indicated a less than 20% Asian/Pacific Islander student population, including the six tribal colleges.

Table 14

Ethnicity of Students at Public Community and Tribal Colleges Serving Economically Distressed Regions of the United States

| Ethnicity | | Community Colleges Serving Severely Distressed Counties | | | | | |
|---------------------------------------|-----------|---|------|----------------|------|---------------------|------|
| | | Public (N = 18) | | Tribal (N = 6) | | Total RCCI (N = 24) | |
| | | n | % | n | % | n | % |
| White, Non-Hispanic | Under 20% | 3 | 17% | 6 | 100% | 9 | 38% |
| | 21% - 40% | 2 | 11% | 0 | 0% | 2 | 8% |
| | Over 40% | 13 | 72% | 0 | 0% | 13 | 54% |
| Native American/ Alaskan Native | Under 20% | 17 | 94% | 0 | 0% | 17 | 71% |
| | 21% - 40% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Over 40% | 1 | 6% | 6 | 100% | 7 | 29% |
| Hispanic | Under 20% | 14 | 78% | 6 | 100% | 20 | 83% |
| | 21% - 40% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Over 40% | 4 | 22% | 0 | 0% | 4 | 17% |
| Asian/Pacific Islander | Under 20% | 18 | 100% | 6 | 100% | 24 | 100% |
| | 21% - 40% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Over 40% | 0 | 0% | 0 | 0% | 0 | 0% |
| Black, Non-Hispanic | Under 20% | 10 | 56% | 6 | 100% | 16 | 66% |
| | 21% - 40% | 4 | 22% | 0 | 0% | 4 | 17% |
| | Over 40% | 4 | 22% | 0 | 0% | 4 | 17% |
| Other | Under 20% | 18 | 100% | 6 | 100% | 24 | 100% |
| | 21% - 40% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Over 40% | 0 | 0% | 0 | 0% | 0 | 0% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor
2. The 24 institutions surveyed were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000.
3. All 24 institutions' physical address were located in the 319 severely economically distressed counties, according to the definition developed by the Appalachian Resource Commission based upon 2000 Census data.
4. Data reported above were from Question 34 on the survey, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
5. When the question was specific for the nursing program, data from the 3 Tribal colleges that did not have such programs were not used.

Though all six tribal colleges indicate they have less than 20% Black population, the 18 publicly controlled colleges in the sample of 24 are diverse in the percentages of Blacks attending their institutions. Several of the colleges located in the Delta/South region had higher Black, non Hispanic student percentages than the rest. All of the 24 community colleges (100%), including the six tribal colleges all indicate they have less than 5% of these other ethnicities attending their facility.

Research Question 2: What are some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, in terms of characteristics of the health care facilities, communities served by these facilities and the nurses employed?

The data for this section depended on the response of healthcare facilities in the regions of the 24 community colleges and identified as clinical sites for students at these colleges. Table 15 lists the population for Phase 4 of the study. These healthcare facilities were identified by the first survey instrument that was sent to the 24 RCCI community colleges. The respondents were asked to list sites designated for student clinical experiences. These facilities are listed by regions of the community college which listed them as a clinical site. Only a few healthcare facilities were listed by more than one community college.

Table 15

Populations of Identified Healthcare Facilities Serving Economically Distressed Regions of the United States by Region

| Region | Healthcare Facility | City, State |
|------------|---------------------------------|--------------|
| Appalachia | Danville Regional | Danville, VA |
| | Common Wealth Home Health Care | Danville, VA |
| | Statford Health Center | Danville, VA |
| | Riverside Nursing Home | Danville, VA |
| | Piney Forest Health Care Center | Danville, VA |

(table continues)

Table 15 (continued).

| Region | Healthcare Facility | City, State |
|---------------------------------|--|-------------------|
| Appalachia (continued) | Abingdon Place of Danville | Danville, VA |
| | Hazard Appalachian Regional Healthcare | Hazard, KY |
| | Harlan Appalachian Regional Healthcare | Harland, KY |
| | Whitesburg Appalachian Regional Healthcare | Whitesburg, KY |
| | Kentucky River Medical Center | Jackson, KY |
| | Hazard Nursing Home | Hazard, KY |
| | Knott County Nursing Home | Hindman, KY |
| | Letcher Manor Nursing Home | Whitesburg, KY |
| | Morgan County Nursing Home | West Liberty, KY |
| | ARH (Appalachian Regional Healthcare) Psychiatric Hospital | Hazard, KY |
| | Kentucky River Comprehensive Care | Jackson, KY |
| | Wellmont Lonesome Pine Hospital | Big Stone Gap, VA |
| | Highlands Regional Medical Center | Prestonsburg, KY |
| | Paul B. Hall Regional Medical Center | Paintsville, KY |
| | Pikeville Medical Center | Pikeville, KY |
| | Three Rivers Medical Center | Louisa, KY |
| | Riverview Manor | Prestonsburg, KY |
| | Mountain Manor at Paintsville | Paintsville, KY |
| | Lake Cumberland Regional Hospital | Somerset, KY |
| | Somerset Nursing and Rehabilitation | Somerset, KY |
| | Sunrise Nursing Home | Somerset, KY |
| | Marymount Hospital | London, KY |
| | Laurel Heights | London, KY |
| | Rockcastle Hospital | Mount Vernon, KY |
| | Rockcastle Health & Rehabilitation Center | Brodhead, KY |
| | Somerview Personal Care Home | Somerset, KY |
| | Clinton County Hospital | Albany, Kentucky |
| | Clinton County Healthcare | Albany, KY |
| | Crestview Nursing Home | Somerset, KY |
| | McCreary County Health Center | Whitley City, KY |
| | Wayne County Hospital | Monticello, KY |
| | Golden years Nursing Home | Monticello, KY |
| | Manchester Memorial Hospital | Manchester, KY |
| | Middleboro Appalachian Regional Hospital | Middleboro, KY |
| | Whitesburg Appalachian Regional Hospital | Whitesburg, KY |
| | Knox County Hospital | Barbourville, KY |
| Baptist Regional Medical Center | Corbin, KY | |
| Pineville Community Hospital | Pineville, KY | |
| Britthaven of Tri-cities | Cumberland, KY | |

(table continues)

Table 15 (continued).

| Region | Healthcare Facility | City, State |
|--------------------------------|---|--------------------|
| Appalachia (continued) | Britthaven of Pineville | Cumberland, KY |
| | Harlan Nursing Home | Dr. Harlan, Ky |
| | Middleboro Health Care Facility | Middleboro, KY |
| | Barbourville Nursing Home | Barbourville, KY |
| Delta/South | Evergreen Medical Center | Evergreen, AL |
| | Rush Foundation Hospital | Meridian, MS |
| | Springhill Memorial Hospital | Mobile, AL |
| | Specialty Hospital of Meridian | Meridian, MS |
| | Searcy Hospital | Mount Vernon, AL |
| | Woman Care Birth Place –Riley | Meridian, MS |
| | Monroe Manor Nursing Facility | Monroeville, AL |
| | Riley Memorial Hospital | Meridian, MS |
| | Englewood Nursing Facility | Monroeville, AL |
| | Riley Nursing Center | Meridian, MS |
| | Clarksdale Nursing Center | Clarksdale, MS |
| | Northwest Ms Regional Medical | Clarksdale, MS |
| | Greenbough Nursing Center | Clarksdale, MS |
| | Meridian Long Term Care | Meridian, MS |
| | Aldersgate Retirement Community | Meridian, MS |
| | East Mississippi State Hospital | Meridian, MS |
| | Northwest Mississippi Regional Medical Center | Clarksdale, MS |
| | Helena Regional Medical Center | Helena, AR |
| | DeWitt Hospital | Dr DeWitt, AR |
| | St. Vincents Health System | Little Rock, AR |
| | Delta Memorial Hospital and Generations Unit | Dumas, AR |
| | Arkansas State Psychiatric Hospital | St Little Rock, AR |
| | Arkansas Children’s Hospital | Little Rock, AR |
| | Crestpark Nursing Homes | DeWitt, AR |
| | Southeast A Behavioral Health | Stuttgart, AR |
| | Columbus County Hospital | Whiteville, NC |
| | Southeastern Regional Medical Center | Lumbertson, NC |
| | New Hanover Regional Medical Center | Wilmington, NC |
| | Bladen County Hospital | Elizabethtown, NC |
| | St Eugene Medical Center | Dillon, SC |
| | Loris Community Hospital | Loris, SC |
| | Premiere Living Long Term Care | Lake Waccamaw, NC |
| | Shoreland Long Term Care | Whiteville, NC |
| Liberty Commons Long Term Care | Whiteville, NC | |
| Liberty Home Care | Wilmington, NC | |

(table continues)

Table 15 (continued).

| Region | Healthcare Facility | City, State |
|-------------------------------|---|------------------|
| Delta/South (continued) | Columbus County Home Health | Whiteville, NC |
| | Beaufort Memorial Hospital | Beaufort, SC |
| | US Navy Hospital | Beaufort, SC |
| | Health South Sports Medicine & Rehab | Beaufort, SC |
| | Charter Behavioral Health System | Beaufort, SC |
| | Bay View Nursing Center | Beaufort, SC |
| | Vaughan Regional Medical Center | Selma, AL |
| | Veterans Affairs Medical Center | Tuscaloosa, AL |
| | Chilton Medical Center | Clanton, AL |
| | Cahaba Center for Mental Health and Mental Retardation | Selma, AL |
| | Warren Manor Nursing Home | Selma, AL |
| | Lighthouse Convalescent Home | Selma, AL |
| | Hatley Health Care | Clanton, AL |
| Northern Plains | Poplar Medical Clinic | Poplar, MT |
| | Trinity Hospital | Wolf Point, MT |
| | Roosevelt Medical Center & Nursing Home | Culbertson, MT |
| | Daniels Memorial Hospital & Nursing Home | Scobey, MT |
| | Northern Montana Hospital | Havre, MT |
| | Sweet Memorial Nursing Home | Chinook, MT |
| | Good Samaritan Center | Malta, MT |
| | Medcenter One Care Center Mandan | Mandan, ND |
| | St. Alexius Medical Center | Bismarck ND |
| | Hans P Peterson Mem Hospital | Philip, SD |
| | Avera Gregory Healthcare Ctr | Gregory, SD |
| | Bennett Cnty Healthcare Center | Martin, SD |
| | Cherry County Hospital | Valentine, NE |
| | St. Patrick Medical Center | Missoula, MT |
| | Community Medical Center | Missoula, MT |
| | Kalispell Regional Medical Center | Kalispell, MT |
| | St. Joseph Hospital | Polson, MT |
| | St. Luke Hospital | Ronan, MT |
| | Montana State Hospital | Warm Springs, MT |
| | CS&K Tribal Health Department | Pablo, Montana |
| Lake County Health Department | Polson Montana | |
| Blackfeet Community Hospital | Browning, MT | |
| Blackfeet Nursing Home | Browning, MT | |

The second survey instrument as seen in Appendix G and the cover letter in Appendix F were sent to these healthcare facilities that had been identified by the 24

community colleges as sites used for clinical experiences for their students as describe in Chapter 3. Though three of the tribal colleges did not have nursing programs, the investigator was still curious as to where the healthcare facilities in these areas found their healthcare workers so these sites are included in the data. The data collected from the surveys is displayed in tables according to the regions in which the community college that identified the healthcare facility is located.

With such light responses to the completed surveys, the researcher attempted to acquire 30% from each region in an attempt to have comparable data by continued e-mailing, telephone calls, and faxes. The end result was almost 30% completed survey returns from each of the four regions. This researcher feels in future studies, state and local governing bodies or national accreditation organizations should help to acquire a larger return. Table 15 lists the healthcare facilities that were identified by the community colleges and contacted by regions. They are listed by regions of the community college identifying them. Eight of the facilities were named by different colleges as clinical sites, but are listed only once.

Table 16

Healthcare Facilities Servicing Economically Distressed Regions of the United States

| Healthcare Facilities | Appalachia | Delta-South | Northern Plains | Southwest |
|-------------------------|------------|-------------|-----------------|-----------|
| # identified | 49 | 48 | 23 | 24 |
| # responding | 16 | 14 | 9 | 7 |
| % responding per region | 33% | 29% | 39% | 29% |

Notes:

1. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
2. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so all six of the tribal colleges were used.
3. These facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes.
4. Each identified facility that did not return the survey was contacted by telephone, e-mail, and/or postal service at least five times.

5. Due to such light returns, the data can only be generalized to the population from which it was retrieved.
6. As a result, inferences, findings, conclusions and recommendations in this part of the study are based on the data collected from these reports.

Table 16 illustrates the regional response rate for the completed survey. The second survey tool consisted of 35 questions. The first five questions collected demographic data on the person completing the survey. The following six questions pertained to the facility's classification, size, and economic health assessment. The next part of the survey tool had four questions about community orientation. The remaining 19 questions focus on the staff, primarily nursing, and issues the staff may face. The 22nd question referred to allied healthcare providers which will be used in another study in the future and the data from that question will not be included in this study.

