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How Are Washington State's Hospitals Affected by the Nursing Shortage?

Results of a 2001 Survey

by

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About the Workforce Center

The WWAMI Center for Health Workforce Studies at the University of Washington Department of Family Medicine is one of five regional centers funded by the National Center for Health Workforce Information and Analysis (NCHWIA) of the federal Bureau of Health Professions (BHPr), Health Resources and Services Administration (**HRSA**). Major goals are to conduct high-quality health workforce research in collaboration with the BHPr and state agencies in Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI); to provide methodological expertise to local, state, regional, and national policy makers; to build an accessible knowledge base on workforce methodology, issues, and findings; and to widely disseminate project results in easily understood and practical form to facilitate appropriate state and federal workforce policies.

The Center brings together researchers from medicine, nursing, dentistry, public health, the allied health professions, pharmacy, and social work to perform applied research on the distribution, supply, and requirements of health care providers, with emphasis on state workforce issues in underserved rural and urban areas of the WWAMI region. Workforce issues related to provider and patient diversity, provider clinical care and competence, and the cost and effectiveness of practice in the rapidly changing managed care environment are emphasized.

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This study was performed by the WWAMI Center for Health Workforce Studies (CHWS) and the Washington State Hospital Association (WSHA). The WWAMI CHWS is supported by the National Center for Health Workforce Information and Analysis (NCHWIA), Bureau of Health Professions (BHPr), Health Resources and Services Administration (HRSA). Data collection was supported by funds from the WSHA, and survey methods development and data analysis were supported by NCHWIA. Susan Yee, graduate research assistant, provided valuable data-collection assistance.

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Abstract

Background: The registered nurse (RN) workforce in the U.S. and the national population are both aging. Nursing shortages now are being reported around the country, and are expected to increase as the demand for medical care rises with the aging of the population. The Center for Health Workforce Studies at the University of Washington and the Washington State Hospital Association teamed up to ask how acute care hospitals in the state are affected by the nurse shortage.

Methods: An eight-page questionnaire was mailed to the 83 acute care hospitals in Washington. After in-person and telephone follow-up to encourage response, 68 hospitals (82%) responded. Rural-Urban Commuting Area (RUCA) codes were used to distinguish rural from urban sites.

Results: Sixty-nine percent of Washington's RN hospital staff nurses are age 40 or older, and 8.4 percent are male. The hospitals employ many part-time nurses; 100 staff nurses are required to produce 70.5 full-time equivalents (FTEs). An estimated 1,987 hospital staff nurses are needed to fill the 1,401 vacant FTEs. Hospital RN vacancy rates are 9.2 percent of budgeted FTEs, with rural sites reporting slightly lower vacancy rates (8.9%) than urban sites (9.6%). Annual nurse turnover rates are 16.6 percent in both rural and urban hospitals. However, 54 percent of urban hospitals compared to 14 percent of rural hospitals said RN turnover was higher than last year. Urban hospitals find it easier to recruit newly trained RNs than do rural hospitals, but all hospitals reported that it is difficult to hire experienced nurses. The nurse specialties most difficult to recruit, in order of difficulty, were ICU/CCU, anesthesia, emergency, OR/recovery, and labor and delivery. Sixty-six percent of urban hospitals and 46 percent of rural hospitals reported they went on divert status last year because of a shortage of nurses. The hospitals used many different methods to recruit and retain nurses, but none were generally considered effective. Overall, most hospital respondents indicated that the main reason for nurse vacancies was a lack of qualified applicants and very few said they felt pay or benefits issues were the cause of the vacancies.

Discussion: Washington's hospitals face the challenge of a nursing shortage similar to that of the rest of the country. The problem appears to have escalated more rapidly in urban areas than rural ones, but nurse vacancy rates and turnover are now very similar in both rural and urban hospitals. Among the short-term effects of the shortage are closing of hospital beds and diverting more

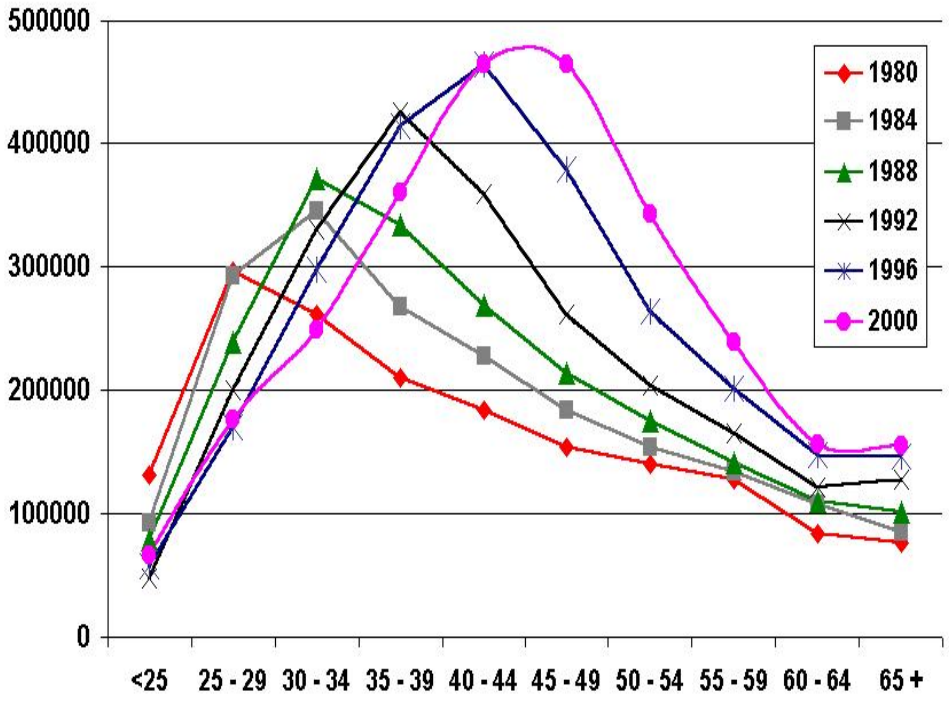
of management's resources to nurse recruitment. Long-term effects are likely to be greater stress on the work environment, which contributes to nurse dissatisfaction and retention problems and impedes appropriate patient care. Solutions include increasing the supply of nurses and encouraging them to remain in the workforce longer.

Background

The registered nurse (RN) workforce in the U.S. is aging (see Figure 1). The average nurse is 45 years old, and more than two-thirds of the nation's nurses are over age 40 (U.S. HRSA, 2001). The main reason the nurse workforce is aging is because fewer young women are entering the profession (Buerhaus, Staiger, & Auerbach, 2000)

FIGURE 1

Age of the Registered Nurse Population: 1980-2000

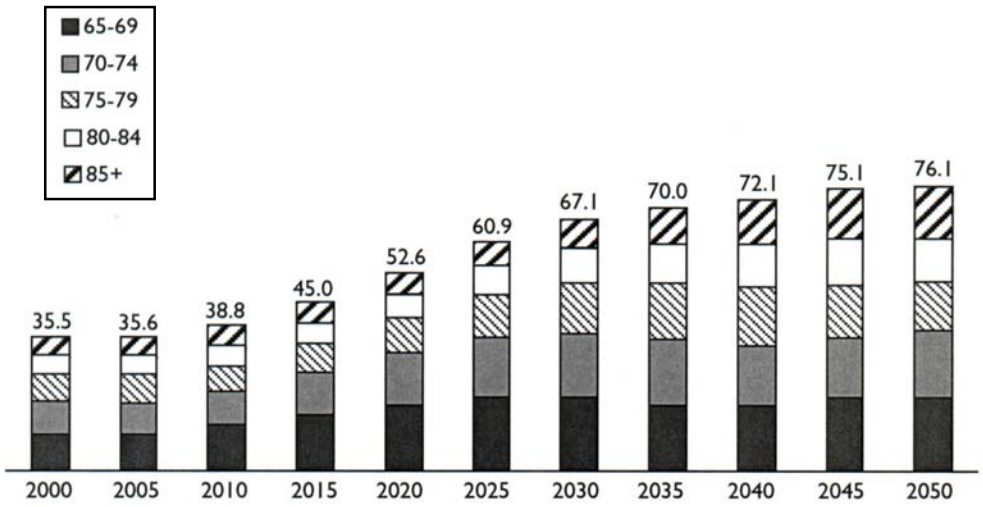


Source: U.S. Health Resources and Services Administration, The Registered Nurse Population: National Sample Survey of Registered Nurses, March 2000.

At the same time, the U.S. population is aging. As shown in Figure 2, it is estimated that by 2035 the number of Americans over age 65 will double (Urban Institute, 2001). An increase in absolute and proportionate numbers of older people in the U.S. population will cause increased need for health care services, including hospital services, to care for this population.

FIGURE 2

Millions of Older Adults in the U.S., by Age



Note: The projections of the number of people in the general population age 65 and older assume reductions in mortality of 0.6% a year.

Source: Urban Institute, 2001. Based on The Long-Term Care Financing Model. Prepared by The Lewin Group, Inc., for the Office of the Assistant Secretary for Planning and Evaluation, DHHS, 2000.

Nursing shortages now are being reported around the country and are expected to increase as the demand for medical care rises with the aging of the population (Center for Health Workforce Studies, 2001; First Consulting Group for the American Hospital Association, 2002; Furino, Gott, & Miller, 2000; North Carolina Center for Nursing, 2001; Sechrist, Lewis, & Rutledge, 1999). Much of the nurse shortage is being experienced by hospitals, where nearly 60 percent of RNs are employed (U.S. HRSA, 2001). Little information has been reported on whether rural and urban hospitals are affected similarly.

The Center for Health Workforce Studies (CHWS) at the University of Washington and the Washington State Hospital Association (WSHA) were interested in examining the extent to which the nursing shortage was affecting acute care hospitals in Washington State.

Methods

To better understand and describe the effects of the nursing shortage on Washington State hospitals, in early 2001 the University of Washington's CHWS and the WSHA designed and carried out a survey of the state's acute care hospitals. The survey collected information on the nurse workforce and details of vacancies in other non-physician professions from all 83 non-federal acute care hospitals in Washington State. The survey was conducted from March through June 2001, and the data were analyzed by the CHWS. The survey design and analysis were supported with CHWS core funding from HRSA's National Center for Health Workforce Information and Analysis, and the data collection was supported by a grant from the WSHA.

