

NURSING WORKFORCE ISSUES IN RURAL AND URBAN SETTINGS: LOOKING AT THE DIFFERENCE IN RECRUITMENT, RETENTION AND DISTRIBUTION

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ABSTRACT

Nursing personnel workforce issues vary depending on geographic and population density of health care settings and the type of agency. The purpose of this investigation was to explore the distribution of registered nurses in rural and urban health care settings (public health departments, long-term care facilities and hospitals); examine recruitment and retention strategies and barriers; and to analyze relationships between distribution of nurses and recruitment and retention. Written surveys of 131 rural and urban nursing administrators (response rate 57%) evaluated the quantitative and open-ended responses to questions regarding specific personnel numbers and recruitment and retention strategies and barriers. Results revealed that using the FTE (Full time equivalency) vacancy formula, rural health care settings reported the lowest vacancies; however, when major vacancies did exist, they were greater in the rural settings. Salaries, changes in local economies and military closures, and major changes in nursing position allocations had both a negative and positive effect on both the rural and urban health care settings. The findings indicate that numbers alone are not a sufficient means to determine the need for nurses, and shortages can pose a significant threat to quality and access of health care.

INTRODUCTION

Nursing personnel workforce issues vary depending on the rural or urban geographic and population density of the health care setting and the type of agency. There has been a major change in the focus of health care from an acute, in-patient setting, to a broader, community-based care, resulting in a shift in nursing personnel needs. The distribution of nurses and other health care personnel is a major issue facing many rural and urban areas, and predicting requirements for personnel is a complex process (Dumpe, Herman & Young, 1998; Prescott, 1991, 1993). Due to vast differences in rural and urban settings, there may be an assumption that nursing personnel issues will be significantly different. The purpose of this investigation was to explore the distribution of registered nurses in rural and urban health care settings; examine recruitment and retention strategies and barriers; and to analyze relationships between the distribution of nurses and recruitment and retention.

Determination of nurse adequacy levels in either rural or urban settings requires an analysis of a variety of factors beyond counting vacancy rates (Brush, 1992; Dumpe et al. 1998; Prescott, 1991, 1993; LaSala, 1995). The federal government designates nursing shortage areas based on numbers (Lee, 1991), and although this provides a starting point for investigation, situational analysis of individual settings may reflect multiple factors

play into the need and demand for nurses. A non-economic, non-numerical perspective would evaluate the quality of the patient care, rather than the quantity of nurses.

SIGNIFICANCE OF THE STUDY

Health professional shortages pose a significant threat to access, quality, and costs of health care (Gilliland, 1997; Prescott, 1991, 1993). Health care spending in the United States is approximately 14% of the gross national product and personnel account for a almost 30% of those expenses (Sultz & Young, 1999). There is a growing body of literature indicating a shift in the distribution of nurses across the nation (Buerhaus & Staiger, 1996; Ketter, 1994; Manuel & Sorensen, 1995; Stratton, Dunkin & Juhl, 1995; Schultz, 1999); however, there is limited data to reflect current differences in rural versus urban settings. This study provides a collective summary of nursing personnel distribution and identifies key recruitment and retention issues. Findings may guide nursing leaders in developing their future recruitment and retention efforts and resource allocation, specifically, nursing position allocations in financially tight times. By using an employer-based research survey at the state level, the results can be used to support and direct workforce policy and comparative research studies in other regions (Bamberg, Malvery, Wainwright, Fottler & Joiner, 1994).

REVIEW OF THE LITERATURE

In the United States there has been a large population identified as medically underserved and geographic regions designated as health professional shortage areas, in both rural and urban areas. The central health care issue for many communities across the nation is the inadequate supply of health care professionals and limited access of residents to health services (Sultz, 1999; Christianson & Moscovice, 1993). The maldistribution of health care professionals has left many areas underserved or without health care services, while other areas deal with surpluses of health care specialists and services.

Many health care agencies have been dramatically impacted by nursing shortages and cost containment efforts in the health care system, with some forced to close beds to admissions, others have closed altogether (Brush, 1992; Fuszard et al. 1990; Prescott, 1993). The demand for skilled nurses has increased with advances in complex health care and technological services available in the health care settings. Patients are discharged from hospitals with more complex health care needs. Concurrently, the nursing profession has increased its role in the community, including ambulatory services, home health care and industrial nursing (Buerhaus & Staiger, 1996; Gilliland, 1997). This shift to ambulatory services and home care has decreased the average patient hospital stay, but increased the patient acuity of patients in the hospital and at home (Stratton, Dunkin, Juhl, Ludtke & Geller, 1992; Brewer, 1996). Population demographics also have shifted to an increase in the elderly population which tends to put a high demand on health care services at all levels. Federal and state health care reform movements call for a shift to a primary care focus, also increasing the demand for more independent, generalist-focused Registered Nurses (Buerhaus, 1995; Sultz & Young, 1999).