Questions 1, 2, and 5 asked questions about the person completing the survey. The first question asked for the person's job title. The majority of those completing the survey were Directors of Human Resources (34 or 74%) while the other respondents were either Directors of Nursing or in a similar position (8 or 17%). Thirty-six (78%) participants were veterans having been at their hospital for over 15 years and 39% (18) had been in their position for 20 years or more. Of the remaining 61% of those completing the survey, 11 (24%) have been in their position 5 years or less. Table 17 addresses the third and fourth questions concerning the hospital. The table illustrates the percentage of healthcare facilities in each region surveyed by types of the organizations controlling the healthcare facility. About one fourth of the surveys came from nursing homes/retirement facilities/ long term facilities. Over one fourth came from not for profit community hospitals, and the remainder varied per region.

Table 17 below contains information about the length of time the healthcare facilities have serviced the community. All of the facilities surveyed have been in service for over 10 years. There were 89% indicating they had been in operation for over 15 years. The majority of those surveyed have been servicing their community for over 30 years (59%). Those in the Delta/South appear to have the largest number of healthcare facilities that have been open for the longest time frame.

Table 17

Types of Healthcare Facilities Surveyed Serving Economically Distressed Areas of the United States, by Region

| | | Appalachia (N=16) | | Delta-South (N=14) | | No. Plains (N=9) | | Southwest (N=7) | | Total (N=46) | |
|---|--------------------------------|-------------------|-----|--------------------|-----|------------------|-----|-----------------|-----|--------------|-----|
| | | n | % | n | % | n | % | n | % | n | % |
| Type of healthcare organization | Not for profit community hosp. | 4 | 25% | 4 | 29% | 3 | 33% | 2 | 29% | 13 | 28% |
| | For profit community hosp. | 4 | 25% | 3 | 21% | 2 | 22% | 1 | 14% | 10 | 21% |
| | Privately owned hospital | 1 | 6% | 1 | 7% | 0 | 0% | 0 | 0% | 3 | 4% |
| | Not for profit clinic | 1 | 6% | 2 | 14% | 0 | 0% | 0 | 0% | 3 | 7% |
| | For profit clinic | 2 | 13% | 1 | 7% | 0 | 0% | 0 | 0% | 3 | 7% |
| | State | 0 | 0% | 0 | 0% | 1 | 1% | 1 | 14% | 2 | 4% |
| | City-County | 0 | 0% | 0 | 0% | 1 | 1% | 1 | 14% | 2 | 4% |
| | Other | 4 | 25% | 3 | 21% | 2 | 22% | 2 | 29% | 11 | 24% |
| <i>How many years has the facility provided care for the community?</i> | < 15 years | 4 | 25% | 0 | 0% | 0 | 0% | 1 | 14% | 5 | 11% |
| | 16 – 30 years | 7 | 44% | 2 | 14% | 4 | 44% | 1 | 14% | 14 | 14% |
| | > 30 years | 5 | 31% | 12 | 86% | 5 | 56% | 5 | 72% | 27 | 59% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns.
2. The names of healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed sites used for clinical experiences for nursing students.
3. Data reported above were from Question 3 and 4 on "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected May, 2005.
4. These 144 facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes. Each identified facility that did not return the survey was contacted by telephone, e-mail, faxes, and/or postal service at least five times. Others listed were nursing homes, retirement communities, and do not know.

Table 18 below shows the distribution in the percentages of the types of healthcare facilities surveyed. Approximately half were general medical and surgical

hospitals/clinics with the other half nursing homes, long term care facilities, or rehabilitation centers in each region. Only one hospital in the Delta/South indicated it was a critical access hospital. Only one psychiatric facility was surveyed. It is located in the Northern Plains Region. There was only one hospital indicating a critical access hospital for the rural population.

Table 18 below displays data collected in the questions addressing hospital issues (questions 6, 7, and 11). The percentages of hospitals in each region by number of beds at each facilities are displayed in Table 18 along with growth experience, expected and economic health.

The Appalachian region has more healthcare facilities with the greatest number of beds while the Northern Plains and Southwest have more healthcare facilities of smaller size. The data indicates that over 50% of the facilities have 150 beds or less in these rural areas.

Table 18

Types and Size of Healthcare Facilities Surveyed Servicing Economically Distressed Regions of the United States and the Service Areas' Economic Health

| | Healthcare Facilities Serving Severely Distressed Counties per Region | | | | | | | | | |
|---|---|-----|-----------------------|-----|---------------------|-----|--------------------|-----|-----------------|-----|
| | Appalachia (N=16) | | Delta-South (N=14) | | No. Plains (N=9) | | Southwest (N=7) | | Total (N=46) | |
| | n | % | n | % | n | % | n | % | n | % |
| Is your institution | | | | | | | | | | |
| General med. and Surg. | 5 | 31% | 7 | 50% | 4 | 45% | 3 | 43% | 19 | 41% |
| Critical Access Hospital | 0 | 0% | 1 | 7% | 0 | 0% | 0 | 0% | 1 | 2% |
| Psychiatric Medical Hospital | 0 | 0% | 0 | 0% | 1 | 11% | 0 | 0% | 1 | 2% |
| Long Term Care Hospital | 7 | 44% | 3 | 22% | 3 | 33% | 2 | 29% | 15 | 33% |
| Rehabilitation Hospital | 3 | 19% | 2 | 14% | 0 | 0% | 1 | 14% | 6 | 13% |
| Clinic | 1 | 6% | 1 | 7% | 1 | 11% | 1 | 14% | 4 | 9% |
| Number of beds in facility | | | | | | | | | | |
| 0 – 50 | 0 | 0% | 4 | 29% | 4 | 44% | 3 | 44% | 11 | 24% |
| 51 – 100 | 4 | 25% | 4 | 29% | 1 | 11% | 1 | 14% | 10 | 22% |
| 101 – 150 | 4 | 25% | 1 | 7% | 4 | 44% | 2 | 28% | 11 | 24% |
| 151 – 300 | 4 | 25% | 5 | 36% | 0 | 0% | 1 | 14% | 11 | 22% |
| 301 - 500 | 4 | 25% | 0 | 0% | 0 | 0% | 0 | 0% | 4 | 8% |
| Economic health service area over 5 years | | | | | | | | | | |
| Very strong to strong | 12 | 76% | 3 | 21% | 4 | 45% | 2 | 29% | 21 | 45% |
| Flat, stable | 2 | 12% | 8 | 57% | 4 | 45% | 4 | 57% | 18 | 39% |
| Distressed to severely distressed | 2 | 12% | 3 | 21% | 1 | 11% | 1 | 14% | 7 | 15% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns
2. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
3. Data reported above from Question 6, 7, and 11 on "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
4. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so these were also used.
5. These 144 facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes.
6. Each identified facility that did not return the survey was contacted by telephone, e-mail, faxes, and/or postal service at least five times.

When asked to rank the service area's economic health, several healthcare facilities surveyed did not like being referred to as being located in or near areas of

severe distress, becoming defensive and describing their service regions as thriving. The wording had to be altered to servicing areas that were once considered severely distressed. Table 18 lists the responses of the facilities concerning their assessment of the general economic health of their facility's service area over the past 5 years. About 85% of the regions indicated their service areas to be stable or above, with the Appalachian Region indicating 38% were very strong economically while no other region had areas they considered very strong. The data further shows that 15% of the regions surveyed indicated the general economic health of their facilities service area of the past 5 years has been distressed, with each region having at least one of their facilities indicating distressed areas for service.

As Table 18 illustrated, these hospitals and healthcare facilities are small. Many times these smaller rural hospitals have to transfer critically ill patients to large specialized/critical care/teaching facilities for more advanced care. Table 20 lists the distance the surveyed healthcare facilities are from the nearest large teaching hospital with this advanced technology and care. Over 50% of the surveyed healthcare facilities in the Delta/South are 50 miles or less to the nearest large teaching facility. However, the facilities in the Northern Plains are furthest from a large facility. Given the terrain of these rural areas, it might well take much more an hour to travel 50 miles. The 40% of those healthcare facilities that are over 100 miles which would mean over a two hour drive and longer for days with inclement weather.

Though these regions had been designated as severely distressed in 1997, the researcher needed to know how the economic condition of the regions was at the time of the study. The survey asked the person completing the question to answer several

questions relating to the economic health of the service area. Table 19 lists the responses of these facilities.

Approximately 70% of the facilities in these regions said they have experienced growth over the past five years. The same percentage expects to continue this growth over the next 5 years. Respondents from the Delta/South and the Southwest regions both indicated 86% of their surveyed facilities had experienced growth and expect growth to continue. Respondents from the Appalachia and the Northern Plains Regions were not as optimistic. A smaller majority (56%) surveyed stated they had experienced growth over the past 5 year, and expect growth over the next 5 years. This response may have occurred because at the time of this study, Congress was considering decreasing the reimbursement for Medicare at the rural facilities which will impact their growth even more (Rowley, 2005).

Table 19

Trends of Growth/No Growth/Decline Among Healthcare Facilities that Serve Economically Distressed Regions of the United States

| | Facilities Serving Severely Distressed Counties by Region..... | | | | | | | | | | | | | | |
|--|--|----|-----|-----------------------|----|-----|---------------------|---|-----|--------------------|---|-----|-----------------|----|-----|
| | Appalachia (N=16) | | | Delta-South (N=14) | | | No. Plains (N=9) | | | Southwest (N=7) | | | Total (N=46) | | |
| | Y/N | n | % | Y/N | n | % | Y/N | n | % | Y/N | n | % | Y/N | n | % |
| Has facility experienced growth over past 5 years? | Y | 9 | 56% | Y | 12 | 86% | Y | 5 | 56% | Y | 6 | 86% | Y | 32 | 70% |
| Has facility experienced growth over past 5 years? | Y | 9 | 56% | Y | 12 | 86% | Y | 5 | 56% | Y | 6 | 86% | Y | 32 | 70% |
| Has a Director of Education | Y | 14 | 88% | Y | 10 | 71% | Y | 6 | 67% | Y | 5 | 71% | Y | 35 | 76% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor.
2. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
3. Data reported above were from Question 8, 9, and 10 on the survey, "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
4. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so these were also used.
5. These 144 facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes.
6. Each identified facility that did not return the survey was contacted by telephone, e-mail, faxes, and/or postal service at least five times

Community health service was reported to be an important priority for the majority of the healthcare facilities surveyed. All of the facilities surveyed (100%) indicated that the mission statement at their facility focused on community benefit, as demonstrated in Table 20 below. Two healthcare facilities in the Appalachian Region indicated their facility did not have any long term plan for community health. They also indicated that they did not have the resources for this production. Only one of the facilities located in the Northern Plains region indicated they did not have any long-term plans for improving the health of their local community, due to not having the resources needed. The other 98% indicated that their facility did have plans for improving community health, with 93% indicating that they have the resources to meet this.

Both research questions one and two examine the nursing shortage looking at the community colleges and the surrounding healthcare facilities. Ultimately, it is in the healthcare facilities that the nursing shortage is felt the most. The third part of the second research question looks at staffing issues which is included in Questions 16 – 19, 21, 23, and 25 – 28. The following tables illustrate the data from these questions.

So who are the nurses that have chosen to work in these surveyed facilities? These healthcare facilities were asked to estimate the percentage of Licensed Practical Nurses (LPNs), Associates Degree Nurses (ADNs), and nurses with Bachelor's of Science in Nursing (BSNs) employed at their facilities and then to identify the ethnicity of these nurses. Table 21 addresses the percentages of each division of nursing type. At the onset of this study, the researcher had not planned to include LPNs. After receiving the completed surveys from the initial 24 community colleges, 21 offered a LPN program, which indicated that these nurses must be in demand in these areas.

Table 20

Community Orientation of Healthcare Facilities Surveyed Servicing Economically Distressed Regions of the United States

| | Facilities Serving Severely Distressed Counties by Region..... | | | | | | | | | | | | | | |
|--|--|----|------|-----------------------|----|------|---------------------|---|------|--------------------|---|------|-----------------|----|------|
| | Appalachia (N=16) | | | Delta-South (N=14) | | | No. Plains (N=9) | | | Southwest (N=7) | | | Total (N=46) | | |
| | Y/N | n | % | Y/N | n | % | Y/N | n | % | Y/N | n | % | Y/N | n | % |
| Mission statement includes focus on community benefit? | Y | 16 | 100% | Y | 14 | 100% | Y | 9 | 100% | Y | 7 | 100% | Y | 46 | 100% |
| Facility has long-term plan for improving health of community? | Y | 16 | 100% | Y | 14 | 100% | Y | 8 | 89% | Y | 7 | 100% | Y | 45 | 98% |
| Facility has resources for community benefit activities? | Y | 14 | 88% | Y | 14 | 100% | Y | 8 | 89% | Y | 5 | 71% | Y | 43 | 93% |
| Distance to closest large teaching facility | | | | | | | | | | | | | | | |
| < 50 miles | | 6 | 38% | | 8 | 58% | | 0 | 0% | | 1 | 14% | | 15 | 32% |
| 51 – 100 miles | | 6 | 38% | | 3 | 21% | | 2 | 22% | | 2 | 28% | | 13 | 28% |
| 101 – 150 miles | | 1 | 6% | | 2 | 14% | | 1 | 11% | | 2 | 28% | | 6 | 12% |
| > 150 miles | | 3 | 18% | | 2 | 14% | | 6 | 67% | | 2 | 28% | | 13 | 28% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor.
2. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
3. Data reported above were from Question 12, 13, 14, and 15 on the survey, "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
4. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so these were also used.
5. These 144 facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes.
6. Each identified facility that did not return the survey was contacted by telephone, e-mail, faxes, and/or postal service at least five times.