Questionnaire

An eight-page questionnaire was developed and revised based on reviews of experts and a limited pretest. The questionnaire asked for descriptive information about the acute care hospital, employment statistics and demographics of RN employees, nurse turnover statistics, information about the hospital's level of difficulty recruiting and retaining nurses, information about the hospital's strategies to recruit and retain nurses, and a set of questions about employment, recruitment and retention of other non-physician clinical employees. A copy of the questionnaire is included as Appendix A.

Data Collection

The questionnaires, with cover letters, were mailed to human resource executives at each hospital, and copies of the cover letters were sent to Chief Executive Officers (CEOs) and Nursing Executives at each hospital. The CEOs and Nursing Executives were sent letters in order to encourage the hospital to respond, and to draw attention to the likelihood that the human resources executive would need input from nursing and other administrative staff in order to complete the questionnaire. As necessary, in-person (through regular WHSA

meetings) and telephone follow-up contacts were made with non-responding hospitals to encourage their response. The initial mailing of the questionnaire was followed by two additional mailings to non-respondents at approximately four-week intervals. Individual hospitals were sent additional copies of the questionnaire if they indicated need during phone follow-up.

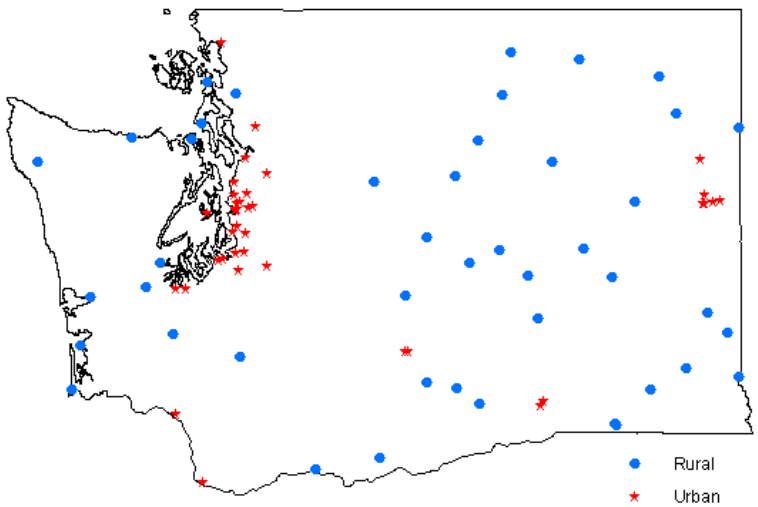
Rural vs. Urban Classification

Many of the analyses distinguish responses of urban hospitals from those of rural hospitals. The hospitals were classified as rural or urban based on the Rural-Urban Commuting Area (RUCA) classification system (Morrill, Cromartie, & Hart, 1999). Of the 83 hospitals surveyed, 44 had ZIP codes in rural areas (RUCA categories 4.0, 5.0, 6.0, 7.0, 7.2-7.4, 8.0, 8.2-8.4, 9.0, 9.1, 9.2, 10.0, and 10.2-10.5) and 39 had ZIP codes in urban areas (RUCA categories 1.0, 1.1, 2.0, 2.1, 3.0, 4.1, 5.1, 7.1 and 10.1). The RUCAs are a subcounty alternative to the more commonly used but less specific county-based schemes (e.g., OMB's Metro Areas). RUCAs are based on the sizes of cities and towns and functional relationships as measured by work commuting patterns.

The distribution of rural and urban acute care hospitals in Washington State is shown in Figure 3.

FIGURE 3

Urban and Rural Acute Care Hospitals in Washington



Nurse Definitions

The questionnaire asked respondents to provide data on four categories of RNs employed by their hospital: staff nurses, administrator/supervisor/manager nurses, clinical nurse specialists, and advanced registered nurse practitioners. The majority of nurses employed by the hospitals are staff nurses. This category also received by far the most complete responses. For this reason, most of the analyses reported here are for staff nurse positions at the hospitals, not managerial, specialist, or advanced practice nurses. Other specific questions asked about use of temporary, registry, and travel nurses.

Imputing Values for Non-Respondents

To estimate the total number of staff nurses employed and the number of vacancies in the state, it was necessary to impute values for non-responding hospitals. All hospitals in the sample (respondents and non-respondents) were grouped into one of four hospital size categories based on the number of licensed acute care beds operated by the facility: smallest (fewer than 50 beds), small (50-99 beds), medium (100-250 beds) and large (more than 250 beds). The values for non-respondents were imputed by applying the mean value obtained from responding hospitals in each size category to each of the non-respondent hospitals. Bed size for non-responding hospitals was obtained from WSHA records.

Completion Rates

The completion rates for individual questions in the questionnaire varied considerably. Employment statistics for staff nurses were provided by most respondents (e.g., 99% provided counts, 96% provided numbers of vacant FTEs). The response rates for many questions about nurse managers, clinical nurse specialists, and certified nurse practitioners were too low to be analyzed. Questions about the difficulty of nurse recruitment, turnover rates, and salary were completed by most respondents. However, information about the average number of weeks required to fill positions was seldom provided by respondents. Anecdotal information indicates that missing items were often a function of the respondents not being able to obtain the information. The results presented below are from analyses of the survey questions with high completion rates.

Results

Description of Respondents

The survey yielded a response from 68, or 81.9 percent, of the non-federal acute care hospitals in Washington. Respondents included 79.6 percent of the rural hospitals (35 of 44) and 84.6 percent of the urban hospitals (33 of 39). Table 1 shows characteristics of the responding hospitals by size.

TABLE 1
Characteristics of Washington Hospitals by Hospital Size

	Smallest (< 50 beds)	Small (50-99 beds)	Medium (100-250 beds)	Large (> 250 beds)
Surveyed hospitals	35	13	18	17
Responding hospitals	31 (88.6%)	9 (69.2%)	15 (83.3%)	13 (76.5%)
Average daily acute care occupancy	6.6	33.5	85.0	242.3
Average number of licensed long term care beds	15.8	9.6	5.4	5.0
Average number of permanent full-time staff*	91.0	219.7	594.9	1542.9
Average number of part-time staff*	68.0	185.8	382.7	1432.3
Location: Rural	26 (83.9%)	5 (55.6%)	3 (20.0%)	0 (0%)
Urban	4 (12.9%)	4 (44.4%)	12 (80.0%)	13 (100%)

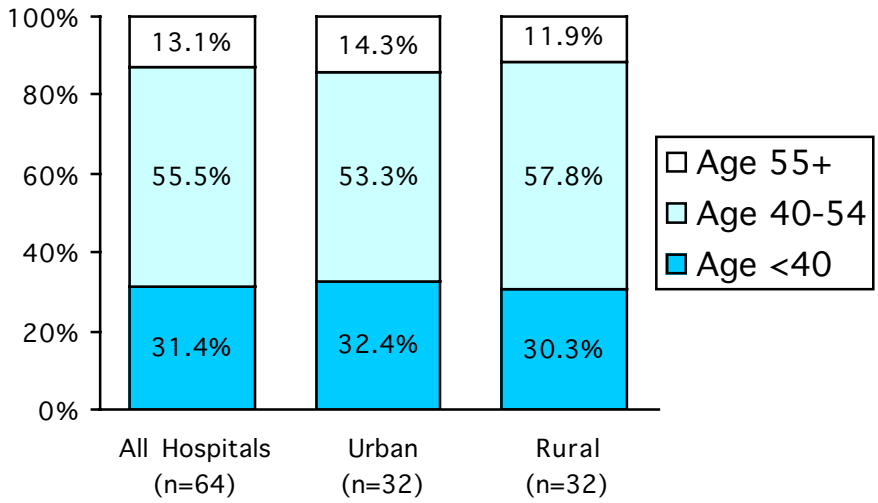
* Facility-wide.

Nurse Demographics

Age: More than half (68.6%) of the RN workforce in Washington's acute care hospitals is over the age of 40, and 13.1 percent are age 55 or older (see Figure 4). Nationally, the proportion of all RNs age 40 and over is 68.3 percent (HRSA, 2001). Slightly more of Washington's rural hospital RN workforce is over age 40 compared to urban hospitals (69.7% vs. 67.6%), but urban hospitals employ a greater percentage of RNs age 55 and older (14.3% vs. 11.9%). These rural-urban differences, however, are not statistically significant.

FIGURE 4

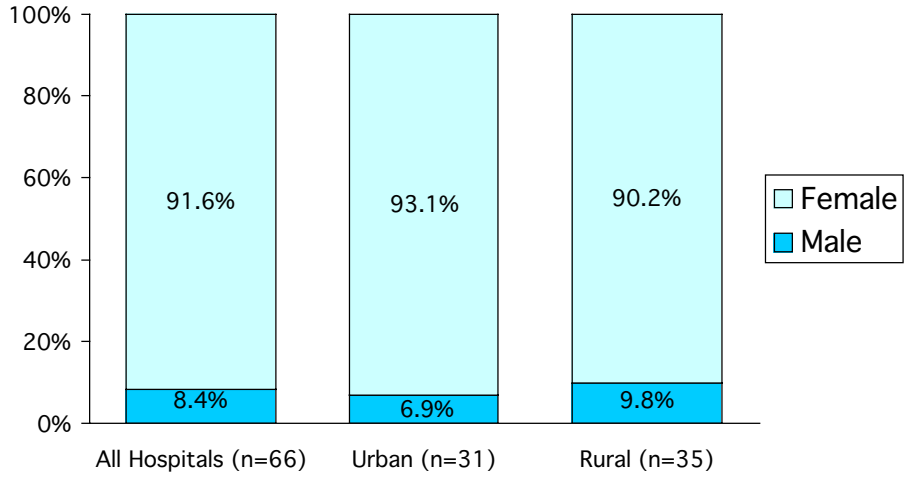
Age of Washington's Hospital RNs:
Average Hospital Percentage by Category



Sex: Relatively more male RNs are employed by Washington's hospitals than are among the RN workforce nationally: 8.4 percent in the state's hospitals compared to 5.9 percent in the nation's RN workforce (HRSA, 2001). Rural hospitals employ a higher proportion of male nurses (9.8%) than do urban hospitals in the state (6.9%), although this difference was not statistically significant at the 0.05 level (see Figure 5).