The demand for nurses is currently unstable, as health care reform and managed care movements are demanding increased access and quality, while simultaneously insisting on effective cost containment (Dumpe, Herman & Young, 1998). It has become increasingly clear to nursing leaders that the future of nursing will be drastically shaped by the economic pressures, managed care and market-led reforms (Coile, 1995; Wakefield, 1997). The demand for nurses is heavily influenced by socio-cultural, political and economic factors. The supply factors refer to the number of available nurses, which is influenced by factors such as changes in the health care system, nursing education, economic conditions and nurse demographics (Dumpe et al. 1998).

Using a supply and demand workforce model, Dumpe et al. (1998) identify multiple factors influencing the demand for nurses, including: the health care delivery system; the number and types of services provided; the technology and degree of specialization required; the use of employee substitutes; other health care provider status; the economic system; reimbursement availability and restrictions; nursing education system; and demographics. As the need expands for highly skilled nurses in the health care system, demand will overcome the supply. While managed care has reduced the overall demand for hospital nurses, it has increased the need for nurses in community health care settings. Unfortunately, hospital wages have historically been higher than salaries in outpatient settings, plateauing salaries at inflation rate since 1991 (Buerhaus & Staiger, 1996).

There is relative consensus that the present nursing shortage is more a result of the changes in utilization of nurses, than in the supply (Dumpe et al. 1998; Stratton et al. 1995). The regional maldistribution of nurses has not affected all geographic regions or institutional settings equally. Rural and inner-city settings seem to be more consistently hard hit. The largest number of shortage areas designated in the U.S. exist in counties non-adjacent to metropolitan areas (Stratton et al. 1995; Sultz & Young, 1999).

Morris and Palmer (1994) compared ten different allied health professions for differences in vacancy rates. Significant rates decreases were cited for only two of the professions, nursing and respiratory therapy. When examining the findings for nurses, significant influences were location and size ($F = 4.80, p < .05$). Investigators noted that on average urban hospitals had significantly more RN vacancies than rural hospitals, however, small rural hospitals had greater vacancy rates than large hospitals. The large hospitals in the urban settings had greater vacancy rates than small hospitals in the same cities.

The rural nursing workforce has been greatly impacted by the cultural environment in which it is practiced, including some of the broader trends related to rural occupational and economical foundations as well as political influences that have had a significant impact on rural health care (Sultz & Young, 1999). The decline in the rural occupational foundations of agriculture, mining and forestry has left many rural communities in economic distress. Unemployment is high, with growth in the service industry jobs much slower in rural areas than in urban settings. Rural settings often have a captive employment base due to geographic and distance factors which isolate them from urban centers (Christianson & Moscovice, 1993). Many nurses are being drawn to urban area salaries and opportunities for themselves as well as family members (LaSala, 1995; Stratton et al., 1993, 1995). Urban settings have a broader population to draw

nursing recruits and nursing administrators can use competitive salary options as a recruitment strategy.

In urban areas the supply of nurses has been dramatically affected by health care shifts and "downsizing" due to cost containment efforts. Fewer patients in hospitals, reduced budgets and cutbacks for personnel, layoffs, and the substitution of lesser-trained workers for registered nurses have all occurred (Begany, 1994; Betts, 1994; Gilliland, 1997; Ketter, 1994; Manuel & Sorenson, 1995, Prescott, 1993). McGuckin-Smith (1995) reported 48% of over 3,000 nurses surveyed reported their employers had deleted or failed to fill vacant RN positions, 36% cited staff reductions and 25% reported unit closures, and 23% noted reductions in assistive personnel. Nurses also documented RN layoffs and an increase in the usage of unlicensed assistive personnel as factors increasing the RN shortages (Begany, 1994; Gilliland, 1997). Inpatient RN staffing was consistently cited as decreasing (45%), while outpatient settings actually reported no change (41%) or increases (41%). When nursing shortages exist, there is a heavier demand on those nurses remaining in the workforce, which in return increases their job dissatisfaction (Klemm & Schreiber, 1992). In a recent survey of 681 hospitals, 81% cited poor morale as the worst employee problem. Workers cited layoffs, ineffective communication and job uncertainty as major causes of these feelings (Morale skidding with restructuring, 1996). Further recruitment of nurses is hampered due to the image these nurses portray of their job environment and satisfaction (Kramer & Schmalenberg, 1991).

In addition to salary and geographic issues, some blame a shortage of nurses on increasing career options for women, poor economic return for a baccalaureate degree, nursing management's inflexibility and lack of autonomy, condescending attitude towards nurses, and a poor image of nursing (Schneider, 1992; Ludwig, 1998). Ludwig (1998) asserts that individuals making career choices are focusing on options that enhance overall quality of life issues, looking for job opportunities that support non-work priorities as well. The nursing shortages that have occurred over the past eight decades are not a continuation of the same problem, but a term to describe the perception of an insufficient nursing supply, inadequate control of practice, and professional concerns within a specific time frame (Brush, 1992). Dumpe et al. (1998) contend shortages could be predicted and understood better if nursing leaders examined the entire context, rather than just numbers.