Respondents were asked the percentage of LPNs employed at these facilities. These data are nested in Table 21. In the healthcare facilities surveyed, 54% of them indicated their percentage of LPNs employed at their facility to be over 20% or one-fifth. The Appalachian Region appears to utilize more LPNs and fewer BSN nurses than the other regions. Many of the nursing homes, retirement communities, and long term care facilities indicated a larger number of LPNs employed than the hospitals that were surveyed. The Delta/South has a large percentage of BS prepared nurses, but also has more healthcare facilities that are close to large teaching facilities. The data indicated that the Delta/South Region has poverty, but fewer geographic challenges than the other three regions.

The ADN trained nurse makes up a large percentage of the nursing staff at these rural hospitals. This makes sense since the largest place for recruiting nurses for these facilities is the local community colleges which supply ADN nurses. Table 36 shows that 77% of the healthcare facilities surveyed indicated the percentage of ADN RNs to be over 20%; over 50% indicated their percentage to be over 30%. As mentioned in Chapter 2, at least 60% of the nurses in the workforce are ADN RNs. Only 23% indicated the percentage of ADN RNs to be 20% or less.

In these surveyed healthcare facilities the BS RN is not employed at the number of the other two divisions of nurses. As presented in Table 21, 45% of the surveyed facilities indicated the Percentage of BSN RNs employed at their facility to be 20% or less. These healthcare facilities were all asked if they were dealing with a nursing shortage. Of the 46 facilities surveyed, 78% said they were dealing with a nursing shortage. All 9 (100%) of the facilities responding in the Northern Plains region said

Table 21

Estimated Percentage of Different Levels of Nurses Staffing These Healthcare Facilities Surveyed Servicing Economically Distressed Regions of the United States

| | Healthcare Facilities Serving Severely Distressed Counties per Region | | | | | | | | | |
|----------------------|---|-----|-----------------------|-----|---------------------|-----|--------------------|-----|-----------------|-----|
| | Appalachia (N=16) | | Delta-South (N=14) | | No. Plains (N=9) | | Southwest (N=7) | | Total (N=46) | |
| | n | % | n | % | n | % | n | % | n | % |
| LPNs employed | | | | | | | | | | |
| < 20 % | 6 | 38% | 8 | 57% | 4 | 44% | 3 | 43% | 21 | 46% |
| 21% – 40% | 8 | 50% | 5 | 29% | 3 | 33% | 4 | 57% | 20 | 43% |
| > 41% | 2 | 12% | 1 | 7% | 2 | 22% | 0 | 0% | 5 | 11% |
| ADNs employed | | | | | | | | | | |
| < 20 % | 5 | 31% | 2 | 14% | 2 | 22% | 2 | 29% | 11 | 25% |
| 21% – 40% | 9 | 57% | 8 | 57% | 1 | 11% | 2 | 29% | 20 | 39% |
| > 41% | 2 | 12% | 4 | 29% | 6 | 66% | 3 | 42% | 16 | 35% |
| BSNs employed | | | | | | | | | | |
| < 20 % | 12 | 76% | 5 | 36% | 2 | 22% | 1 | 14% | 21 | 46% |
| 21% – 40% | 2 | 12% | 7 | 50% | 5 | 55% | 5 | 71% | 19 | 41% |
| > 41% | 2 | 12% | 2 | 14% | 2 | 22% | 1 | 14% | 4 | 13% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor.
2. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
3. Data reported above were from Question 16, 17, and 8 on the survey, "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
4. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so these were also used.
5. These 144 facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes.
6. Each identified facility that did not return the survey was contacted by telephone, e-mail, faxes, and/or postal service at least five times.

their facilities were dealing with a nursing shortage. Though only 63% of the surveyed facilities in the Appalachia Region indicated they were dealing with a nursing shortage, this is still a large percentage.

This leads into the other factors to recruiting and retaining nurses as listed in Table 22. With transportation being limited in some of these regions, the healthcare facilities identified remoteness of their facility (87%) as a factor in recruiting and retaining staff while the limited social activities (13%) did not seem to be a big issue. Several of the healthcare facilities also identified the high unemployment rates in the surrounding areas as a factor impacting recruiting nurses. Spouses have difficulty finding employment in the area. At no facility in the Appalachia Region did BSN prepared nurses comprise more than 40%; for 76% of the health care facilities or 12 of 16, the total percentage of nursing staff with BSN degrees was under 20%.

As with many rural facilities, the ability to compete with the larger facilities near big cities is challenging. The factor that seemed to be generated throughout all regions was the lower salary (63%) at their facility, compared to the healthcare facilities in larger cities.

Other factors identified by these healthcare facility practitioners were the limited access for advancing their degrees or for advanced education. Another issue was the high cost of living. For the healthcare facilities located in the Northern Plains, the big difference in the culture played a major role in nurses leaving. Several of the practitioners indicated that the majority of the time, those that came to these healthcare facilities on a contract leave as soon as the contract was completed. They just did not “fit in” with the culture. Two facilities in the Appalachian region stated they did not have

any shortage of healthcare providers for their facilities therefore, they indicated 'not applicable' for this question.

Attractive recruitment factors included the small town environment. Several of these healthcare facilities list other attractions special to their areas for recruiting, including the family atmosphere due to the small town environment; support from administrative staff; four indicated their mission statement and values; excellent benefits; multiple outdoor activities; and two indicated living in a university town.

The majority of the practitioners surveyed at these healthcare facilities listed they recruited from local community colleges (87%). This was the primary source for nurses when recruiting. The other options came in at only 26%. Some of the healthcare facilities identified the need to have "their own kind" of nurse referring to Native American nurses to care for their patient who were also Native American. These facilities stressed the importance of the cultural understanding by nurses when caring for Native American as was also mentioned in Chapter 2.

The Southwest indicate they used nursing agencies (71%) and several stated their nurses were "contracted" through nursing agencies, meaning the nurses signed a contract with the agency to work for a certain contracted time period such as 3 months, 6 month, one year, or two years. These facilities indicated that the nurses usually leave at the end of their contract. This holds true for the healthcare facilities in the Northern Plains. Except for the Northern Plains, few recruit from other hospitals. As indicated in Table 20, there are not many nearby large healthcare facilities. Two facilities in the Southwest indicated that they have been recruiting nurses from the Philippines. Other of

the facilities indicated they had their own “in house” diploma nursing program so they grow their own.

With there being a shortage of nurses, everyone seems to be recruiting from the same sites. The researcher wanted to know what issues do these healthcare facilities have in recruiting and retaining their nursing staff. Respondents were asked to supply these issues they face in the survey. Issues that affect recruiting and retaining nurses at these hospitals/clinics are listed in Table 22.

These rural healthcare facilities were asked if they are experiencing a shortage of nurses and 78% said yes in Table 23. With there being shortage of healthcare providers through the nation, the researcher wanted to know from where are the staff for these facilities recruit. The survey listed several options to this question as indicated in Table 23.

For 30% of the surveyed healthcare facilities, transportation was a barrier issue for nurses. For several facilities in the Northern Plains (44%), transportation was a major factor. One noted there was a train that came through the area in the early morning going one way and then returned that evening going back the other direction. This was the major form of transportation into and out of the area. With the poverty being extreme in some of these areas, few have adequate transportation to and from work and except for a train, with no access to transit systems.

Table 22

Recruitment and Retention Issues of Nurses for Healthcare Facilities that Serve Economically Distressed Regions of the United States

| | Healthcare Facilities Serving Severely Distressed Counties per Region | | | | | | | | | |
|---------------------------------------|---|-----|-----------------------|-----|---------------------|------|--------------------|-----|-----------------|-----|
| | Appalachia (N=16) | | Delta-South (N=14) | | No. Plains (N=9) | | Southwest (N=7) | | Total (N=46) | |
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Factors recruiting nurse | | | | | | | | | | |
| Remoteness of the institution | 2 | 13% | 1 | 7% | 2 | 22% | 2 | 71% | 7 | 15% |
| Limited social activities | 1 | 6% | 1 | 7% | 2 | 22% | 2 | 28% | 6 | 13% |
| Severity of the poverty | 0 | 0% | 1 | 7% | 2 | 22% | 4 | 57% | 7 | 15% |
| Lower salaries | 8 | 50% | 11 | 79% | 5 | 56% | 5 | 71% | 29 | 63% |
| Other | 1 | 6% | 2 | 14% | 5 | 56% | 2 | 28% | 10 | 22% |
| Assisting factors in retaining nurses | | | | | | | | | | |
| Remoteness of the institution | 3 | 19% | 1 | 7% | 2 | 22% | 1 | 14% | 7 | 7% |
| Small town environment of the area | 10 | 63% | 9 | 64% | 5 | 56% | 2 | 28% | 26 | 57% |
| Other | 4 | 25% | 2 | 14% | 5 | 56% | 2 | 28% | 13 | 28% |
| Recruit nursing staff from | | | | | | | | | | |
| Local community colleges | 14 | 88% | 12 | 88% | 9 | 100% | 5 | 71% | 40 | 87% |
| Universities from large cities | 1 | 6% | 4 | 14% | 5 | 56% | 2 | 28% | 12 | 26% |
| Other hospitals outside county | 2 | 12% | 2 | 7% | 4 | 44% | 4 | 57% | 12 | 26% |
| Nursing Agencies | 1 | 6% | 4 | 14% | 2 | 22% | 5 | 71% | 12 | 26% |
| Other | 2 | 12% | 2 | 14% | 5 | 56% | 2 | 28% | 11 | 24% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor.
2. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
3. Data are from Question 19, 23, and 24 on the survey, "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.

4. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so these were also used.
5. These 144 facilities included hospitals, clinics, long term care and rehabilitation facilities, and nursing homes.
6. Each identified facility contacted by telephone, e-mail, faxes, and/or postal service at least five times.
7. Others listed were nursing homes, retirement communities, and do not know.

In Table 23, the healthcare facilities indicated that childcare is provided at only 68% of the healthcare facilities surveyed. For 70% of the healthcare facilities surveyed, childcare is an issue. Even for those with childcare facilities, the nursing staff is faced with challenges. Childcare at these facilities is usually only open during the week, and typically during the daytime. Nurses are needed 24 hours a day, seven days a week, 365 days a year, and many nurses need childcare early in the mornings and late at night due to 12 hour shifts. One of the hospitals in the Northern Plains region indicated that the spouses of the nurses would take turns taking the children to school and picking them up and watching the children after school, while the other spouse works. Apparently the local school system was inadequate to meet the needs of the children in the area.

The percentage of each ethnicity of the staff employed at these healthcare facilities is listed in Table 24. As with nursing in general, the majority of the staff is White, Non-Hispanic at all of the surveyed healthcare facilities as illustrated in the table. The facilities in the Northern Plains Region have the fewest number of this ethnic nursing population.

The healthcare facilities in the Northern Plains have the highest percentage of Native Americans which goes to reason being located near or on Indian Reservations. Table 24 demonstrates how few Native Americans are employed in the other regions.

Facilities servicing the reservations in the Southwest indicated a higher percentage of Native Americans also.

Table 23

Nurse Staffing Issues and Barriers of Healthcare Facilities Surveyed Servicing Economically Distressed Regions of the United States

| | Facilities Serving Severely Distressed Counties by Region..... | | | | | | | | | | | | | | |
|--|--|----|-----|-----------------------|----|-----|---------------------|---|------|--------------------|---|-----|-----------------|----|-----|
| | Appalachia (N=16) | | | Delta-South (N=14) | | | No. Plains (N=9) | | | Southwest (N=7) | | | Total (N=46) | | |
| | Y/N | n | % | Y/N | n | % | Y/N | n | % | Y/N | n | % | Y/N | n | % |
| Facility dealing with nursing shortage | Y | 10 | 63% | Y | 12 | 86% | Y | 9 | 100% | Y | 5 | 71% | Y | 36 | 78% |
| Is transportation a barrier to nurses? | N | 9 | 56% | N | 12 | 86% | N | 5 | 56% | N | 6 | 86% | N | 32 | 70% |
| Is child care an issue for nurses? | Y | 9 | 56% | Y | 12 | 86% | Y | 5 | 56% | Y | 6 | 86% | Y | 32 | 70% |
| Is child care provided for employees? | Y | 9 | 56% | Y | 12 | 86% | Y | 5 | 56% | Y | 6 | 86% | | 32 | 70% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor.
2. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
3. Data reported above were from Question 21, 26, 27, and 28 on the survey, "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.
4. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so these were also used.
5. These 144 facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes.
6. Each identified facility that did not return the survey was contacted by telephone, e-mail, faxes, and/or postal service at least five times.