FIGURE 5

Gender of Washington Hospital RNs: Average Hospital Percent



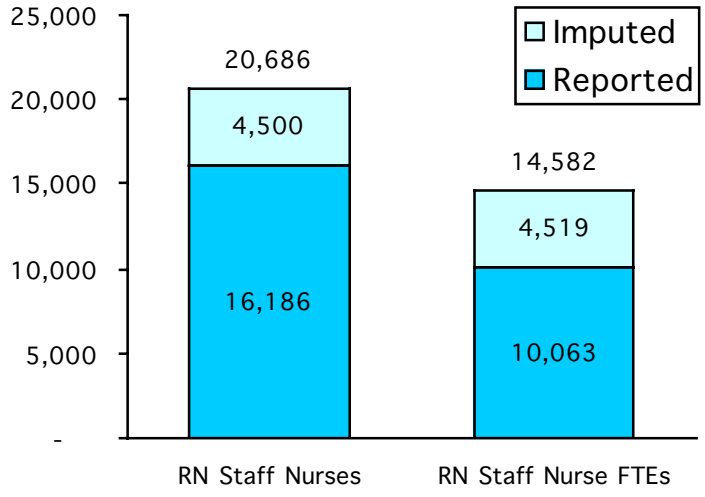
Race/Ethnicity: The survey included questions about nurse race and ethnicity, but very few hospitals (19%) were able to respond to these questions.

Nurse Employment Rates, Status, and Tenure

Employment Rates: Respondents were asked to provide numbers of staff nurses employed, full-time equivalents (FTEs) employed, FTEs budgeted, and FTEs vacant in their acute care facilities. As shown in Figure 6, the responding hospitals reported that they employed 16,186 RN staff nurses. The estimated additional number in non-responding hospitals is 4,500. The estimated total number of staff nurses employed by Washington's acute care hospitals is 20,686. Similarly, the number of FTEs reported by respondents is 10,063, and the imputed number is 4,519, resulting in an estimated total number of FTEs employed by these facilities of 14,582. Urban hospitals employ 86.3 percent of the total count of RNs and 85.8 percent of the total RN FTEs. From the reported numbers, the discount of staff RN counts to FTEs is 70.5 percent. In other words, 100 staff RNs are needed to fill every 70.5 FTE staff RN positions. A recent HRSA report ranked Washington as having the second highest rate in the U.S. of part-time employment among nurses (HRSA, 2000).

FIGURE 6

RN Staff Nurses Employed in Washington Hospitals: Counts and FTEs



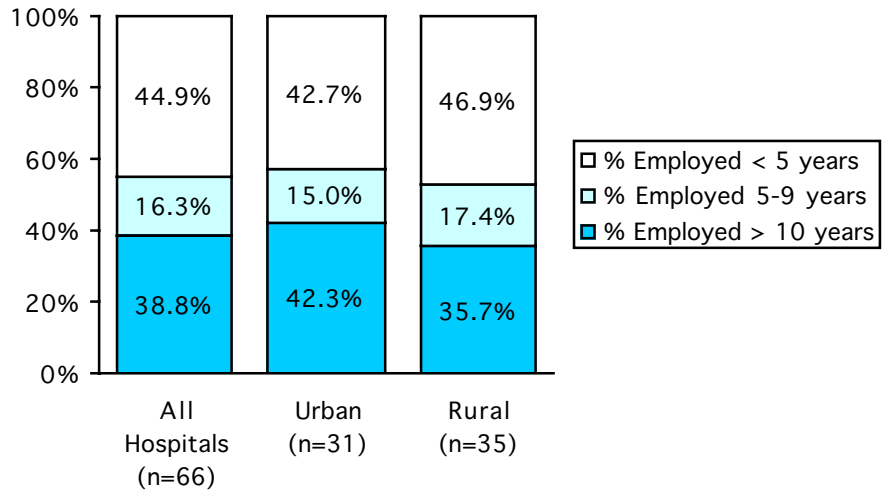
Non-Permanent Staff: The survey included questions about the total number of staff nursing hours each hospital filled during the past year with on call, per diem, temporary, registry or traveling nurses. Completion rates for these

questions were low, and it was not possible to determine if non-respondents did not use these staff or simply did not respond to the question. Because of this uncertainty, imputing values for non-respondents was not feasible. Nonetheless, the 40 percent of hospitals who responded to the questions reported use of 1,082,229 hours of on call and per diem staff, and temporary, registry or traveling nurses. This number is undoubtedly an undercount for the state, but when converted into FTEs, it still represents approximately 550 FTEs, or 3-5 percent of the total reported staff nurse FTEs employed.

Tenure: Washington's acute care hospitals report that nearly 45 percent of RN staff nurses have been employed fewer than five years, over 16 percent have been employed five to nine years, and nearly 40 percent have been employed ten years or more (see Figure 7). Urban and rural hospitals reported very similar tenure rates.

FIGURE 7

RN Staff Nurse Employment Tenure: Percentage of Nurses Employed in the Same Hospital by Tenure Category

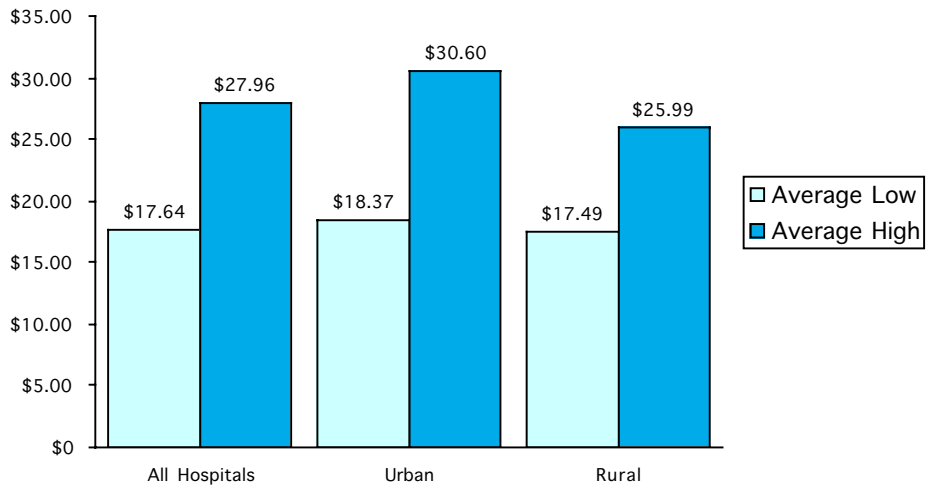


Nurse Salaries

Hospitals were asked to report the high end and low end of hourly pay for staff nurses. The averages of the hospitals' high and low hourly rates are shown in Figure 8. The average low end of the salary range was similar across hospitals, with less than a dollar difference in average hourly rates between rural and urban facilities. The high end of the range had greater variability: the average for rural hospitals is more than $4.00 lower than the average high hourly salary for urban hospitals. This may be due to the employment of more nurses with specialized training in urban hospitals compared with rural hospitals. In comparison, the actual mean salary of Washington State dental hygienists during the same period was $36.17 statewide, $36.34 for hygienists in urban areas, and $34.48 for hygienists in rural areas (Hart, 2002).

FIGURE 8

Staff Nurse Hourly Salary: Average Low and High Rates



Nurse Vacancy Rates and Turnover

Vacancy Rates: As shown in Table 2, the estimated total number of vacant hospital RN staff nurse FTEs in Washington is 1,401. This number is based on the reported total of 1,079 vacant hospital staff nurse FTEs among responding hospitals, with the addition of an imputed 322 vacant FTEs for non-responding hospitals. Because of the high rate of part-time employment among Washington nurses (100 nurses required to fill 70.5 FTEs), an estimated 1,987 nurses are needed to fill the 1,401 vacant FTEs.

TABLE 2
RN Staff Nurse Vacancy and Turnover Rates

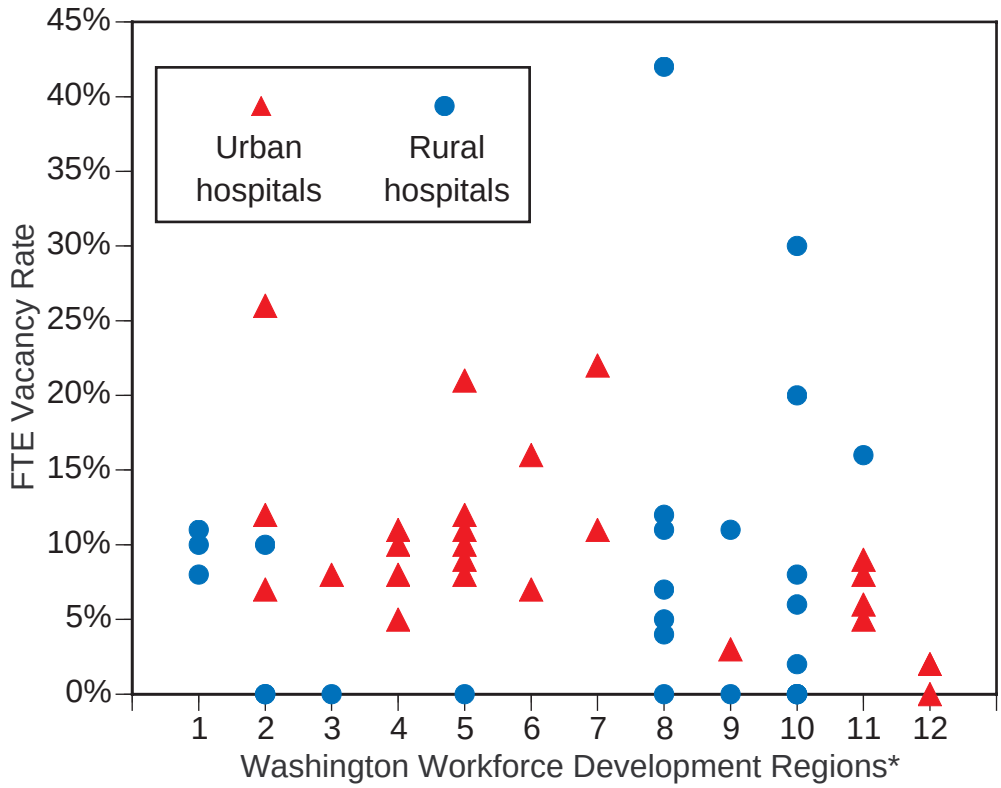
	All Hospitals	Urban	Rural
Reported vacant FTEs	1,079	976	103
Total estimated vacant FTEs	1,401	1,222	179
Total nurses needed to fill vacancies	1,987	1,733	254
Average hospital vacancy rate	9.2%	9.6%	8.9%
Overall FTE vacancy rate	10.1%	10.4%	7.4%
Turnover rate	16.6%	16.6%	16.6%

Vacancy rates can be calculated by different methods. For Washington's hospitals, depending on the method used, the statewide staff nurse vacancy rates ranged from 9.2 percent to 10.1 percent. When the calculation is based on the average of each hospital's vacancy rate, the average staff nurse vacancy rate is 9.2 percent (this method gives equal weight to each hospital's rate, regardless of size). When the calculation is based on the sum of all hospitals' FTE vacancies divided by the sum of their budgeted FTEs, the RN staff nurse vacancy rate is 10.1 percent.