POPULATION AND SAMPLE

A convenience population of all hospitals, long-term care agencies and public health departments in both rural and urban Virginia was sampled for this study. Counties were classified as urban using the U.S. Census Bureau's classification system of metropolitan statistical area (MSA) designations and only agencies in MSA counties. The definition of a MSA is a county encompassing at least one city of at least 50,000 population or an urbanized area of at least 50,000 with a total metropolitan population of at least 100,000 (Office of Management and Budget, 1990). Non-metropolitan statistical areas and those counties non-adjacent to metropolitan areas were classified as rural. The chief nursing administrators from 230 urban and rural settings in 54 counties/cities (31

urban; 23 rural) in the Commonwealth of Virginia were asked to participate. Surveys were completed and returned from 131 administrators, with a response rate of 57%.

INSTRUMENTATION AND OPERATIONAL DEFINITIONS

A recruitment and retention survey tool developed by the University of North Dakota (UND) Rural Health Research Center was revised and piloted for use in rural and urban settings. The tool provided quantitative and open-ended questions which explored distribution of nursing personnel, as well as recruitment and retention strategies and barriers. Distribution of Registered Nurses in individual health care settings was calculated using the RN FTE (full time equivalency) vacancy rate. The RN vacancy rates were calculated as follows:

$$\frac{[(\# \text{ of Full time RN vacancies}) + (\# \text{ of Part time RN vacancies} \times 0.5)]}{[(\# \text{ of Full time RN positions}) + (\# \text{ of Part time RN positions} \times 0.5)]} \times 100$$

This method was developed by the Bureau of Health Care Delivery and Assistance Office of Shortage Designation to identify nurse shortage counties (Bureau of Health Care Delivery and Assistance, 1990). Recruitment and retention strategies include plans of action to attract and retain nurses. Recruitment and retention barriers reflect perceptions of things that block or hinder nurses from joining or staying in an agency.

METHODOLOGY AND DATA ANALYSIS

This research study involved a self-administered, mailed questionnaire survey. The survey included demographic and descriptive items, Likert rating scales, and some open-ended questions for non-predictive, individualized answers. Both descriptive analysis and inferential techniques were used to analyze the data. The responses were analyzed as a total sample of all health care settings and then as individual sub-samples consisting of public health departments, hospitals and long-term care facilities. The demographic data were based on frequencies and distribution of responses. Clustering and content analysis was used for qualitative open-ended questions. The relationship between the variables of distribution and resulting characteristics was analyzed using inferential statistics. Chi-square contingency tables were produced and analyzed using correlation coefficients to determine relationships ($p < .05$) and their linear directions. Correlation coefficients to established the significance level ($p < .05$) of the comparison data were computed.

FINDINGS

The majority of rural hospitals and long-term care (LTC) agencies were small (less than 80 beds), in comparison to those in urban settings, which were large (75% had 120 or more beds). Seventy-nine percent of rural settings were 30 to 90 miles from an urban setting. Over 90% of both rural and urban settings reported they did not use swing beds to ease staffing and patient loads, nor were they co-located with other agencies (both less than 12%) or co-administered (urban < 32%; rural < 16%). Over half of the agencies reported some type of cross-training of nurses, with public health departments reporting the greatest degree of required flexibility between client care specialty areas, administrative responsibilities and quality assurance.

Using the RN FTE vacancy rate formula, rural health care settings reported the lowest vacancies rates. Over half (59.6%) of rural settings reported no vacancies, compared to 43.7% of urban settings without vacancies. However, when major vacancies did exist (vacancy percent rates greater than 21%), they were greater in the rural settings (19.2%) than the urban settings (2.7%).

Nursing administrators were asked to evaluate if their agency vacancy rates had increased, decreased, or stayed the same. The responses varied dramatically depending on the setting. Over 80% of both the rural and urban settings reported that vacancy rates had decreased or stayed the same. The health departments reported largest increase in vacancy rates, hospitals reported the largest decrease in vacancies, and the long term care facilities reported that vacancies had remained constant.

The nursing administrators shared perceptions of the causes of decreases and increases in vacancy rates. They reported a general shift in health care to ambulatory care thus limiting the number of positions in hospitals and opening up new ones in ambulatory care settings, resulting in a decreased rate in one setting and an increase in the other, respectively. Changes in the overall economy were linked with both loss and retention of nurses. Some of the administrators viewed the competitive job market as an influence on nurses staying in their present positions, while others indicated the lack of available job openings (especially full time) led nurses to look elsewhere for positions.