Table 24

Estimated Percentage of Ethnicity of Staff of Healthcare Facilities Surveyed Servicing Economically Distressed Regions of the United States

| | Healthcare Facilities Serving Severely Distressed Counties per Region | | | | | | | | | |
|--|---|------|-----------------------|------|---------------------|------|--------------------|------|-----------------|------|
| | Appalachia (N=16) | | Delta-South (N=14) | | No. Plains (N=9) | | Southwest (N=7) | | Total (N=46) | |
| | n | % | n | % | n | % | n | % | n | % |
| White, Non-Hispanic | | | | | | | | | | |
| Under 20% | 0 | 0% | 0 | 0% | 2 | 22% | 0 | 0% | 2 | 4% |
| 21% - 40% | 2 | 12% | 0 | 0% | 2 | 22% | 0 | 0% | 4 | 8% |
| Over 40% | 4 | 88% | 14 | 100% | 5 | 56% | 7 | 100% | 40 | 87% |
| Native American/ Alaskan Native | | | | | | | | | | |
| Under 20% | 16 | 100% | 14 | 100% | 2 | 22% | 6 | 86% | 38 | 82% |
| 21% - 40% | 0 | 0% | 0 | 0% | 5 | 56% | 1 | 14% | 6 | 13% |
| Over 40% | 0 | 0% | 0 | 0% | 2 | 22% | 0 | 0% | 2 | 4% |
| Hispanic | | | | | | | | | | |
| Under 20% | 16 | 100% | 14 | 100% | 9 | 100% | 7 | 100% | 46 | 100% |
| 21% - 40% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Over 40% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Asian/Pacific Islander | | | | | | | | | | |
| Under 20% | 16 | 100% | 14 | 100% | 9 | 100% | 7 | 100% | 46 | 100% |
| 21% - 40% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Over 40% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Black, Non-Hispanic | | | | | | | | | | |
| Under 20% | 16 | 100% | 11 | 78% | 9 | 100% | 7 | 100% | 43 | 93% |
| 21% - 40% | 0 | 0% | 1 | 7% | 0 | 0% | 0 | 0% | 1 | 2% |
| Over 40% | 0 | 0% | 2 | 14% | 0 | 0% | 0 | 0% | 2 | 4% |
| Other | | | | | | | | | | |
| Under 20% | 16 | 100% | 14 | 100% | 9 | 100% | 7 | 100% | 46 | 100% |
| 21% - 40% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Over 40% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |

Notes:

1. Percentages were rounded up or down so the total may not actually add up to 100% in some columns due to the rounding factor.
2. The names of the healthcare facilities were obtained from the surveys given to the 24 community colleges which were all original participants in the Ford Foundation's Rural Community College Initiative from 1995-2000. These colleges listed the sites used for clinical experiences for their nursing students.
3. Data reported above were from Question 29 - 34 on the survey, "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," collected in May, 2005.

4. Three of the tribal colleges did not have nursing programs, but one had an allied health program requiring clinical sites, so these were also used.
5. These 144 facilities were comprised of hospitals, clinics, long term care facilities, rehabilitation facilities, and nursing homes.
6. Each identified facility that did not return the survey was contacted by telephone, e-mail, faxes, and/or postal service at least five times.

Table 24 clearly indicates how few Hispanic nurses are employed in these facilities that service the economically distressed regions. As seen in the table, 100% of the facilities indicated less than 5% of the employees are Hispanic, despite the fact that many Southwest community colleges are recognized as HSIs by USED.

The percentage of Asian/Pacific Islander employed at these surveyed healthcare facilities is listed in Table 24. Only one facility in the Southwest Region indicated their employee population percentage to be between 5% and 10%. This facility also indicated that they recruit nurses from the Philippines. All of the others surveyed indicated their percentage of Asian/Pacific Islander employed at their facility to be under 5%.

Table 24 lists the percentage of Black, non-Hispanic employed at each facility by region. The Delta/South clearly employs the hire percentage of Blacks. The other facilities indicated their percentages were 20% or less.

Table 24 indicates the percentage of "other" ethnic groups is minimally represented at these facilities. Only one facility in the Delta-South identified between 5% and 10% of their persons employed there were in the "other" category.

Summary

The study consisted of four phases. Phase 1 consisted of obtaining data about faculty from NCES' NSOPF, Fall 1998 data. Phase 2 gathered data on student

characteristic from NCES' IPEDS 2003. Phase 3 required sending the survey tool, "A Survey of Community College Healthcare Program Deans/Directors on Issues Related to the shortage of Nurses and Other Healthcare Providers," to the 24 rural community colleges previously selected by the Rural Community College Initiative (RCCI). The data from NSOPF and IPEDS were divided into five separate groups: all two-year publicly controlled community colleges, the 24 in the sample, the 18 publicly controlled colleges in the sample, the six tribal colleges in the sample, and all tribal colleges which included in the 6 tribal colleges in the sample. These groups were compared, examining any difference. These three phases developed the data base for research question 1.

The first survey tool sent to the 24 community colleges had a 100% response rate. From this survey the names of healthcare facilities used as sites for students' clinical experiences were gathered. This was the sample to be used in Phase 4. Once these healthcare facilities were identified, the survey instrument, "A Survey of Community Healthcare Clinics/Hospitals on Issues Related to the shortage of Nurses and Other Healthcare Providers," was sent to these facilities, or at least the 30% of the facilities that agreed to participate in the study. This data was used to answer the final research question.

CHAPTER 5

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

At the birth of the 21st century, the nation faces a critical shortage of nurses in the workforce, a shortage that is not going away any time soon. In large part due to the aging baby boomer population, the need for nurses without question is destined to grow. Nationally, by 2010 the need for nurses is projected to increase by 26% over 2000. This is equivalent to nearly half a million nurses! (Satterly, 2004). From where will these nurses be obtained? In 2000, the National Sample Survey of Registered Nurses in the United States indicated there were nearly 2.7 million licensed Registered Nurses (RNs). Women represented 95% of the nurses; 87% were white; and 72% were married. The average age of the nurse was 45 years of age. What is disconcerting is that in 1980, 25% of the nurses were under 30 years of age, but in 2000 this age group had dropped to just 9%. America's nursing workforce is clearly aging.

In 2002, the study completed by Aiken et al. demonstrated there were serious health risks impacting patients' lives that went with this shortage of nurses. Aiken et al. documented that increasing the number of patients from four to seven the nurse must care for increases the patients' risk of death by 21% (Aiken et al., 2002). It is statistics such as these that create a sense of urgency to address the growing shortage of nurses in our country. In some hospitals, surgeries are canceled or patients diverted to other hospitals, due to the lack of nurses to give care. In California, nursing shortages prompted the state legislature and passed an act to have nurse-to-patient ratios set in accordance with the recommendations of the Aiken study. Unfortunately, bowing to

pressure from the hospital lobby, Governor Arnold Schwarzenegger issued an emergency order that sought to delay implementation of new nurse-to-patient ratios from January 2005 until 2008 (Los Angeles Times, 2005).

Training for nurses is highly variable. The Licensed Practical Nurse (LPN), or Licensed Vocational Nurse (LVNs) as they are called in California and Texas, are trained at technical/vocational schools, community colleges, or hospitals in programs typically of 12 months duration. The LPN nurses provide basic bedside care under the direction of physicians, advance practice nurses, or RNs. The RNs can receive their training 2- or 3-year programs at community colleges and graduate with Associate's Degrees in Nursing (ADNs), or they may be trained at 2- or 3- year hospital-based diploma schools. The RNs may also have completed a four-year baccalaureate degree at universities. The RNs with baccalaureate degrees are not only trained to provide direct patient care, but are also prepared to continue their education on towards a master's degree. It is from this pool that future nursing educators are necessarily drawn (Satterly, 2004).

While the pathways to the nursing profession vary, there are also important differences and specializations depending upon the type of health care facility in which the nurse is placed for employment. Florence Nightingale, who gained prominence during the Crimean War in 1853, focused on making a clean environment in which to care for the ill and injured. With the tremendous progress in the knowledge of disease processes and in medicine also moves the care that is required. Present day nursing has greatly changed from Ms. Nightingale's time. In the more advanced, complex teaching hospitals, the use of sophisticated technologies and the complexity of patient

care requires specializations and advanced training of a continuous nature in order to provide a well trained nursing workforce.

At the smaller healthcare facilities most commonly found in rural America, however, the need for such advanced training is not as high of a priority. Patients requiring advanced therapy are usually transferred to the larger facilities in cities, however the need for nurses in rural American's health care facilities is just as great. Rural healthcare facilities tend to offer more generalized and basic services that span a broad range of needs. As one rural health care survey respondent noted, "We have other issues with which to deal, such as the vast cultural differences found in the populations at nearby Indian Reservations."

The nursing shortage may be even more severe in economically distressed counties of the United States. The community colleges that serve these areas appear to be in the driver's seat in being positioned to meet the need for more healthcare workers in both nurses and allied health professions. However, in these times of uncertain funding opportunities from state legislatures, tax cuts, and apprehension regarding future financial resources, publicly controlled community colleges and tribal colleges are faced with the challenge of obtaining dependable methods by which to secure the needed income to finance their missions. As Katsinas, Palmer, and Tollefson (2004) noted a cut in federal funding of training has a greater impact on these rural colleges. With lower access to local tax dollars, the rural community colleges have fewer options to replace the declining revenues from the state (Katsinas, Alexander, and Opp, 2003).

Rural community colleges, including tribal colleges, are not only faced with limited financial support, they also face a shortage of nursing faculty. At a time when

more nursing students need to be enrolled in these colleges, they have been forced to limit student spaces due to faculty shortages and limited physical classroom and laboratory space. Not only is the nursing workforce aging, so is the nursing faculty with the average age in the 50s. For numerous reasons, including lower salaries in academe as compared to practice in the field (often, the differential can be in excess of 50%). It clearly does not pay to be a nursing educator, as the author can personally attest, and for this and other reasons, all too few baccalaureate prepared nurses are choosing to return to obtain their master's degrees and teach.

This study was driven by the desire of the researcher to investigate the importance of Associate Degree Nursing (ADN) programs offered at rural community colleges as they relate to (a) providing a good pipeline of nursing professionals for rural healthcare facilities and (b) investigating the relationship of the ADN programs to the shortage of nursing staff at rural hospitals and other healthcare facilities. Initially, the researcher did not plan to include the Licensed Practical Nursing (LPN) programs as part of the study, but completed surveys from the 24 responding rural community colleges made it clear that the LPN programs played a very important role in creating a broadly trained rural healthcare workforce that can provide the kind of care rural America's communities need.

This study examined issues faced by 24 community colleges that are located in severely distressed counties of the United States. This sample had been used by the Rural Community College Initiative (RCCI). A Ford Foundation sponsored project designed to promote access and economic development in high poverty areas of the U.S. Managed by MDC, Inc of Chapel Hill, North Carolina, these 24 colleges were the

plot institutions in the years 1995 to 2000 (AACC, 2003). The colleges were chosen for the variety in their geographic focal points, the economic framework in which they operated, and governing authority systems under which they functioned, except for the tribal colleges. The sample consisted of 18 publicly controlled rural community colleges and 6 tribal colleges.

There were four phases in the research design of this study. In Phase 1, data on characteristics of faculty from the 24 RCCI colleges and other community and tribal colleges were collected from the National Center for Education Statistics' National Study on Postsecondary Faculty (NSOPF). Data presented were from Fall 1998, the most recent year for which data were available. In Phase 2, data on characteristics of students enrolled at community and tribal colleges, including the 24 RCCI colleges, were collected and analyzed. The source of data for Phase 2 was the US Department of Education's Integrated Postsecondary Education Data System (IPEDS) for 2003, the most recent year available.

In Phase 3 of the study, surveys of nursing program directors were obtained from all 24 RCCI colleges. This includes 18 publicly controlled rural community colleges and 6 tribal colleges who participated in the Ford Foundation's RCCI Program from 1995 to 2000 (AACC, 2003). The survey was designed to collect perceptions from nursing educators in the field regarding the general economic health of the college's service area, characteristics of the college's nursing program if one existed, as well as characteristics of both faculty and students. An emphasis was placed on assessing practitioner's perspectives regarding issues, challenges, and barriers faced by nursing

students as well as nursing faculty. The data were presented by type of institution (publicly controlled and tribal).

Responding nursing program directors from community and tribal colleges in Phase 3 were asked to provide a listing of healthcare facilities that were used as sites for their nursing students to obtain clinical experience, as required by licensure in each of the 50 states. Phase 4 of the study presents the results of a survey of human resource directors or directors of nurses from rural health care providers, including rural hospitals, nursing homes, long-term care facilities, and clinics regarding issues related to their nursing pipeline. Data for Phase 4 were analyzed by specific region in which the identifying rural community or tribal college was located (Appalachia, Mississippi Delta/South, Northern Plains, and Southwest).

This chapter fulfills three basic objectives. First, to identify, interpret, and discuss the major findings from the results of the two survey instruments and from the data available on NSOPF and IPEDS answering each of the two research questions. It is hoped this study will open dialogue among researchers, rural community college leaders, professional organizations, and funding agencies to "peel the onion" back and provide a more accurate picture of the issues, challenges, and barriers in the rural nursing healthcare workforce pipeline, and spur additional appropriate studies. The second objective of this chapter was to derived conclusions from the findings of the study. The last objective is to present recommendations for policy and practice.

Research Questions

Research questions were used in this study as an alternative to statistical hypotheses. The results of this study did yield evidence to sufficiently address the two research questions. The two primary research questions of this study are:

1. What are the characteristics of nursing programs at community colleges, including tribal colleges, that serve severely economically distressed rural counties of the United States, in terms of characteristics of the nursing field of study, the faculty, and students?
2. What are some of the key issues, challenges, impacts, and range of services provided by health care facilities that serve severely economically distressed regions of the United States, in terms of characteristics of the health care facilities, communities served by these facilities and the nurses employed?