There was considerable variability among the hospital-specific staff nurse vacancy rates reported: from 0 percent to 43 percent. This variability can be seen in Figure 9, which shows the distribution of individual hospital vacancy rates among the 12 workforce development regions in the state.

FIGURE 9

Variability of Hospital RN Staff Nurse Vacancy Rates by Washington State Workforce Development Region



* 1 = Olympic
2 = Pacific Mountain
3 = Northwest
4 = Snohomish
5 = Seattle-King
6 = Tacoma-Pierce
7 = Southwest
8 = North Central
9 = Tri-County
10 = Eastern Washington Partnership
11 = Benton-Franklin
12 = Spokane

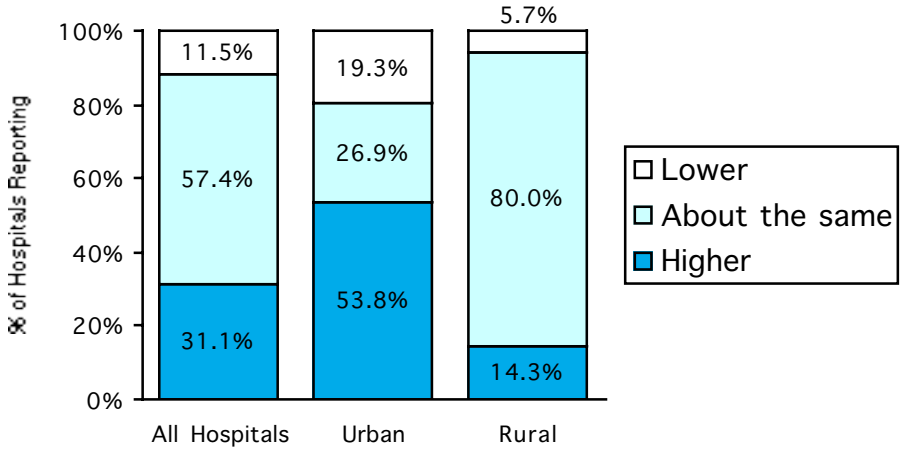
On average, rural hospitals report lower staff nurse vacancy rates than do urban facilities. Washington's urban hospitals report an average vacancy rate (average hospital-specific rate) of 9.6 percent, while rural hospitals report 8.9 percent. The American Hospital Association reports national nurse vacancy rates of 12 percent for urban and 10 percent for rural hospitals in 2001 (AHA, 2001). Washington appears to be in the low-average range for hospital nurse vacancy rates among the states; California—20 percent for 2000, Maryland—14.7 percent for 2000, Florida—16 percent for 2001, Nevada—13 percent for 2001, and Vermont—7.8 percent for 2001 (GAO, 2001). Caution should be used in

comparing Washington with other states because, as described earlier, the methods for calculating the vacancy rates may vary.

Turnover: Overall RN staff nurse turnover rates (total number of nurses leaving/total average number employed during the past year) are identical in rural and urban Washington hospitals: 16.6 percent. However, nearly 54 percent of urban hospitals but only 14.3 percent of rural hospitals reported that their turnover increased during the past year (see Figure 10).

FIGURE 10

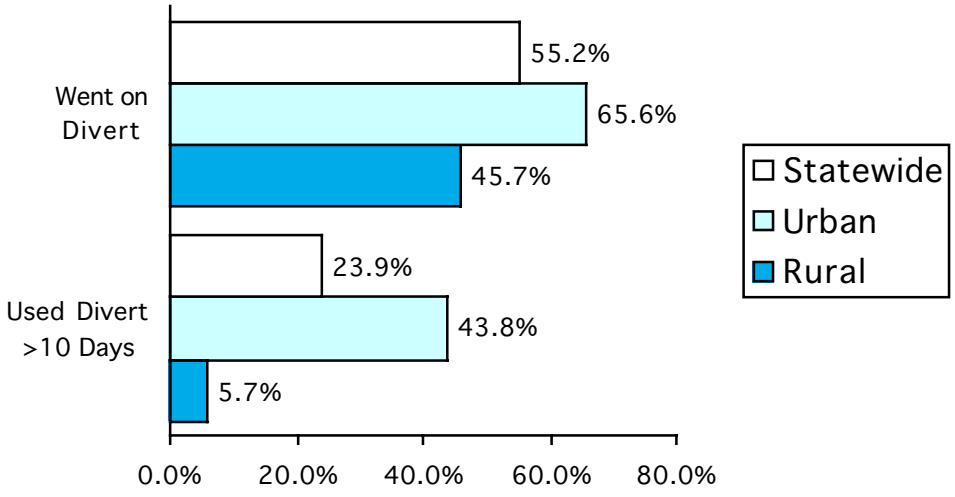
RN Staff Nurse Turnover Rates: This Year Compared with Last Year



Patient Diversion: When asked whether a shortage of nurses caused the hospitals to divert patients to other facilities during the past year, 55.2 percent of the hospitals reported they had. More urban hospitals than rural hospitals reported diverting patients because of a shortage of nurses (65.6% versus 45.7%—see Figure 11). Almost a quarter of all hospitals indicated a shortage of nurses caused them to divert patients for 10 days or more during the past year, and among urban hospitals nearly half (43.8%) diverted patients 10 or more days. Isolated rural hospitals may not be able to divert as readily as other hospitals because of the lack of timely alternative destinations for their potential patients.

FIGURE 11

Hospital Use of Divert Status Because of Nursing Shortage During Past Year



Nurse Recruitment and Retention

Newly Trained vs. Experienced Nurses: Urban hospitals in Washington report having a somewhat easier time recruiting newly-trained RNs than do rural hospitals: 12.1 percent of urban hospitals reported hiring newly-trained nurses was "very difficult" compared with 37.9 percent of rural hospitals. However, when asked about recruiting experienced nurses, the majority of both

urban and rural hospitals reported recruitment is "very difficult" (66.7% and 62.5%, respectively). Nearly all hospitals (97%) report that it is "somewhat" or "very difficult" to hire experienced nurses (see Figures 12 and 13).

FIGURE 12

Difficulty Recruiting Newly-Trained RNs

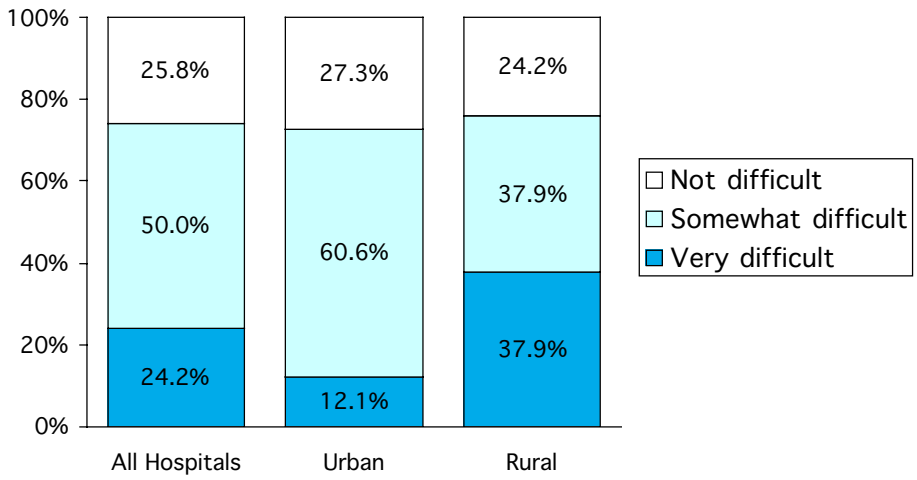
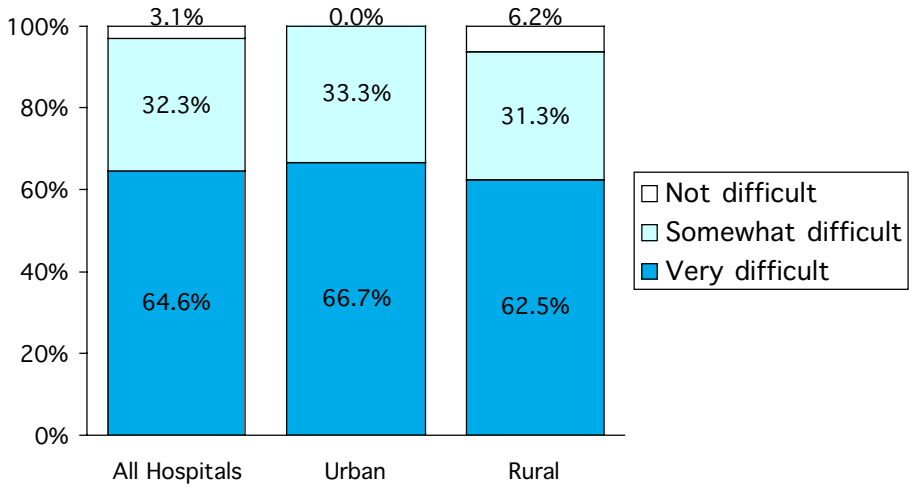


FIGURE 13

Difficulty Recruiting Experienced RNs



When questioned about whether nurse recruitment is more difficult than one year ago, 37.9 percent of hospitals reported hiring newly trained nurses was more difficult, and 58.1 percent reported experienced nurses were more difficult to recruit. Again, urban hospitals reported more change in recruitment difficulty than rural hospitals (see Figures 14 and 15).