Some of the administrators indicated that positive affiliations with schools of nursing education (student rotations, internships and job promotional activities) helped improve the recruitment and retention of nurses. Some attributed the decrease in vacancies to their positive work environment, referring to the "family like atmosphere" of their agency, which was more commonly reported in the rural hospitals and both rural and urban health departments. A small number of agencies reported recent implementation of recruitment plans, and one urban hospital even referenced free parking as a stabilizing factor.

Approximately 10% of urban sites associated the increase in vacancy rates with either recent military base closures or nurses leaving to pursue their education. Approximately 10% of health departments reported recent budget constraints and reductions had drastically affected the position allotment. This lead to the appearance that vacancy decreases existed, when in fact the positions were no longer available. In both rural and urban settings salaries had improved, enhancing both recruitment and retention of nurses, but the rural administrators continue to see the urban areas drawing nurses by offering higher salaries. Promotions, transfers and retirements were documented in both

the rural and urban settings as the causes of vacancies. Rural settings more consistently cited nurses relocating to urban settings due to family needs.

When nursing administrators were asked if the RN vacancy rate (either high or low) accurately reflected the status of RN personnel needs in their agency, over half (52%) responded "no". These administrators elaborated with several explanations. They cited new graduates or inexperienced nurses were not able to function as independently or effectively as experienced nurses. Vacant positions in an agency with few RN positions reflected inflated vacancy percentages. In addition, RN positions were not in the agency budget, therefore no vacant positions were available to report even though a need for more nursing staff existed. And finally, several of the public health departments reported "atypical" position vacancies due to new positions. Nineteen percent of rural settings and twenty-six percent of urban settings reported critical RN vacancies, citing clinical specialty area needs and specific shift or weekend coverage needs. Two of the rural settings indicated a critical need for the primary nurse administrator position.

The administrators' responses were varied when asked how long the average RN stayed in their agencies. In both the rural and urban settings, 35% of the nurses stayed less than five years, and 65% stayed greater than five years. However, the urban settings reported greater numbers of turnover staff per year. In ranking acuity of the nursing shortage in their setting, the most administrators (83.5% rural; 70% urban) reflected "no or little shortage", versus an acute nursing shortage (4% rural; 6% urban). Long-term care facilities reported the greatest acute nursing shortage, but also reported the smallest number of employed registered nurses. In evaluating the supply of nurses in their region, 45% of rural administrators noted a very limited supply, versus 10% of urban administrators also noting a very limited supply. Ratings of a high supply of nurses were reflected by 47% of the rural administrators, versus 66% of the urban administrators. The apparent conflicting reports from almost half the rural administrators may indicate an awareness that although a specific agency is not dealing with a nursing shortage, the administrators are aware of a low supply in their geographic region.

A large majority of both the rural (84%) and urban (93%) administrators ranked little difficulty in recruitment, and 16% and 7%, respectively, ranked significant recruitment difficulty. Retention difficulty was ranked in a very similar fashion, with ratings of little difficulty at 86% in the rural settings and 93% in urban. Long-term care facilities reported more difficulty in both recruitment and retention than in other settings. None of the agencies in rural or urban settings perceived their sites as dependent on temporary nurses, and almost half (47%) reported temporary nurses were not used at all.

In both rural and urban settings, nursing administrators perceived salaries, lack of full-time positions for nurses, and a competitive job market as barriers to both recruitment and retention. Rural administrators also reported the local economy and unmet family needs as barriers. The administrators in both areas indicated nurse relationships (with other nurses, administration and physicians) and work related variables (benefits, working conditions, workload) were viewed as positive incentives for retention. Geographic location, housing, and community amenities were not significant factors in either the rural or urban settings.

CONCLUSIONS AND RECOMMENDATIONS

This investigation revealed quantitative analysis revealed there is no acute shortage of nurses in rural or urban health settings when measured by the RN FTE vacancy rate calculations traditionally used to determine shortages of health care professionals (Bureau of Health Care Delivery and Assistance, 1990). However, additional qualitative questioning and analysis revealed that there are critical vacancies and staffing needs not reflected in numbers. These findings support the nursing workforce model developed by Dumpe et al. (1998), which focuses on the dynamic, interacting factors that affect supply and demand.

Major changes in the health care delivery system and the impacts of local economies and occupational foundations have altered distribution, recruitment and retention issues in nursing. Overall, salaries, lack of full-time positions for RNs, local economies and competitive jobs elsewhere remain a recruitment and retention problem, while close relationships and work related variables remain positive incentives. Recruitment is viewed as slightly more difficult than retention, but at the present time neither are identified as very difficult. Nursing administrators must encourage a more individual assessment of their own communities, agencies and client needs in nursing personnel decisions, and be vocal in policy decisions which are made based entirely on economical or numerical data.

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