It is well-known that community colleges are tied to the communities in which they reside. They are in the position to “grow their own”. For such areas as those located nearby or inside the Indian Reservations, this is very important. One of the major factors for the Tribal Colleges' success has been that students can “remain Indian,” practicing tribal traditions and retaining tribal values while attending college. The tribal community colleges, as with all community colleges throughout the US, are expected to serve the needs of both individuals and communities, yet they differ from the mainstream community colleges in their cultural orientations, which are unique to the tribes they serve. The Native Americans are plagued with multiple healthcare issues. Who better to care for them, than nurses from their own tribe trained in their own community college?

Findings

Finding #1: A nursing shortage exists at the small hospitals, nursing homes, and other health care facilities served by nursing programs at rural community and tribal colleges in severely economically distressed counties in the United States.

The majority of the surveyed healthcare facilities (70%) in these rural areas are small in size, with fewer than 150 beds. By purpose, they tend to be either general medical and surgical hospitals, or long term care facilities. All types of rural healthcare facilities in all four regions (Appalachia, Mississippi Delta, Southwest, and Northern Plains) are experiencing serious shortages of nurses [it should be noted that the researcher did not find a consistent definition of what constituted a small-sized hospital]. The American Hospital Association classifies hospitals by a number 1 through 8 according to the number of beds they have as to the size of the hospital: 6-24 beds are a code 1, 25 to 49 beds are a code 2, 50 to 99 beds are a code 3, 100 to 199 are a code 4, 200 to 299 are a code 5, 300 to 399 are a code 6, 400 to 499 are a code 7, and those 500 or more are a code 8. Of the healthcare providers surveyed, 24% were a code 1 or 2, 22% a code 3, 24% a code 4, indicating that 70% of those surveyed are in the small-sized facilities.

There was only one state hospital in the sample that returned a survey. There were no specialized hospitals in the sample. Only 25% of the respondents indicated their facility was for-profit, which is understandable considering the economic challenges these regions face, more than 50% of the respondents indicated that economic conditions in their colleges' service areas were either flat, distressed or severely distressed. There is simply no profit to be made here by the for-profit healthcare organizations. The majority of the rural healthcare facilities were located are at least 50 miles from the nearest large teaching hospital.

These facilities are almost all 150 beds or less in size. This smaller size necessarily impacts the number of slots for students' clinical experiences. Nursing program directors at all of the community and tribal colleges with nursing programs stated they had to limit students due to limited number of slots in the healthcare facilities.

In the surveys completed by the healthcare facilities servicing these economically distressed regions, 78% indicated they were experiencing a shortage of nurses. A shortage of nurses was found to exist in areas serviced by the 24 community and tribal colleges in the sample. Between 63% (Appalachia Region) and 100% (Northern Plains) of the healthcare facilities survey indicated they were faced with a shortage of nurses. As discussed in Chapter II, a shortage of nurses can lead to increased patient mortality. As the number of patients per nurse ratio increases, so does mortality of the patients (Aiken, 2002). The hardest facilities hit have been nursing homes, long term care facilities, and retirement facilities where fewer RNs work. LPNs make up a large percentage of the work force in these facilities (National Center for Health Workforce Analysis, November, 2004).

The data from healthcare facilities located in the Northern Plains region indicate a more severe nursing shortage, and more difficulties in recruiting and retaining healthcare workers. This is due to the severe poverty, high unemployment, and cultural differences, as compared to the other regions surveyed. The Northern Plains area also has a higher number of nurses with their BS degree. This may be from the push of government hospitals (perhaps run by HIS) to employ a higher number of BS nurses

compared to the ADN nurses. This push may also be the results of this region having such a nursing shortage by limiting who they can hire.

The facilities near and on Indian Reservations strongly indicated a need for more Native American nurses. Several survey respondents indicated that when a position is available in several of their facilities, the Native American gets priority consideration for the position over other ethnicities. Literature reveals that in rural areas, most rural health care facilities are staffed by nurses trained at nearby community college nursing programs (White, 2003, Viterito & Teich, 2002). Data reported by nursing program directors and healthcare providers strongly supports the use of local community and tribal colleges as a reservoir for recruiters looking for nurses.

Finding #2: Nursing programs, including both Licensed Practical Nursing (LPN) programs and Associate's Degree Nursing (ADN) programs, are important to these rural community and tribal colleges.

Rural community colleges, including tribal colleges, represent strong cultured values, including sense of family (particularly for the tribal colleges), along with dedication to the community. Of the 24 colleges surveyed, 21 offered a nursing program. Over 80% and 100% for the three tribal colleges) affirmed they have experienced growth in their nursing programs over the past five years, and expect growth over the next five years. The tribal colleges have all with nursing programs report significant growth, while 86% of the entire sample of 21 colleges with nursing programs have experienced slight to significant growth in their nursing programs. Nurses are clearly in short supply and high demand.

Practitioners at healthcare facilities located in these rural regions of severely economically distress were asked from where did they recruit their nursing staff. Table

22 demonstrated that an overwhelming majority of the healthcare facilities,-- 78%--, recruited from their local community and tribal colleges, while much fewer recruited from universities (26%). This indicates the importance of “growing your own.” Said one respondent, “We start trying to recruit these nursing students when they are completing their clinical hours at our facility.”

Table 5 displayed the responses to the three questions addressed to the community colleges concerning financial support. Over 60% indicated that their institution lacked financial support from both the local area and the state. Over 40% stated they lack federal support. The tribal colleges indicated the federal support was stronger with only a little over 33% specifying they lacked federal support. These findings further confirm recent studies of rural community college finance, which show the negative impact of state budget cuts on these institutions (Katsinas, Palmer, and Tollefson, 2004; Katsinas, Alexander, and Opp, 2003). This is devastating to the nursing programs when they are already short on faculty and limited in physical space.

Finding #3: Student financial aid for nursing students is critically important for both these rural community and tribal colleges, and for the students they serve.

Students at these rural community colleges are highly dependent on financial aid. Ninety percent of the respondents surveyed at these community colleges serving severely economically distressed areas indicated over 60% of their nursing students receive financial aid, and 60% indicated that over 80% of their students received financial assistance. All of the six tribal colleges indicated over 60% of their students receive financial aid with the most reporting over 80%. Without this financial assistance these needy students would probably not be able to afford college. A concern to the

researcher is the financial burden the student is left with upon graduating. Might a new nurse be forced to move to hospitals in larger cities for more money to pay off the loans? Bob Pedersen declared that the cost of tuition to a community college should be less than that of a reliable used car (Katsinas, Alexander, and Opp, 2003). He states, "When given the choice of reliable transportation or one year in colleges, the car is the more rational choice. The student who is forced to choose between the community college and the car chooses the car, because the car can generate income" (Katsinas, Alexander, and Opp, 2003). This area is ripe for further research.

Finding #4: Students in nursing programs at rural community and tribal colleges are predominantly white and female; minorities are significantly under-represented.

According to the 2003 data from the U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS), the majority of students at these community colleges are white females with the exception of the tribal colleges, which require at least 50% of the student population be Native American. The data further indicated that more white females enter nursing programs than all other ethnicities, including those attending the tribal college programs.

More females (60%) attend community colleges than males (40%). A larger number of White, Non-Hispanics attends the two-year publicly controlled community colleges, while more Native Americans attend the tribal colleges. Nursing students are even more predominantly White and female at all nursing programs offered at all of the community colleges. This holds true for the nursing programs offered at the community colleges serving the distressed regions of the US. and the tribal colleges. The students

attending these rural colleges are faced with many of the same issues all students face, yet they have their own.

It is clear that if a nursing workforce in rural America is to be prepared that more accurately reflects the extent diversity of the population, efforts to expand the minority pipeline are essential.

Finding #5: The lack of subsidized, public transportation and child care for nursing students at rural community and tribal colleges is a barrier that impacts program completion.

Nursing program directors at community colleges were asked if they offered on-campus residences for their students, and only 29% said they did so. Several of those whose colleges did so further indicated the spaces were very limited and always full. These colleges were not asked about special housing for married students or students with children. As Moeck (2005 study) indicated, the rural community colleges have a greater need to provide on campus residences to help increase enrollment and reduce barriers of transportation and cost. The researcher did not ask nursing program directors to indicate the distance the student would have to drive to class or clinical sites.

In response to the question asking if transportation is a barrier for the students, 88% stated yes; and 100% of the tribal colleges said yes. The exact issues related to this issue were not examined by this researcher. That said, in these rural communities, public transit systems are poorly developed. As indicated by one responder, "There is a train that comes through the town going one direction in the morning and then back through the town going the opposite direction in the evening." The rural roads might be an issue especially, during inclement weather. There may not be snow plows or even

trucks sanding the roads to and from these institutions limiting access. With the high level of poverty in these areas, students may not have that reliable used car to get them to and from classes, much less to the clinical sites located even farther away.

Child care is also a major issue for these students with 88% of nursing program directors indicating this. Yet, only 38% of the 24 colleges surveyed offer on campus child care. Several responders indicated though they offered on-campus child care, the number of slots was very limited and not low in cost. Other issues related to child care included the limited hours the child care facilities were open, hours that did not correspond with students' long clinical days. Students had difficulty getting children dropped off and then getting to clinical sites on time. Also, if their child was ill, they would have to miss class or clinical. Child care and transportation are clearly issues for nursing students at rural community and tribal colleges serving economically distressed counties.

Finding #6: A shortage of nursing faculty exists at rural community and tribal colleges that serve severely economically distressed regions of the U.S. This negatively impacts the student enrollment in these programs, and in turn reduces the rural nursing workforce pipeline.

The national faculty shortage is the result of a number of complex factors: the aging of faculty (median age of 51.5), increasing retirements, lower salary levels compared to clinical roles, the challenges of an academic environment, the length of time it takes to obtain graduate or doctoral degrees in nursing, the lack of graduate programs with specialized tracks for the preparation of future nursing educators and leaders, and the fiscal crisis in the states throughout the nation.

Seventy-six percent of the community colleges surveyed indicated they also were experiencing a shortage of faculty; and 100% the tribal colleges indicated they lacked enough faculty. This lack of nursing faculty was a factor with 76% of these colleges having to limit student enrollment in their nursing programs. Factors affecting the recruitment and retention included remoteness of the institution, lower salaries, limited social activities, severity of the poverty. Other factors included the limited opportunity for educational advancement, the diversity of cultures, heavy work loads which might be related to the shortage of faculty, shortage of housing with a high cost of living, high unemployment rates in the regions to place spouses, and having to travel long distances to the clinical sites to supervise the nursing students. Many of these issues relate to these colleges being in rural, geographically isolated areas that serve areas of high poverty. One of the three tribal colleges indicated that no shortage of nursing faculty, due to the program being new and starting with a low number of students initially. One respondent said the reason her college did have faculty was that not all of their faculty had obtained their master's degrees. Master's prepared faculty is not required for LPN programs. This might be one reason why these programs are found in larger numbers in these rural areas of poverty, so severe is the challenge of finding properly credentialed nursing faculty.

The remoteness of the area along with a small town environment were positive factors indicated by respondents in attracting and retaining nursing faculty. The slower pace of life in a small town, the community orientation, and the closeness of "knowing your neighbor" were small town reasons given. One additional positive factor for retaining nurses and nursing faculty is if they are from the community originally, and are

bound to it by family ties. Again, this supports the notion of “grow your own” pipeline of nurse and nursing faculty. If this is done, these individuals are apt to stay in the areas in which they grew up.

Conclusions

Conclusion #1: A significant and growing shortage of appropriately prepared nurses exists at healthcare facilities that serve severely economically distressed counties of the United States.

When surveyed, almost 80% of the healthcare facilities indicated they were dealing with a nursing shortage. These rural facilities are faced with issues when trying to recruit and retain nursing staff that are more specific to being rural, such as the extreme cultural differences and socioeconomic issues. Child care is also an issue for these healthcare facilities. One responder indicated that spouses of nurses would take turns “babysitting” children in the neighborhood. Along with child care issues is the issue of adequate primary and elementary educational opportunities for the older children. Some facilities indicated that the children were transported to a larger school system in a nearby county, because their own local school system was so poor in quality.

Larger, more technologically advanced facilities may be miles or hours away, so these facilities have a major role in the communities they service. They also play a vital role in interfacing with nearby community and tribal colleges. Not only do they offer places for students to complete the clinical aspect of the program, they offer jobs to graduating nurses, both Licensed Practical Nurses (LPN) and Associate’s Degree Nurses (ADN). These facilities utilize large numbers of both LPNs and ADNs, while employing fewer baccalaureate nurses. Several of the surveyed healthcare facilities indicated they liked having students performing their clinical experiences in their

hospitals, for that is when they start recruiting them, rather than waiting until they graduate.

Conclusion #2: Community and tribal colleges in severely economically distressed regions are key to the development of a strong nursing workforce that can appropriately meet 21st century healthcare needs of rural America.

There is a shortage of nurses throughout the United States. This shortage impacts the lives of patients, increasing their risk of death (Aiken et al., 2002). There is a great demand to “make” more nurses. The healthcare facilities surveyed indicated one of the primary sources for recruiting nurses is the local community college (87%). It is important in many cultures that these nurse be “grown from their own” for reasons inherent to each region. American Native nurses are highly desired to care for individuals in their own tribes. They understand the culture, and can more competently meet the needs of these special populations. Nurses from these rural areas tend to stay due to family ties and being comfortable with the local cultural and economic condition and issues, since they were raised there.