FIGURE 14

Difficulty Recruiting Newly Trained RNs: This Year Compared with Last Year

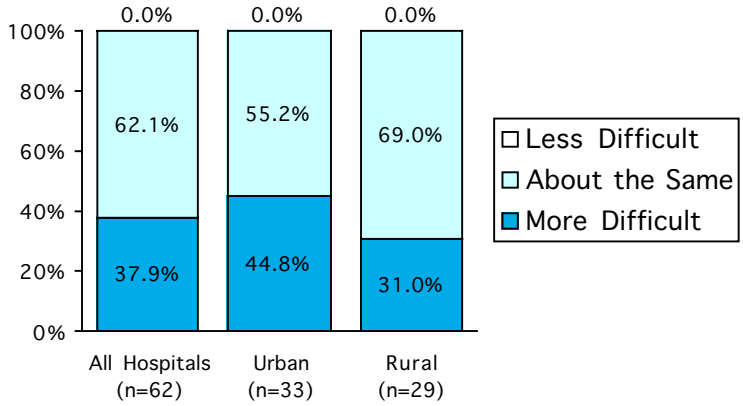
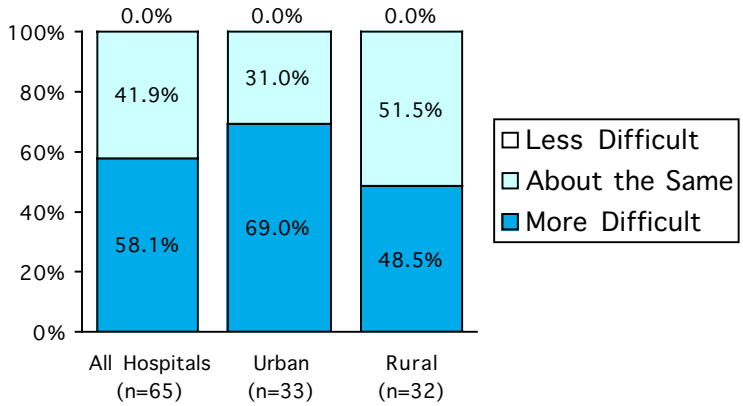


FIGURE 15

Difficulty Recruiting Experienced RNs: This Year Compared with Last Year



Nurse Specialties: Some nurse specialties are more difficult to recruit than others. Table 3 orders nurse specialty by the percentage of hospitals who indicated the specialty was "very difficult" to recruit. ICU/CCU, anesthesia, emergency, and operating room (OR)/recovery specialties top the list. This is probably because more experience is required of nurses filling positions in these specialties than, for example, a medical/surgical unit position, where newly trained nurses are often placed. Urban and rural hospitals listed similar specialties as most difficult to recruit now compared to one year ago. Because many rural hospitals do not employ as many different specialties as do urban hospitals, it is difficult to compare the rankings in detail.

TABLE 3

Comparative Difficulty of Recruiting RNs by Specialty

	Hospitals Reporting Recruitment as "Very Difficult" *	
Nurse Specialty	**Percent**	**Number**
ICU/CCU	83.3%	40
Anesthesia	76.5%	13
Emergency	65.5%	36
OR/recovery	62.3%	33
Labor and delivery	56.0%	28
Oncology	50.0%	14
Medical/surgical	33.9%	20
Pediatrics	33.3%	8
Neonatology	31.6%	6
Psychiatry	25.0%	4
Rehabilitation	17.6%	3

* Of hospitals that employ the specialty.

Reasons for Shortages: Hospitals were asked to identify the primary reason they felt they had nurse vacancies. A majority of hospitals (59.3%) said there were not enough applicants, and another 20 percent indicated there were too few applicants qualified for the available positions (see Table 4). Very few hospitals cited pay or benefits as a primary reason for nurse vacancies—only five percent (or three hospitals) cited not being able to pay competitively, three percent (two hospitals) said their benefits were not good enough, and another three percent (two hospitals) reported the main reason for their nurse shortage was that they were hampered by pay scale restrictions (e.g., union contract specifications of allowable salary ranges for new hires).

TABLE 4
Principal Reason for RN Vacancies

Reason	% of Hospitals Citing as Principal Reason*
Not enough applicants	59.3%
Lack of qualified applicants	20.4%
Not able to pay competitively	5.0%
Benefits not good enough	3.4%
Pay scale restrictions	3.1%
Other	8.9%

* Respondents who inappropriately selected more than one reason had their responses weighted.

Strategies to Improve Recruitment and Retention

Hospitals were asked about a variety of methods to improve nurse recruitment and retention.

Nursing Education: Participation in training with a local nursing school was one method of recruiting and retaining nurses that was investigated. Of the nearly 78 percent of hospitals who indicated that they participate in nurse training with a local nursing school, fewer rural hospitals (68.6%) reported this educational pairing than did urban hospitals (87.9%) (see Table 5). One quarter of hospitals statewide reported participating in distance education programs for nurses. Rural hospitals (30.3%) were more likely to participate than urban hospitals (18.8%).

TABLE 5
Hospital Participation in RN Education

	All Hospitals	Urban	Rural
Participate in nurse training with local nursing school	77.9%	87.9%	68.6%
Participate in distance education programs for nurses*	24.6%	18.8%	30.3%

* For training or continuing nurse education.

Out-of-State Recruitment: The hospitals do not limit their recruitment activities to Washington State. As shown in Table 6, 69.1 percent recruit from other states, and 26.5 percent recruit from other countries. Idaho and Oregon were the states named most often, but many hospitals reported that they regularly recruit nationwide. Canada was cited most often as a recruitment target outside the U.S., but four hospitals reported they recruited from the Philippines, and other hospitals named specific countries, including Mexico, Australia, New Zealand, and the United Kingdom. Rural hospitals were much less likely than urban hospitals to recruit nurses from outside the U.S. and somewhat less likely to recruit from other states.

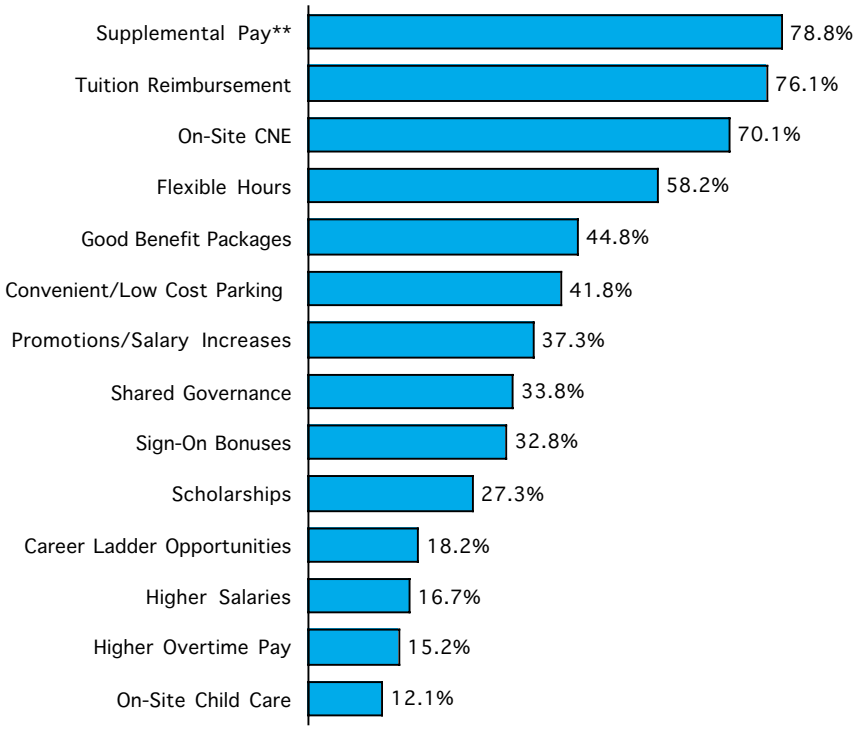
TABLE 6
Nurse Recruitment Outside Washington State

	All Hospitals	Urban	Rural
From other states	69.1%	78.8%	60.0%
From other countries	26.5%	36.4%	17.1%

Incentives: Washington's acute care hospitals use many incentives to enhance nurse recruitment and retention. Seventy percent or more use supplemental pay (for off shift, specialty care, weekend or on-call work), tuition reimbursement and/or on-site continuing nurse education (CNE) as incentives (see Figure 16). Fewer than 20 percent of the hospitals reported using higher pay or enhanced career ladders as recruitment and retention incentives.

FIGURE 16

Percentage* of Hospitals Using RN Recruitment and Retention Incentives

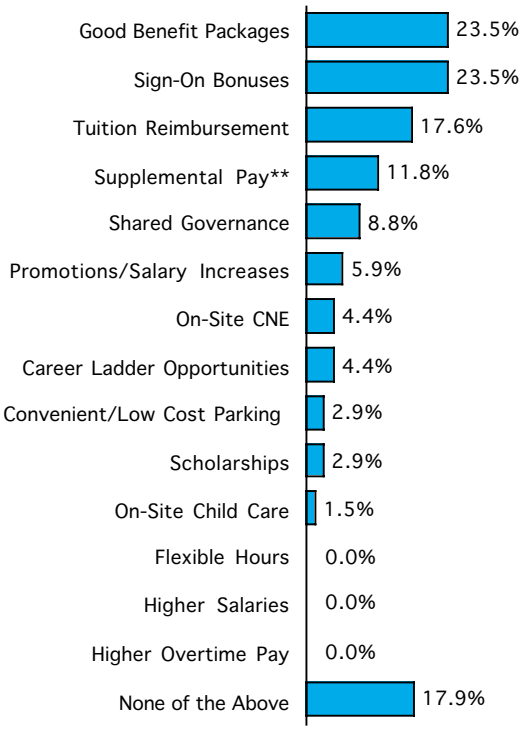


* Of 68 total hospital respondents. The 95% confidence interval for each measure, from top to bottom is ± 19.8%, ± 20.4%, ± 22.0%, ± 23.6%, ± 23.8%, ± 23.6%, ± 23.2%, ± 22.4%, ± 22.4%, ± 21.4%, ± 18.6%, ± 18.0%, ± 17.4%, ± 15.8%.
** For off shift, specialty care, weekend and on-call work.