Just examining the number of colleges that offered a nursing program among the sample of 24 colleges demonstrated that both LPN and ADN programs are in great demand. The programs have grown and are expected to grow significantly in the future providing adequate financial resource to secure enrollment growth is a challenge that needs to be addressed. With the ever-growing shortage of nurses to care for patients, these programs need the financial support to meet the needs of their community. This means more local and state financial support of a targeted nature in order for these rural community colleges to meet the demand with such issues as more housing, larger class

rooms, better technology, affordable on-campus child care, and adequate transportation.

These rural community and tribal colleges face a shortage of nursing faculty needed to meet the needs of the programs. Faculty salaries need to be adequate and comparable to those in the larger cities and universities. Nursing faculty need to have opportunities for advancement in their degrees and in their careers. “Growing your own” nursing faculty includes having more Native American nursing faculty as well. Encouraging more Native Americans to enter this field of predominantly white females is needed. The same holds true for the Hispanic population in the Southwest whose representation in the number of faculty at these institutions is very limited, and African Americans in the Mississippi Delta region.

Student enrollments in nursing programs are limited by physical constraints of their campuses, limited clinical sites for student experiences and limited number of nursing faculty. Many faculty utilized by these colleges are not master’s prepared. These rural community and tribal colleges have issues that impact recruiting and retaining faculty. Lower salary is the main complaint. Other limitations are the extreme diversity at the tribal colleges and the severe poverty of the area.

The rural community and tribal colleges have an important role in “growing their own” healthcare workforce for these severely economically distressed regions of the US. These colleges, however, are faced with issues impacting the college itself, the faculty and the students. While these rural community and tribal colleges are in key positions to meet the local needs for home grown nurses, they cannot meet this

challenge alone. This will require targeted financial assistance at the local, state and federal levels.

Conclusion #3: Students pursuing nursing degrees at community and tribal colleges that serve severely economically distressed rural regions of the United States face significant barriers of finance, distance, and time.

Financial aid for nursing students' tuition and fees, is not the only need facing students at these rural community and tribal colleges serving severely economically distressed regions of the United States. There are additional non-academically related expenses attached to their degree completion. Transportation, childcare, and on-campus residences are key issues.

Students attending the nursing programs at rural community colleges may be faced with issues or barriers that impact their ability to attend these colleges, especially those students in the severely economically distressed counties of the United States. The community colleges offer programs not to just those individuals in their service areas, but to those outside these areas. Students may be required to travel distances to reach the campus or their site for clinical experience. Factors such as inclement weather, poor road conditions, long drives down narrow winding roads may take the students longer to get to classes. Adequate transportation is a must in these back roads. With this reliable transportation are additional expenses such as auto repair, registration, annual inspections, insurance....and the list goes on and on for these students.

A large majority of the students require financial assistance without which they may not be able to attend the college, but does this leave the student in debt post graduation? With lower salaries offered by rural healthcare providers in these

communities, it might take these students a longer period of time to pay their debts than those who make more money by working in the larger facilities suburban and urban areas.

There is clearly a great need for on-campus housing. As mentioned earlier, to ameliorate with the transportation challenges, opportunities for these students to have a place to stay on campus and not have a long daily drive to attend class are needed along with housing, adequate low cost child care is also needed, with better hours and places for ill children.

Limited clinical slots in the rural healthcare facilities served by community and tribal colleges in economically distressed areas for these nursing students have a major impact on the number of students allowed to enroll. In the areas with large teaching hospitals and numerous clinics and other healthcare facilities, there are more opportunities for clinical placement. There also needs to be more opportunities provided to these students in the rural communities.

Conclusion #4: Nursing program faculty at community and tribal colleges that serve severely economically distressed rural regions of the United States face significant barriers of finance, distance, and time.

There are many factors noted that impact recruiting faculty to these rural community and tribal colleges that serve severely economically distressed regions of the United States. Lower salaries offered at these rural community colleges was an issue for 67% of those surveyed, but that was not the only issue. There were many other factors, such as the vast different cultural experience at these colleges and in the communities. This was identified as a “major shock” to those entering these areas on or near Indian reservations, however other colleges indicated the cultural difference from

the socioeconomic status of the regions were sometimes too much for faculty to handle, so they would end up leaving the college and the community.

There is strong acknowledgement of a shortage of nursing faculty. Thus, it logically follows that the rest of the nursing faculty employed at these community and tribal colleges have very heavy teaching work loads and overloaded semesters with students that have multiple needs. Travel is also a challenge these nursing faculty at the rural community and tribal colleges must face. Many times just getting to the clinical site to supervise nursing students requires adequate transportation and the need to travel great distances. Another frequently mentioned issue was the fact that there was limited or no opportunity for advancing their education at these geographically isolated facilities. The lack of adequate housing along with the high cost of living and a high unemployment level leaves few or no jobs for spouses.

Recommendations

A total of 5 recommendations, including 2 for policy and 3 for practice flowing from this study are presented in this section. While the scope of this study was limited to the nursing portion of healthcare providers, some recommendations are proposed to continue the study by adding other allied healthcare programs and issues to obtain a broader and more complete picture of healthcare in these distressed rural communities. The recommendations of this study follow.

Recommendations for Policy

Recommendation #1: Further study on a national level of the factors associated with successful recruitment and retention of nurses for rural healthcare facilities is needed, for both severely economically distressed rural regions, and the rest of rural America.

The national nursing shortage is well documented, and this study found the national trend data to be reflected in the responses of both the healthcare practitioners and community and tribal college nursing educators. Further research is needed, however, to investigate and "flush out" positive and negative factors that assist/impinge recruitment and retention of nurses.

In the recruitment phase, how does the fact that nurses serving in rural health care facilities are much more likely than their urban counterparts to work in smaller facilities with caseloads of a much more generalized nature affect recruitment? Is this reality of healthcare in rural America an attractive feature? While this study did not specifically examine salary differentials between nurses working in urban, suburban, and rural healthcare facilities, the disparities are well known by practitioners in the field. Is low pay a factor that causes nursing students to pursue their careers in urban as opposed to rural settings? If it is true that the nursing recruitment pipeline for rural healthcare is in fact community/tribal colleges to clinical placement facility to permanent hiring by the clinical placement facility, then an investigation should be made as to how additional clinical placement slots can be created in rural health care facilities, so as to expand the pipeline. A national study, perhaps through the US Department of Health and Human Services, performed in cooperation with state offices of health, could shed further light on this.

Similarly, further study of motivating factors and issues that impinge on the retention of nurses for rural healthcare facilities is needed. Is the lack of easy access to

professional development opportunities a major negative factor in retaining nurses in rural areas, and if so, could new technologies such as distance learning ameliorate such barriers? Is there a difference in level and type of case load and required skill set for nurses working in rural as compared to suburban and urban settings that assists/impinges on nursing retention?

Finally, this study focused on the nursing pipeline in rural communities that are located in regions of high persistent poverty. What motivates nurses who choose to stay in this particular environment and why? A study supported by DHHS, state health officials, and supported by nursing and hospital organizations would improve the response rate obtained by this researcher from the rural healthcare facilities, as state health officers should have access to such data or the ability and resources to gather the information.

Nationally, community colleges are a place to “grow your own” nursing workforce; the fact that 87% of the nurses at the rural healthcare facilities surveyed in this study hired ADN-trained nurses from their local community and tribal colleges strongly suggests the efficacy of a place-based strategy to maintain and expand the healthcare workforce pipeline. Practitioners at healthcare facilities clearly look to their local community and tribal colleges as their primary place to recruit nurses. But the limited number of slots for students at these facilities in turn necessarily limits the number of students who can be both enrolled in nursing programs and then placed into the rural healthcare workforce in clinical sites. For these reasons, an important component of any national study of recruitment and retention of nurses for rural America should include what financial incentives/disincentives exist for rural healthcare facilities that

open their doors to local community and tribal colleges nursing students to increase the number of available “student slots.”

Recommendation # 2: A national study of how to best expand the programs and services offered by nursing programs at rural community and tribal colleges in the United States should be conducted. Such a study should include both allied health and nursing programs, and within nursing should include both ADN and LPN nursing programs, with special focus on expanding clinical placement pathways.

This study found policy reform and funding for the promotion and expansion of these nursing programs, is vital for these programs to continue. The respondents indicated their nursing programs have had growth over the past five years and are expected to continue to grow. There is a great need for financial assistance and a change in policy to support these new programs and assist in the continuance of the older programs.

To get a global picture of healthcare, the focus needs to be broader than just nursing. Other areas such as radiology technicians, respiratory therapists, patient care technicians, dental hygienists, and nutritionists all play a major role in health care of the communities. These areas also need to be researched. Physically visiting sites might give researchers a better perspective on the quality of the programs, condition of the facilities, actual clinical placement availability, childcare availability, and actually a visual understanding of the service areas.

For public community colleges funding for most nursing programs is more dependent on student enrollments through funding formulae, than them on graduating students and meet the healthcare/allied health the demands of the community. Policy needs to be changed to address needs and not just numbers. These rural community and tribal colleges serving severely economically distressed regions of the United

Stated are vital in the challenge to meet the shortage of nurses, especially in their own communities where “grow your own” is what they do.

A place-based grounded survey of health care facilities starting with local community needs for recruiting new nurses for their facilities is needed. The community needs need to be reassessed through a funded study possibly through the Rural Policy Research Institute, Rural Community College Initiative, the US Department of Education, the Kellogg or Ford Foundation, or any number of well-endowed agencies might see this as a cause for further research expanding it to examine the allied health work force.

For over sixty years major nursing organizations have been pushing for all Registered Nurses to hold baccalaureate degrees, yet ADN students continue to pass their state board licensure exams at an equally or higher rate than the BSN students. This study clearly indicated the vital importance of ADN programs in rural healthcare facilities. The percentage of ADNs versus BSNs in the nursing staff of the healthcare facilities surveyed demonstrates the continuing importance of these programs. What are these nursing organizations telling rural Americans living in these severely economically distressed regions States that depend on these community college prepared nurses?

Instead of putting the community college nursing programs down, these universities should work *with* these programs and make it easier for the ADN nurses to get that baccalaureate degree if it is the student’s decision. A fully funded pilot study needs to be conducted on how these two nursing programs can compliment each other. These community college ADN students have already completed two to three

semesters of prerequisite class work, prior to the four semesters of nursing course work. Baccalaureate nursing programs tribally included are only four semesters of nursing course work. A study needs to develop nursing program that would be offered at *both* community colleges and universities. The baccalaureate programs could offer management course(s) and require government and other prerequisite courses, but both nursing programs would graduate the same “nurse.” The BSN would be prepared for management and pushed toward advancement to the master’s. Then all the ADN nurse would need to get the BSN would be to take the management class(es) and those few prerequisite courses. Programs that allow for early admission to pharmacy programs for the undergraduate programs already exist. Might not programs for nurses also prove successful?

Recommendations for Practice

Recommendation #3: A task force to study financial aid issues faced by nursing students at rural community and tribal colleges is needed, with special emphasis on programs that serve severely economically distressed rural regions of the United States.

This study found that 90% of the rural community and tribal colleges in these severely economically distressed regions of America indicated that the majority of nursing students attending their programs required financial assistance. Colleges are having to raise their tuition, putting an increased burden on students to subsidize the colleges’ drop in income. Given what is occurring in the nursing programs, it can be assumed students in allied health programs are hit just as hard in their wallets.

Without financial assistance, these students might not be able to attend these colleges. If these students are burdened with loans when they graduate, they may choose to go to the big cities to earn more money just to pay off these loans, thus

leaving the rural communities. In the long term, this could be devastating to the pipeline of rural nurses, despite a shortage already exists in these rural communities. A large number of students use financial aid to assist them in attending nursing programs. These students need to have more funding, more grants, and less debt upon graduation. Tuition needs to be affordable, so that they do not have to choose the reliable used car over one year's tuition.

Policy reform needs to occur to assist these students, especially minorities, in attending nursing programs. Funding needs to be provided for outreach programs to get potential students interested in nursing starting in at elementary and continuing through high school. There needs to be an incentive for these students other than just the promise of a job. A national task force to table these issues is clearly needed.

Recommendation #4: A study of the barriers related to finance, distance and time faced by nursing students at rural community and tribal colleges should be conducted across all of rural America, with special emphasis on the unique spatial requirements faced by students enrolled at community and tribal college programs that serve severely economically distressed rural regions of the United States.

The cost of tuition is not the only issue the students at these rural community and tribal colleges must face. Moeck (2005) clearly indicated the importance of on-campus housing, yet the rural community and tribal colleges serving severely economically distressed regions of America indicate that they lack housing on-campus, or that housing is limited with waiting lists. A funded study is needed to establish and document best practices. Are special housing arrangements available for these students? With the housing, low cost, easily affordable child care should be researched. This study clearly indicated the need for childcare and the lack of resources available to the nursing students. Allied health fields should also be included.

Travel and transportation are barriers to these students. Not only do these students have to manage getting to the campus, they must also find a means of getting to the healthcare facilities for their clinical experiences. As Pedersen (2003) indicated, a reliable car is looked at as a means of earning money. If given a choice between one year's college tuition or a car, the student would choose the car. Transportation is very important in these rural areas. With reliable transportation also comes the expense of upkeep and gasoline. Reform in state and federal policies and practices to assist these students in nursing and in allied health is needed.

Along with the barriers these student face is the issue of low representation of minorities in the nursing and allied health fields. Why are so few Hispanics and Native Americans enrolling into the nursing programs? Why is nursing such a predominantly white female profession? A study needs to examine why minorities are not choosing nursing and allied health as careers. There needs to be a push for other ethnicities to enroll into the nursing and allied health programs offered at these rural community colleges. A federally supported program designated for these groups could increase participation. Education has to be a priority. Finding ways to reach out to the men and minorities who are missing from the nursing programs at these community colleges is crucial when "growing your own."

Recommendation #5: A study of the barriers related to finance, distance and time faced by nursing faculty at rural community and tribal colleges should be conducted across all of rural America, with special emphasis on the unique spatial requirements faced by students enrolled at community and tribal college programs that serve severely economically distressed rural regions of the United States.

A shortage of nursing faculty exists and this shortage is only going to get worse. This need for nursing educators across the nation is apparent, including rural

community and tribal colleges serving severely economically distressed regions of the United States. This study demonstrated several factors impinging on recruitment and retention of faculty at the rural community and tribal colleges. Lower salaries was commonly mentioned by the heads of the nursing programs. Small rural healthcare facilities in areas of high poverty, high unemployment, high cost of housing, have faculty faced with lower salaries than those located near larger cities. Funding is part of the solution. Unless policy allows for more delegation of funds to these colleges, the salaries will likely remain the same along with the heavy workloads. It makes sense that one would want the best of the best teaching, but instead only the truly dedicated fill the nursing faculty positions at these colleges. The author has personally experienced the lower salary in the world of academia at the large university setting, resulting in a return to the hospital setting. The salary is twice that of the academic world, plus benefits such as tuition reimbursement for degree advancement, payment for seminars attended, and more flexible hours, all of which tend to attract nurse educators into healthcare facilities. Colleges have to be able to compete with the healthcare facilities, and this requires funding, not yearly cuts in support.

Distance and transportation are other issues identified by the respondents of the survey. Faculty must travel long distances in the supervision of the nursing students at clinical sites. The rural roads are not as well maintained as state highways, and narrow and winding roads add time to the distance to be traveled. Another issue with distance is the issue of limited opportunities for the faculty to advance their degree. A national study needs to be conducted as to what opportunities may be offered at these community colleges for the educational advancement of the faculty. Nursing educator

associations and organizations need to fund, perform, and distribute the results of this study.

There needs to be funding or grants offered to faculty to advance their degrees. Incentives need to be offered to graduating nursing students to continue their education to return to teaching at these institutions. This would do well for the tribal colleges where there is a limited number of Native American students enrolling in the nursing program. Offering incentives such as loan forgiveness or low cost or no cost education to the graduating nurses to return for their advanced degrees and teaching at these rural community and tribal colleges should be piloted.

Closing Remarks

There is a critical shortage of nurses whether they are LPNs or RNs with Associate's Degrees or Baccalaureate Degrees. This impacts the health of the people, especially those in counties of severe poverty. The higher patient to nurse ratio have proven to increase the risk of patient death (Aiken et al., 2002). It is the community and tribal college nursing programs that can help these counties with the nursing workforce needed to decrease the patient to nurse ratios.

Rural poverty offer special problems to these community and tribal colleges, the faculty and the students who attend these community colleges. These colleges are in need of local, state and federal financial support just to survive, yet all of these colleges indicate that their nursing programs have been and are going to continue to grow. For this they need more funding. These 24 RCCI rural community and tribal colleges serve areas with higher poverty rates, lower education levels, and more unemployment than in

the rest of rural America and nationally. Local community colleges are critical to these desperately poor communities. They offer a means to better the individuals in the communities.

With the shortage of RNs and LPNs, the future looks bleak. If not for the work of the community and tribal colleges and their efforts to meet the needs of the healthcare workforce, the rural communities would be even harder pressed to find the nursing staff for their hospitals, clinics, doctor's offices, and nursing/retirement homes.

Rural community colleges play vital roles in supplying nurses for their service areas. The findings of this researcher suggest that community and tribal colleges are the primary resource for recruiting nurses in the healthcare facilities. Many facilities identified the vast cultural differences of their communities as a factor impacting recruiting. Here is the reason to "grow your own" and meet the needs of the community. What better place to grow your own than at a well financed, locally well supported community college?

APPENDIX A

THE 24 RCCI COLLEGES IN SEVERELY DISTRESSED COUNTIES

| Name | Location |
|---------------------------------------|-------------------|
| Alabama Southern Community College | Monroeville, AL |
| Blackfeet Community College* | Browning, MT |
| Coahoma Community College | Clarksdale, MS |
| Danville Community College | Danville, VA |
| Fort Belknap College* | Harlem, MT |
| Fort Peck Community College* | Poplar, MT |
| Hazard Community College | Hazard, KY |
| Laredo Community College | Laredo, TX |
| Meridian Community College | Meridian, MS |
| Mountain Empire Community College | Big Stone Gap, VA |
| New Mexico State University | Carlsbad, NM |
| Northern New Mexico Community College | Espanola, NM |
| Phillips Community College | DeWitt, AR |
| Prestonsburg Community College | Prestonsburg, KY |
| Salish Kootenai College* | Pablo, MT |
| Sinte Gleska University* | Rosebud, SD |
| Sitting Bull College* | Fort Yates, ND |
| Somerset Community College | Somerset, KY |
| Southeast Community College | Cumberland, KY |
| Southeastern Community College | Whiteville, NC |
| Southwest Texas Junior College | Uvalde, TX |
| Technical College of the Lowcountry | Beaufort, SC |
| Wallace Community College | Selma, AL |
| University of New Mexico | Gallup, NM |

*Tribal Community Colleges

APPENDIX B
TRIBAL COLLEGES IN THE UNITED STATES

| Name | Location | Established |
|---|-----------------|--------------------|
| 1. Bay Mills Community College | Brimley, MI | 1984 |
| 2. Blackfeet Community College* | Browning, MT | 1974 |
| 3. Cankdeska Cikara Community College | Fort Totten, ND | 1974 |
| 4. Cheyenne River Community College | Eagle Butte, SD | 1974 |
| 5. College of the Menominee Nation | Keshena, WI | 1993 |
| 6. Crownpoint Institute of Technology | Crownpoint, NM | 1979 |
| 7. D-Q University | Davis, CA | 1971 |
| 8. Dine College | Tsaile, AZ | 1968 |
| 9. Dull Knife Memorial College | Lame Deer, MT | 1975 |
| 10. Ford du Lac Tribal and Community College | Cloquet, MN | 1987 |
| 11. Fort Belknap College* | Harlem, MT | 1984 |
| 12. Fort Berthold Community College | New Town, ND | 1974 |
| 13. Fort Peck Community College* | Poplar, MT | 1978 |
| 14. Haskell Indian Nations University | Lawrence, KS | 1970 |
| 15. Insitute of American Indian Arts | Santa Fe, NM | 1988 |
| 16. Lac Courte Oreilles Ojbwa Community College | Hayward, WI | 1982 |
| 17. Leech Lake Tribal College | Cass Lake, MN | 1990 |
| 18. Little Big Horn College | Crow Agency, MT | 1980 |
| 19. Little Priest Tribal College | Winnebago, NE | 1996 |
| 20. Nebraska Indian College | Niobrara, NE | 1979 |
| 21. Northwest Indian College | Bellingham, WA | 1983 |
| 22. Oglala Lakota College | Kylie, SD | 1971 |
| 23. Salish Kootenai College* | Pablo, MT | 1977 |
| 24. Sinte Gleska University* | Rosebud, SD | 1971 |
| 25. Sisseton Wahpeton Community College | Sisseton, SD | 1979 |
| 26. Sitting Bull College* | Fort Yates, ND | 1973 |
| 27. Southwestern Indian Polytechnic Institute | Albuquerque, NM | 1971 |
| 28. Store Child College | Box, Elder, MT | 1984 |
| 29. Turtle Mountain Community College | Belcourt, ND | 1972 |
| 30. United Tribes Technical College | Bismarck, ND | 1969 |
| 31. White Earth Tribal and Community College | Mahnomen, MN | 1997 |

* Included in the 24 colleges identified by RCCI to be located in severely distressed counties.

APPENDIX C
IRB APPROVAL LETTER

UNIVERSITY^{of} NORTH TEXAS

Office of Research Services

January 31, 2005

Mary Reid
Department of Counseling, Development and Higher Education
University of North Texas

Re: Human Subjects Application No. 04-382

Dear Ms. Reid,

As permitted by federal law and regulations governing the use of human subjects in research projects (45 CFR 46), the UNT Institutional Review Board has reviewed your proposed project titled "Rural Community Colleges and the Nursing Shortage in Severely Distressed Counties." The risks inherent in this research are minimal, and the potential benefits to the subject outweigh those risks. The submitted protocol and informed consent form are hereby approved for the use of human subjects in this study. **Federal policy 45 CFR 46.109(e) stipulates that IRB approval is for one year only.**

Enclosed is the consent document with stamped IRB approval. Please copy and **use this form only** for your study subjects.

It is your responsibility according to U.S. Department of Health and Human Services regulations to submit annual and terminal progress reports to the IRB for this project. Please mark your calendar accordingly. The IRB must also review this project prior to any modifications.

Please contact Shelia Bourns, Research Compliance Administrator, at ext. 3940 or Boyd Herndon, Director of Research Compliance, if you wish to make changes or need additional information.

Sincerely,



Scott Simpkins, Ph.D.
Chair
Institutional Review Board

APPENDIX D
COMMUNITY COLLEGE SURVEY TOOL COVER LETTER

Informed Consent Script

February 15, 2005

Dr. XXXX XXXX

XXXXXXXXXXXX

Dear Director/Dean of Nursing:

I am conducting a national study of two-year community colleges that are located in the severely distressed counties of the United States as identified by the Appalachian Regional Commission. The Rural Community College Initiative randomly selected 25 community colleges located in these counties as pilot colleges for their program administered by MDC Inc., in Chapel Hill, North Carolina between 1995 and 2003. As you probably know, your college was one of these 25 pilot colleges.

Sadly, limited healthcare for those who reside in these areas of severe poverty has been identified as a major problem for years. As major nursing organizations such as the American Nurses Association continue to push for federal and state licensure mandates that would require all nurses to have a baccalaureate degree in nursing, there is concern severely distressed counties might be the areas that would suffer most from this decision.

My research is directed at assessing how rural community college nursing programs impact the supply of nurses at the hospitals/clinics also located in these distressed counties. The survey from which I will ask you questions has been developed to provide data for this purpose.

I am particularly interested in identifying factors you face in attracting and retaining faculty at your institution, and in identifying challenges the students face attaining their degrees and in obtaining employment post graduation. I am also interested in any other healthcare training offered at your institution. This survey will attempt to answer these and other questions specific to the community colleges.

If you do not have a nursing program, please so indicate; if your institution offers other healthcare programs, please provide me with the name of the person over these programs. If you do have a nursing program, would you be so kind as to answer the questions in this telephone survey today? This should take approximately 15 to 20 minutes of your time.

Please know that individual campus responses will be kept in strict confidence. All data will be coded and all identifying data will be locked in a separate file contained within a locked office. It is my intention to present the results of this survey at community college professional meetings, and of course to share results with those indicating an interest in receiving them. I take the liberty of thanking you in advance for helping with this project.

In case you have any questions about the study, you may contact Mary B. Reid, Doctoral Candidate at UNT at telephone number 972-981-8392 or Dr. Stephen Katsinas, Higher Education Department at UNT at telephone number 940-369-6001.

Sincerely,

Mary B. Reid, MS, APRN-BC
Doctoral Candidate and Research Associate
Bill Priest Center for Community College Education
University of North Texas

APPROVED BY THE UNT IRB
FROM 1/31/05 TO 1/30/06
JS

APPENDIX E
COMMUNITY COLLEGE SURVEY TOOL

**A SURVEY OF COMMUNITY COLLEGE HEALTHCARE PROGRAM DEANS/DIRECTORS ON
ISSUES REALTED TO
THE SHORTAGE OF NURSES AND OTHER HEALTHCARE PROVIDERS**

Directions: Your information will be kept confidential and the responses will be anonymously coded. Please provide all requested information asked during this survey.