When asked which incentives the respondents felt were effective for recruiting and retaining nurses, no consensus emerged. With regard to recruitment, no single incentive was cited by more than 24 percent of the hospitals (see Figure 17). Sign-on bonuses and good benefit packages were the most-often cited, but these methods were still only referred to by 23.5 percent of the hospitals. Nearly 18 percent of the hospitals said none of these incentives were effective in recruiting nurses.

FIGURE 17

Percentage* of Hospitals that Identify Incentive as Effective for RN Recruitment



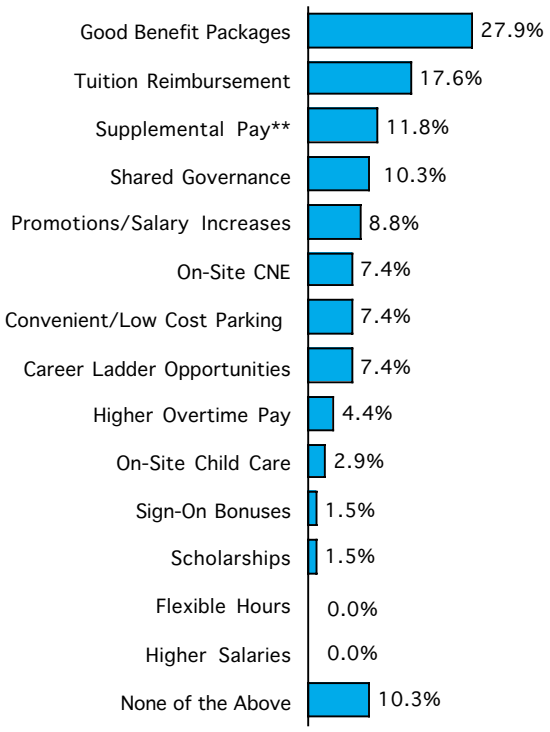
* Of 68 total hospital respondents
** For off shift, specialty care, weekend and on-call work.

For nurse retention, 27.9 percent of hospital respondents said good benefit packages were useful (see Figure 18). No other retention method was cited as

effective by more than 18 percent of the hospitals. According to 10.3 percent of respondents, none of the listed methods were effective in retaining nurses.

FIGURE 18

Percentage* of Hospitals that Identify Incentive as Effective for RN Retention



* Of 68 total hospital respondents.
** For off shift, specialty care, weekend and on-call work.

Several other incentives, not among the list provided in the questionnaire, were added by respondents and cited as being effective in recruiting and retaining nurses. Those most frequently added methods for recruiting and retaining nurses can be categorized as: (1) promoting teamwork and having a positive working environment (mentioned by 10.3% of hospitals), (2) providing relocation bonuses and incentives (8.8%), and (3) being located in a desirable location (5.9%). Other incentives mentioned include having low patient-nurse ratios, having residency training programs, and providing referral bonuses.

Rural hospitals were not meaningfully different from urban hospitals with regard to questions about nurse recruitment and retention strategies.

Why Do Some Hospitals Have Less of a Nurse Shortage Problem?

While the majority of Washington's acute care hospitals are suffering a shortage of nurses, the problem is not universal. Some hospitals report low nurse vacancy rates (including eight who report they have no vacancies) and report that recruiting nurses is "not difficult." The data from the survey were used to attempt to identify any systematic explanation for differences between the hospitals with clear nurse shortages, and those affected less by the problem.

To see if there was an effective difference in recruiting and retention strategies among hospitals, the extent to which the hospitals used recruitment/retention methods was compared. Hospitals reporting it was "very difficult" to recruit experienced nurses (42 in total) were compared to those that reported it was "somewhat" (21 total) or "not difficult" (2 total) to recruit experienced nurses. Figure 19 shows how the two groups compare by use of these methods. The top four incentives on the list for both groups are identical to the rank of incentives shown in Figure 16. Supplemental pay, followed by tuition reimbursement, on-site CNE and flexible hours are being used by the majority of hospitals, whether or not they are having trouble recruiting experienced nurses. More of the hospitals that have less difficulty with recruitment report using higher salaries as an incentive (28.6% versus 11.9%), but this difference was not statistically significant. However, the vast majority of both groups do not report that they use higher salaries as an incentive. Fewer of the hospitals that had less difficulty recruiting nurses use sign-on bonuses than do the hospitals for whom recruitment is "very difficult."

FIGURE 19

Percentage* of Hospitals Using Nurse Recruitment and Retention Incentives: Comparison of Hospitals where Recruitment Is "Very Difficult" vs. "Somewhat" or "Not Difficult"

* Of 42 hospitals where recruiting experienced nurses was "very difficult" and of 22 hospitals where recruiting experienced nurses was "somewhat" or "not difficult."
** For off-shift, specialty care, weekend, and on-call work.

There was little difference between the two groups of hospitals and their participation with local nursing schools, and the extent to which they provide distance education opportunities (see Table 7).

TABLE 7
Participation in RN Education, by Level of Difficulty Recruiting Experienced Nurses

	More Difficult*	Less Difficult**
Participate in Nurse Training with Local Nursing School	76.2%	82.6%
Participate in Distance Education Programs for Nurses*	22.5%	27.3%

* Hospital reported that recruiting experienced nurses is "very difficult" (n = 42).
** Hospital reported that recruiting experienced nurses is "somewhat" or "not difficult" (n = 22).

Discussion

Similar to hospitals across the country, Washington's acute care hospitals are dealing with the challenge of a nursing shortage. The results of this hospital survey help us to understand the extent to which hospitals are affected and suggest trends for the future. There are several limitations to the extent that this study's findings can be used to make conclusions about the state's hospital nurse workforce. First, the study is limited by being a cross-sectional, or one-point-in-time, measure, and trends cannot be concluded from these results alone. The survey's response rate was high (82%), but because 15 of the 83 acute-care hospitals in Washington did not respond, the findings remain estimates of statewide measures. Many of the questions yield perceptions (i.e., qualitative responses to questions such as "How difficult is recruitment?") rather than more objective quantitative measures (i.e., "How many FTEs are vacant?"). These qualitative responses are subjective, and responses may vary somewhat among respondents in the same hospital. For this reason, only large differences in qualitative responses among hospitals were considered meaningful in these analyses. Another limitation of this study is that it elicited insights about the nursing shortage from employers (hospitals) and not from nurses. A logical complement to this study would be to survey the nurse workforce to learn more about their reasons for choosing different work sites or leaving the profession.

One conclusion that can be made from this study is that nearly 2,000 RNs are estimated to be needed now to fill hospital vacancies alone, not to mention needs in other nurse employment settings. The WSHA reports that Washington's nursing schools graduate approximately 1,200 registered nurses each year. In the short term, the nursing schools in Washington cannot be counted on to train new nurses in adequate numbers to meet the state's needs. The majority of RN staff nurses in the state's hospitals are over the age of 40, and if the national aging trend of nurses continues in Washington, retirement will further erode the nurse supply in this state. While this study alone cannot predict long-term trends in nurse supply in Washington, there is clearly a shortage now in the state's hospitals, and the demand for nurses is increasing with the growth and aging of Washington's population. There should be concern about the extent to which supply can meet demand in the future.

One short-term result of the nursing shortage in Washington's hospitals is the closing of hospital beds. Two-thirds of the state's hospitals diverted patients to other hospitals because of nurse shortages: 44 percent of the state's urban hospitals had to divert patients more than ten days in the year prior to the survey (rural hospitals diverted patients less frequently, but that may be because their remoteness provides fewer options for diversion). Diverting patients is not in the best interest of patients and represents loss of business for hospitals.

Other short-term effects of the RN shortage are that more management and supervisory resources must be spent in nurse recruitment efforts and orientation of new and temporary staff than if the hospital had fewer vacancies and less turnover. A sizeable portion of the nursing provided in Washington's hospitals is by on call, per diem, temporary, registry, and traveling nurses, many of whom are filling vacancies in permanent positions. This means more of managers' and supervisors' time is taken away from supervision, mentoring and support of already-employed staff nurses, and likely increases the stress in the nurses' work environment. The nurse shortage is also one of the reasons many hospital nurses are working many overtime hours. The long-term effects of the nurse shortage cannot be measured by this study, but difficult working environments and long working hours increase the chances that nurses will be dissatisfied with their work, undermine retention efforts, and increase risks to the quality of patient care.

Not all of Washington's hospitals are experiencing nursing shortages to the same degree or in the same way. The nurse shortage is being felt in both rural and urban hospitals, but urban hospitals have somewhat higher vacancy rates.

Experienced and specialty RNs are difficult to recruit for both rural and urban hospitals, but rural hospitals report having a more difficult time recruiting newly trained nurses than do urban hospitals. Urban hospitals are more likely than rural hospitals to be in proximity to a nursing school, and therefore are more likely to team up with schools for nurse training. Efforts to create more clinical training opportunities for nurses in rural hospitals could help alleviate those hospitals' recruitment problems.

The state's hospitals are using a large variety of methods to improve their ability to recruit and retain nursing staff. However, none appears to be a "magic bullet" solution, given the limited supply of nurses in the state. Washington's hospitals see shortage of nurse supply as the main reason for their shortage, not inability to compete with other employers on pay or benefits. A survey of the state's nurses would help paint a more complete picture of what works best to recruit and retain nurses in the hospital workforce.