Background information

1. What is your title at your institution?
 Associate Dean of Nursing
 Dean of Nursing
 Director of nursing
 Associate Dean of Health Science/Allied Health
 Dean of Health Science/Allied Health
 Director of Health Science/Allied Health
 Other (please specify):

2. How long have you been at this institution?
 < 1 year
 1 – 5 years
 6 – 10 years
 11 – 15 years
 > 15 years

3. How long have you been the director/dean of this program at this institution?
 < 1 year
 1 – 5 years
 6 – 10 years
 11 – 15 years
 > 15 years
 I am not a director/dean of a nursing program

Program Information

4. Which of the following nursing programs are offered at your institution?
 LVN
 LPN
 ADN
 Pre-requisites for transfer to a baccalaureate program in nursing

5. Which of the following Allied Health programs are offered at your institution?
 Radiology Technician
 Respiratory Therapist
 Dental Hygienist
 Patient Care Technician
 Emergency Medical Technician (EMT)
 Paramedic

6. How many years has your institution offered a nursing program?
- < 1 year
 - 1 – 3 years
 - 4 – 6 years
 - 7 – 9 years
 - 10 – 12 years
 - > 12 years
7. How many years has your institution offered a radiology technician program?
- < 1 year
 - 1 – 3 years
 - 4 – 6 years
 - 7 – 9 years
 - 10 – 12 years
 - > 12 years
8. How many years has your institution offered a respiratory technician program?
- < 1 year
 - 1 – 3 years
 - 4 – 6 years
 - 7 – 9 years
 - 10 – 12 years
 - > 12 years
9. How many years has your institution offered a dental hygienist program?
- < 1 year
 - 1 – 3 years
 - 4 – 6 years
 - 7 – 9 years
 - 10 – 12 years
 - > 12 years
10. How many years has your institution offered a patient care technician program?
- < 1 year
 - 1 – 3 years
 - 4 – 6 years
 - 7 – 9 years
 - 10 – 12 years
 - > 12 years
11. How many years has your institution offered a paramedic/EMT program?
- < 1 year
 - 1 – 3 years
 - 4 – 6 years
 - 7 – 9 years
 - 10 – 12 years
 - > 12 years

Issues Facing Your College

12. Has your nursing program experienced growth over the past 5 years?
 Yes
 No
13. Has your allied health program(s) experienced growth over the past 5 years?
 Yes
 No
14. Do you expect your nursing program to experience growth over the next 5 years?
 Yes
 No
15. Do you expect your allied health program(s) to experience growth over the next 5 years?
 Yes
 No
16. How would you assess the general economic health of your college's service area over the past 5 years?
 Very strong
 Strong
 Flat, stable
 Distressed
 Severely distressed
17. What is the estimated enrollment trend of your nursing program from 2000 to 2004?
 Significant increase (+8% or more)
 Slight increase (+4 to + 7)
 Flat/stable (+ or – 3%)
 Slight decrease (-4 to -7)
 Significant decrease (-8 or more)
18. What is the estimated enrollment trend of your allied health program from 2000 to 2004?
 Significant increase (+8% or more)
 Slight increase (+4 to + 7)
 Flat/stable (+ or – 3%)
 Slight decrease (-4 to -7)
 Significant decrease (-8 or more)
19. Does your institution lack financial support from the local area?
 Yes
 No
20. Does your institution lack financial support from the state?
 Yes
 No
21. Does your institution lack financial support from the federal government?
 Yes
 No

Faculty Issues

22. Do you have the number of faculty that you need for your nursing program?
 Yes
 No
23. Do you have the number of faculty that you need for your allied health program(s)?
 Yes
 No
24. Which of the following factors are factors when recruiting faculty to your institution?
 Remoteness of the institution
 Limited social activities in the area
 The severity of the poverty level in the area
 Lower salary offered at your institution than at other institutions
 Other (please specify):
25. Which of the following factors are factors retaining faculty at your institution?
 Remoteness of the institution
 Limited social opportunities offered in the surrounding environment
 The severity of the poverty level in the area
 Lower salary offered at your institution than at other institutions
 Other (please specify):
26. Which of the following factor assist in retaining faculty at your institution?
 Remoteness of the institution
 Small town environment of the area
 Other (please specify):
27. Do you have to limit the number of students admitted into your program due to limited number of faculty?
 Yes
 No

Clinical Site Issues

28. Do you have limited slots at area hospitals/clinics for student clinical experiences?
 Yes
 No
29. Please list the names of the facilities used by your institution for clinical opportunities for the students.
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
 - 9.
 - 10.
 - 11.
 - 12.

Student Issues

30. Is transportation to your community college a barrier for students?
 Yes
 No
31. Does your college offer on campus residences for students?
 Yes
 No
32. Is childcare an issue for your students?
 Yes
 No
33. Is low cost, on campus childcare services for students offered at your college?
 Yes
 No
34. What is the estimated percentage of students receiving direct grant student financial aid in your nursing program?
 Under 20%
 20% – 40%
 41% - 60%
 61% - 80%
 Over 80%
35. What is the estimated percentage of minorities enrolled in your nursing program?
Under 5%
 5% - 10%
 11% - 20%
 21% - 30%
 31% - 40%
 41% - 50%
 Over 50%
36. What is the estimated percentage of White, Non Hispanic students attending your institution?
 Under 5%
 5% - 10%
 11% - 20%
 21% - 30%
 31% - 40%
 41% - 50%
 Over 50%
37. What is the estimated percentage of American Indian/Alaskan Native students attending your institution?
 Under 5%
 5% - 10%
 11% - 20%
 21% - 30%
 31% - 40%
 41% - 50%
 Over 50%

38. What is the estimated percentage of Hispanics students attending your institution?

- Under 5%
- 5% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- Over 50%

39. What is the estimated percentage of Asian/Pacific Islanders students attending your institution?

- Under 5%
- 5% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- Over 50%

40. What is the estimated percentage of Black, non-Hispanics students attending your institution?

- Under 5%
- 5% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- Over 50%

41. What is the estimated percentage of other ethnicity groups of students attending your institution?

- Under 5%
- 5% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- Over 50%

APPENDIX F
HOSPITAL/CLINIC SURVEY TOOL COVER LETTER

Informed Consent Script for Hospitals

February 15, 2005
Dr. XXXX XXXX
XXXXXXXXXXXX
XXXXXXXXXXXX

Dear Director of Human Resources:

I am conducting a national study of community hospitals/clinics that are located in the severely distressed counties of the United States as identified by the Appalachian Regional Commission. Your facility is located in one of these regions.

Sadly, limited healthcare for those that reside in these areas of severe poverty has been identified for years, yet this remains an issue. As major nursing organizations, such as the American Nurses Association, continue to push for mandating that all nurse have a baccalaureate degree in nursing, There is a concern the severely distressed counties would be the areas that would suffer most from this decision. My research is directed at demonstrating the number of nurses trained at community colleges affects the supply of nurses at the hospitals/clinics also located in these distressed counties. The survey from which I will ask you questions has been developed to provide data for this purpose.

I am particularly interested in identifying factors you face in attracting and retaining nurses/allied healthcare providers at your institution. The community college in your area identified your facility as one they use as a clinical site in training their students. This survey will answer these and other questions specific to the community colleges.

Would you be so kind as to answer the questions in this telephone survey today? This should take approximately 15 to 20 minutes of your time.

Please know that these responses will be kept in strict confidence. All data will be coded and all identifying data will be locked in a separate file contained within a locked office. It is my intention to present the results of this survey at community college professional meetings, and of course to share results with those indicating an interest in receiving them. I take the liberty of thanking you in advance for helping with this project.

In case you have any questions about the study, you may contact Mary B. Reid, Doctoral Candidate at UNT at telephone number 972-981-8392 or Dr. Stephen Katsinas, Higher Education Department at UNT at telephone number 940-369-6001.

Sincerely,

Mary B. Reid, MS, APRN-BC
Doctoral Student
University of North Texas

APPROVED BY THE UNT IRB
FROM 1/31/05 TO 1/30/06
MB

APPENDIX G
HOSPITAL/CLINIC SURVEY TOOL

**A SURVEY OF COMMUNITY HEALTHCARE CLINICS/HOSPITALS
ON ISSUES RELATED TO
THE SHORTAGE OF NURSES AND OTHER HEALTHCARE PROVIDERS**

Directions: Your information will be kept confidential and the responses will be anonymously coded. Please provide all requested information during this telephone survey.

Background Information

1. What is your job title?
 Director of Human Resources
 Director of Nursing
 Recruiter
 Other (please specify) _____

2. How long have you been at this facility?
 < 1 year
 1 – 5 years
 6 – 10 years
 11 – 15 years
 > 15 years

3. Indicate the type of organization that is responsible for establishing policy for overall operation of your hospital.

| | |
|--|--------------------------------------|
| <input type="checkbox"/> Not for profit community hospital | <input type="checkbox"/> State |
| <input type="checkbox"/> For profit community hospital | <input type="checkbox"/> County |
| <input type="checkbox"/> Privately owned hospital | <input type="checkbox"/> City |
| <input type="checkbox"/> Not for profit clinic | <input type="checkbox"/> City-County |
| <input type="checkbox"/> For profit clinic | |
| <input type="checkbox"/> Privately owned family clinic | |
| <input type="checkbox"/> Other (please specify) | |

4. How many years has your facility provided care for the community?
 < 1 year
 1 – 5 years
 6 – 10 years
 11 – 15 years
 16 – 20 years
 21 - 25 years
 26 – 30 years
 > 30 years

5. How long have you been the director of Human Resources/Nursing Director at this facility?
 < 1 year
 1 – 5 years
 6 – 10 years
 11 – 15 years
 > 15 years

Hospital Information

6. Is your institution a(n)
 General medical and surgical
 Critical Access Hospital
 Academic/Medical Hospital
 Psychiatric Medical Hospital
 Women's Hospital
 Children's Hospital

- Orthopedic Hospital
- Long Term Care Hospital
- Rehabilitation Hospital
- Clinic

7. How many beds does your facility have?
- 0 – 50
 - 51 - 100
 - 101 – 150
 - 151 – 200
 - 201 – 250
 - 251 – 300
 - 301 – 400
 - 401 – 500
 - > 500
8. Does your facility have a Director of Education?
- Yes
 - No
9. Has your facility experienced growth over the past 5 years?
- Yes
 - No
10. Do you expect your facility to experience growth over the next 5 years?
- Yes
 - No
11. How would you assess the general economic health of your facility's service over the past 5 years?
- Very strong
 - Strong
 - Flat, stable
 - Distressed
 - Severely distressed

Community Orientation

12. What is the distance to the closest large teaching hospital?
- < 25 miles
 - 25 – 50 miles
 - 51 – 75 miles
 - 76 – 100 miles
 - 101 – 150 miles
 - 151 – 200 miles
 - > 200 miles
13. Does your facility's mission statement include a focus on community benefit?
- Yes
 - No
14. Does your facility have a long-term plan for improving the health of its community?
- Yes
 - No

15. Does your facility have resources for its community benefit activities?
 Yes
 No

Staff Issues

16. Please estimate the percentage of LPNs/LVNs employed at your institution.
 0 - 10%
 11 - 20%
 21 - 30%
 31 - 40%
 41 - 50%
 > 50%

17. Please estimate the percentage of ADN RNs employed at your institution.
 0 - 10%
 11 - 20%
 21 - 30%
 31 - 40%
 41 - 50%
 > 50%

18. Please estimate the percentage of BS RNs employed at your institution.
 0 - 10%
 11 - 20%
 21 - 30%
 31 - 40%
 41 - 50%
 > 50%

19. From where do you recruit your nursing staff
 Local community colleges
 Universities from large cities outside the county
 Other hospitals outside the county
 Nursing agencies
 Other (please specify)

20. From where do you recruit your allied health care providers
 Local community colleges
 Universities from large cities outside the county
 Other hospitals outside the county
 Nursing agencies
 Other (please specify)

21. Is your facility dealing with a nursing shortage?
 Yes
 No

22. Do you have the number of allied health care providers that you need for your facility?
 Yes
 No

23. Which of the following factors are factors when recruiting nurses/allied health care providers to your facility?
- Remoteness of the facility
 - Limited social activities in the area
 - The severity of the poverty level in the area
 - Lower salary offered at your facility than at other institutions
 - Other (please specify):
24. Which of the following factors are factors in retaining nurses/allied health care providers at your facility?
- Remoteness of the facility
 - Limited social opportunities offered in the surrounding environment
 - The severity of the poverty level in the area
 - Lower salary offered at your facility than at other institutions
 - Other (please specify):
25. Which of the following factor assist in retaining nurses/allied health care providers at your facility?
- Remoteness of the facility
 - Small town environment of the area
 - Other (please specify):
26. Is transportation to your facility a barrier for nurses/allied health care providers?
- Yes
 - No
27. Is childcare an issue for your nurses/allied health care providers?
- Yes
 - No
28. Is childcare provided for your employees at your facility?
- Yes
 - No
29. What is the estimated percentage of White, Non Hispanic persons employed in your facility?
- Under 5%
 - 5% - 10%
 - 11% - 20%
 - 21% - 30%
 - 31% - 40%
 - 41% - 50%
 - Over 50%
30. What is the estimated percentage of American Indian/Alaskan Native persons employed in your facility?
- Under 5%
 - 5% - 10%
 - 11% - 20%
 - 21% - 30%
 - 31% - 40%
 - 41% - 50%
 - Over 50%
31. What is the estimated percentage of Hispanics persons employed in your facility?
- Under 5%
 - 5% - 10%
 - 11% - 20%
 - 21% - 30%
 - 31% - 40%
 - 41% - 50%

Over 50%

32. What is the estimated percentage of Asian/Pacific Islanders persons employed in your facility?

- Under 5%
- 5% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- Over 50%

33. What is the estimated percentage of Black, non-Hispanics persons employed in your facility?

- Under 5%
- 5% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- Over 50%

34. What is the estimated percentage of other ethnicity groups employed in your facility?

- Under 5%
- 5% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- Over 50%

35. Please list the colleges from where you recruit your nurses/allied health staff.

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