To alleviate the current nurse shortage in Washington, an increase in the nurse supply must come from one or more of four sources: increased production from the state's nursing schools, increased importation of nurses from outside Washington, reduction of retirement rates, and reduced attrition from the profession.

Importing nurses only exacerbates nurse shortages in other states or countries and should only be considered as a short-term method to deal with the problem. Washington will likely experience the greatest success by (1) supporting initiatives that focus on improving the quality of nurses' working conditions in order to improve recruiting ability and reduce attrition and (2) encouraging the training of more nurses in the state. Washington State currently has one of the highest unemployment rates in the U.S. Applicants for additional nurse training slots in the state's nursing schools could be filled from among the state's recently unemployed, as well as from outreach efforts to men and racial/ethnic minorities—groups underrepresented to-date in the nursing workforce.

Washington's employers, policy makers, nurses, and potential nurses stand to benefit from increased national and state attention to the nursing workforce problem. Innovative and timely use of training and workforce development resources may help solve the current nurse shortage, and a long-term strategy to monitor the nurse workforce, including longitudinal research, will help prevent this problem in the future.

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APPENDIX:

Questionnaire

Hospital Workforce Survey: Nursing and Allied Health

Instructions

Please answer the following questions to the best of your ability. It may help to first review the definitions and instructions at the start of each section. There is also a glossary of job titles at the end of the questionnaire that may be useful.

A. Hospital Characteristics

The questions in this section will help us understand the size and complexity of your hospital facility.

(A1) How many licensed acute-care beds does your hospital have? _____ acute care beds

(A2) What was your hospital's average daily occupancy (acute care) last year? _____ patients

(A3) In addition to your acute care beds, how many licensed long term care beds does your hospital have? _____ long term care beds

(A4) On average, how many total permanent full-time staff (all professions in all units) does your hospital employ? _____ full-time employees

(A5) On average, how many total permanent part-time staff (all professions in all units) does your hospital employ? _____ part-time employees

(A6) What is your hospital's fiscal year?

☐ January-December ☐ July-June ☐ Other (specify): _____

B. Nursing

This section's questions are about the nursing staff who support your ***acute care hospital***. If your hospital also supports non-acute care functions (long-term care, outpatient, etc.), please answer the following questions ***only*** as they relate to support of ***your hospital's acute care functions***.

Job Titles: Not all job titles listed in this questionnaire will match with those used at your institution. Please use your best judgement in matching your job titles with the job descriptions listed in the glossary at the end of this questionnaire.

RN: "RN" refers to a registered nurse providing direct patient care utilizing the nursing process which includes assessment, nursing diagnosis, planning, implementation, and evaluation of care. Responsibilities may also include: patient teaching and counseling, administering treatments and medications, documenting care given and patients' response to treatment, and supervising.

Full Time Equivalent Position (FTE): Total number of hours per year considered an FTE varies by institution and contract – the range is usually between 1860 and 2080 hours per year (30-40 hours per week). One FTE is indicated 1.0 FTE. Indicate part-time positions as follows: a half-time position = 0.5 FTE; a quarter-time position = 0.25 FTE.

Example: A facility has four RN positions. Two of the positions are for full-time staff nurses and the third is for a half-time staff nurse. The fourth position works half time as a staff nurse and half time as a supervisor. ***This facility has 3.0 staff nurse FTEs and 0.5 administrative/supervisor/manager.***

B1 ***When fully staffed***, how many ***RN nurse FTEs*** *(see definition of FTE above)* does your acute-care hospital employ in permanent positions (i.e., not including on-call, per-diem, temporary, registry, or travelling nurses) in the following categories? *(Use "0" for "none" and "DK" for "don't know.")*

	Staff Nurses	Administrators/ Supervisors/ Managers	Clinical Nurse Specialists	Advanced Registered Nurse Practitioners
Number of RN FTEs when fully staffed				

B2 In the past fiscal year, how many total hours of ***on-call and per-diem RN staff*** did your hospital use?

_____ total hours

B3 Please complete the following table describing your ***hospital's RN staff characteristics***.
(Use "0" for "none" and "DK" for "don't know.")

	Staff Nurses	Administrators/ Supervisors/ Managers	Clinical Nurse Specialists	Advanced Registered Nurse Practitioners
(a) Number of RN FTEs budgeted in ***past*** fiscal year				
(b) Number of RN FTEs budgeted in ***current*** fiscal year				
(c) Number of RN FTEs currently employed				
(d) Number of currently vacant RN FTEs				
(e) If vacancies, are you currently recruiting for these positions? (check No or Yes)	☐ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes	☐ No ☐ Yes
(f) Current hourly RN salary range	$_____ to $_____	$_____ to $_____	$_____ to $_____	$_____ to $_____

B4 How many total RN staff (regardless of part-time or full-time status) does your hospital ***currently employ*** in permanent positions? *(Use "0" for "none" and "DK" for "don't know.")*

	Staff Nurses	Administrators/ Supervisors/ Managers	Clinical Nurse Specialists	Advanced Registered Nurse Practitioners
Total RNs				

B5 Does your hospital use ***temporary, registry, or travelling RNs***?

☐ No (skip to Question B7) ☐ Yes (go to Question B6)

B6 Approximately how many ***total hours of temporary, registry, or travelling RNs*** did your hospital use in the past fiscal year to fill the following positions? *(Use "0" for "none" and "DK" for "don't know.")*

	Staff Nurses	Administrators/ Supervisors/ Managers	Clinical Nurse Specialists	Advanced Registered Nurse Practitioners
Total hours of temporary, registry, or travel RNs during past fiscal year				

B7 Compared with one year ago, how has your hospital's use of temporary, registry, or traveling RNs changed?

☐ Increased ☐ Stayed about the same ☐ Decreased ☐ Don't know

B8 (1) Indicate how ***difficult it is to recruit*** RNs to work in your hospital by experience level and specialty area. (2) Then, indicate how this differs from one year ago.

	1 How difficult is current RN recruitment?				Average Weeks* Required to Fill Positions	2 Is recruitment more or less difficult than one year ago?		
	Not Difficult	Somewhat Difficult	Very Difficult	Not Applicable		More Difficult	The Same	Less Difficult
Level of Experience:								
(a) Newly-licensed RNs (less than 12 months)	☐	☐	☐	☐	_____	☐	☐	☐
(b) Experienced RNs	☐	☐	☐	☐	_____	☐	☐	☐
Specialty Areas:								
(c) ICU/CCU	☐	☐	☐	☐	_____	☐	☐	☐
(d) Anesthesia	☐	☐	☐	☐	_____	☐	☐	☐
(e) Emergency	☐	☐	☐	☐	_____	☐	☐	☐
(f) Medical/surgical	☐	☐	☐	☐	_____	☐	☐	☐
(g) Neonatology	☐	☐	☐	☐	_____	☐	☐	☐
(h) Labor and delivery	☐	☐	☐	☐	_____	☐	☐	☐
(i) Oncology	☐	☐	☐	☐	_____	☐	☐	☐
(j) OR/recovery care	☐	☐	☐	☐	_____	☐	☐	☐
(k) Pediatrics	☐	☐	☐	☐	_____	☐	☐	☐
(l) Psychiatry	☐	☐	☐	☐	_____	☐	☐	☐
(m) Rehabilitation	☐	☐	☐	☐	_____	☐	☐	☐
(n) Other: _____	☐	☐	☐	☐	_____	☐	☐	☐

* of ***active*** recruitment

B9 Are there other RN specialties you have difficulty recruiting? If so, please describe:

_____

_____

_____

_____

_____

B10 During the past year, if any RN positions in your hospital have remained ***vacant for one month or more***, what do you think is the ***primary reason*** for the vacancy? *(Check only one.)*

- ☐ Not applicable — no positions vacant for one month or more
- ☐ Not enough applicants
- ☐ Pay scale restrictions
- ☐ Funds not available to pay competitively
- ☐ Benefits not as attractive as other employers
- ☐ Lack of qualified applicants (describe why not qualified: _____)
- ☐ Other (describe: _____)
- ☐ Don't know

B11 Please complete the following table describing your hospital's ***nursing turnover***.
(Use "0" for "none" and "DK" for "don't know.")

	Staff Nurses	Administrators/ Supervisors/ Managers	Clinical Nurse Specialists	Advanced Registered Nurse Practitioners
Number of RNs* ***hired*** in permanent positions in past fiscal year				
Number of RNs* ***leaving*** permanent positions in past fiscal year (voluntarily or involuntarily)				
Average number of RNs* ***employed*** in permanent positions in past fiscal year				

* full or part time

B12 Compared with three years ago, is your hospital's ***RN turnover***:

☐ Higher ☐ About the same ☐ Lower ☐ Don't know

B13 Approximately what percentage of your hospital's RN staff (excluding temporary, registry, or travelling nurses) are in the following employment categories?

Years at Your Hospital:

10 years or more? _____ %
6-9 years? _____ %
2-5 years? _____ %
One year or less? _____ %
(total should equal 100%)

B14 Approximately what percentage of your RN staff are in the following age categories?

Age:

Less than 25 years? _____ %
26-39 years? _____ %
40-54 years? _____ %
55 years or older? _____ %
(total should equal 100%)

B15 Approximately what percentage of your hospital's total RN staff is ***male***? _____% male

B16 Approximately what percentage of your hospital's RN staff are in the following ***racial or ethnic categories***?

_____ % American Indian, Eskimo, Aleut, Alaskan
_____ % Asian/Pacific Islander
_____ % Black or African American
_____ % Hispanic
_____ % White, not Hispanic
_____ % Other
_____ % Not known
(total should equal 100%)

B17 During the past fiscal year, did your hospital go on ***"divert status"*** because of a shortage of RN staff?

☐ No (skip to Question B19) ☐ Yes (continue to Question B18)

B18 On ***how many days*** did your hospital go on divert status because of RN shortages in the past fiscal year?

☐ 2 or fewer days ☐ 3-5 days ☐ 6-10 days ☐ More than 10 days

B19 During the past several years, many organizations have found it necessary to ***reduce*** the numbers of ***direct patient care RNs*** on staff. Has this been the case for your hospital in the past year?

☐ No (skip to Question B21) ☐ Yes (go to Question B20)

B20 Did your hospital find it necessary to reduce ***RN*** FTEs on staff in the past year because:

No	Yes	
☐	☐	There are fewer patients because of increased competition
☐	☐	Advanced technologies require fewer RNs
☐	☐	You were able to shift some of the tasks traditionally performed by RNs to others
☐	☐	Changes in leadership structure
☐	☐	Reimbursement patterns changed
☐	☐	Your hospital downsized
☐	☐	Your hospital was concerned about margins
☐	☐	Nurses were in short supply
☐	☐	Other (specify: _____)

B21 Does your hospital actively ***recruit RNs from states other than Washington***?

☐ No ☐ Yes If yes, which state(s)? _____ _____ _____

B22 Does your hospital actively ***recruit RNs from other countries***?

☐ No ☐ Yes If yes, which other country(ies)? _____ _____ _____

B23 What do you consider your hospital's toughest ***local competition*** for hiring acute care nurses? (Check only one.)

☐ Other local hospital
☐ Other non-local hospital
☐ Other health care-related, but non-hospital employment
☐ Non-medical employment
☐ Other (describe: _____)
☐ No competition

B24 During the past fiscal year, has your hospital used the following inducements/employee benefits to recruit and/or retain RNs?

	No	Yes	Methods used to recruit/retain RNs:
(a)	☐	☐	Better benefit packages than other employers in the area
(b)	☐	☐	Good clinical/career ladder
(c)	☐	☐	Convenient, low-cost/reimbursed parking
(d)	☐	☐	Flexible hours
(f)	☐	☐	Higher pay for overtime than other employers in the area (average difference per hour: $_____)
(g)	☐	☐	Higher salaries than other employers in the area (specify a difference: $_____ per hour)
(h)	☐	☐	On-site child care
(i)	☐	☐	Opportunity for promotion and/or salary increase
(j)	☐	☐	Sign-on bonuses (average amount: $_____)
(k)	☐	☐	Supplemental pay for off-shift, specialty care, weekend or on-call
(l)	☐	☐	Shared governance (e.g., participation in high-level organizational decision making)
(m)	☐	☐	Scholarships
(n)	☐	☐	Tuition reimbursement
(o)	☐	☐	On-site continuing education
(p)	☐	☐	Other (describe: _____)

B25 Which were the most effective methods for ***recruiting*** RNs?
(List up to 3 from B24 above, in order of effectiveness.)

(1) _____ (2) _____ (3) _____ ☐ None were effective

B26 Which were the most effective methods for ***retaining*** RNs?
(List up to 3 from B24 above, in order of effectiveness.)

(1) _____ (2) _____ (3) _____ ☐ None were effective

B27 What government policy changes would help you the most in recruiting and retaining RN staff?

Describe: _____
_____
_____
_____

B28 Does your hospital participate in RN training in collaboration with a local school of nursing?

☐ No ☐ Yes If yes, please describe: _____
_____
_____

B29 What could local nursing schools do to help your hospital with RN staff recruitment and retention?

_____
_____
_____
_____

B30 Do you participate in distance education programs for your RN staff (for example, programs to train LPNs to become RNs, or CNE programs)?

☐ No ☐ Yes If yes, please describe: _____
_____
_____

C. Other Hospital Staffing

C1 (1) Indicate how difficult it is to recruit staff to work in your hospital in the following positions. Then (2), indicate how this compares to a year ago.

	1 How difficult is current recruitment?				# FTEs Currently Budgeted	# FTEs Currently Employed	# FTEs Currently Vacant	Average Weeks* Required to Fill Positions	2 Is recruitment more or less difficult than a year ago?		
	Not Difficult	Somewhat Difficult	Very Difficult	Not Applicable					Less Difficult	The Same	More Difficult
Non-RN Nursing Staff:											
(a) LPNs	☐	☐	☐	☐					☐	☐	☐
(b) Nursing aides	☐	☐	☐	☐					☐	☐	☐
Laboratory Staff:											
(c) MT/CLS	☐	☐	☐	☐					☐	☐	☐
(d) MLT/CLT	☐	☐	☐	☐					☐	☐	☐
Radiology Staff:											
(e) Radiographer/radiology technologist	☐	☐	☐	☐					☐	☐	☐
(f) Ultrasound technologist	☐	☐	☐	☐					☐	☐	☐
(g) Nuclear medicine technologist	☐	☐	☐	☐					☐	☐	☐
(h) Radiation therapy technologist	☐	☐	☐	☐					☐	☐	☐
Medical Records:											
(i) Technicians	☐	☐	☐	☐					☐	☐	☐
(j) Coders	☐	☐	☐	☐					☐	☐	☐
Pharmacy:											
(k) Licensed pharmacists	☐	☐	☐	☐					☐	☐	☐
(l) Pharmacy technicians	☐	☐	☐	☐					☐	☐	☐
Other:											
(m) Physician assistants	☐	☐	☐	☐					☐	☐	☐
(n) Dieticians	☐	☐	☐	☐					☐	☐	☐
(o) Physical therapists	☐	☐	☐	☐					☐	☐	☐
(p) Occupational therapists	☐	☐	☐	☐					☐	☐	☐
(q) Respiratory therapists	☐	☐	☐	☐					☐	☐	☐
(r) _____	☐	☐	☐	☐					☐	☐	☐
(s) _____	☐	☐	☐	☐					☐	☐	☐

* of active recruitment

(C2) Please provide any additional comments or observations you may have about recruitment and retention of the hospital nursing and allied health workforce in Washington:

_____
_____
_____
_____
_____
_____

D. Other Information

(D1) Please give the ***job title*** of the person(s) responsible for completing this survey:

Primary person completing survey: _____ (job title)
Others who contributed to survey: _____ (job title)
_____ (job title)
_____ (job title)

(D2) If we need clarification of any of the responses to this survey, may we contact you?

Name: _____ Phone number: _____
E-mail address: _____

Thank you for completing this questionnaire!

Please return it in the post-paid envelope to:

Susan Yee
WWAMI Center for Health Workforce Studies
University of Washington
Box 354696
Seattle, WA 98195-4696

Contact Susan with any questions about this survey:

206-685-0401, ext. 3, or
susanyee@u.washington.edu.

Glossary of Nursing and Allied Health Job Titles

Registered Nurses (RN) Positions

Staff Nurses: RNs who provide direct care to patients. Includes case managers, discharge planners, and quality assurance staff.

Administrator/Supervisors/Manager Nurses: RNs who make decisions about human, fiscal and physician resources in order for patient care to be provided.

Clinical Nurse Specialist (CNS): RNs with a Master's degree in an area of specialization who provide specialized care to selected patients, patient and/or staff education or consultation, coordination of special projects and/or administrative support.

Advanced Registered Nurse Practitioner: State-recognized as an independent health care provider addressing the full range of patient/client health problems and needs within an area of specialization.

Non-RN Nursing Positions

Licensed Practical Nurses (LPNs): Individuals licensed as Practical Nurses who provide direct care to patients under the supervisions of an RN.

Nursing Aides: Assists the nursing staff by performing routine duties in the care of hospital patients. Includes CNAs, medical assistants, and orderlies.

Laboratory Staff

MT/CLS: Performs routine and complex testing in medical laboratories for diagnosis and treatment of diseases. Requires a BS degree with Medical Technologist – CLS registration or equivalent.

MLT/CLT: Performs routine tests in medical laboratory for diagnosis and treatment of diseases. Requires AA degree, Medical Laboratory Technician (MLT) – CLT registration or equivalent. Not a Medical Technologist.

Radiology Staff

Radiographer/Radiology Technologist: A medical radiation technologist who uses ionizing radiation to demonstrate portions of the human body to assist the physician in the diagnosis or localization of disease or injury.

Nuclear Medicine Technologist: Persons who qualify by education and training to use radioisotopes to demonstrate function and anatomy in the human body to assist the physician in the diagnosis of disease or injury.

Radiation Therapy Technologist: Persons who qualify by education and training to administer ionizing radiation for the treatment of cancer on the prescription of a physician.

Medical Records

Technicians: Duties involve most of the following: reviews medical records for completeness and accuracy; codes diseases, operations, and other data for retrieval purposes; compiles medical care and census data for statistical reports; files or supervises filing of patient records; assists medical staff in special studies or research, maintains and uses indexes such as patient, disease, operation, physician, etc.; supervises day-to-day operations within medical record department; takes medical records to court; and, maintains flow of medical records and reports to all departments of the hospital or health facility. Implements controls over chart flow and file arrangement; may provide technical guidance to other department members; may perform entry-level coding. Certification required.

Coders: Abstracts basic data items from the hospital medical record and codes the diagnoses and procedures in accordance with specified classification systems for reporting clinical information.

Pharmacy

Licensed Pharmacists: Compounds and dispenses medications according to prescriptions or orders written by a physician or other authorized medical practitioner. Advises patient concerning use of prescription. Consults with, and provides information to, other professional staff concerning drugs, related pharmaceuticals, and other activities requiring professional judgment of a qualified pharmacist. Serves as consultant to the medical team in determining the appropriate drug therapy. Assists the physician when needed to determine the drug strength, dosage, and effect of drug interactions. Requires a B.S. in Pharmacy and/or Doctor of Pharmacy degree. Licensed in the State of Washington.

Pharmacy Technicians: Assists the Pharmacist in performing routine technical duties such as compounding, packaging, distributing, inventory control, and storage of pharmaceutical items.

Other

Physician Assistants: Under the direct supervision of a physician, performs professional duties and technical procedures to provide health care services, operative procedures, suturing, injections, etc. Makes initial diagnosis and orders appropriate test and treatments. May assist in surgery.

Dieticians: Performs at least one of the following: (a) organizes, plans, and directs food service program; (b) applies principles of nutrition and management to menu planning and food preparation and service; (c) instructs individuals and groups in application of principles of nutrition; (d) instructs patients and their families on the requirements and importance of their modified diet and how to plan and prepare the food; and (e) consults with medical, nursing, and social service staffs concerning problems affecting patients' food habits and needs.

Physical Therapists: Assesses and treats disabilities, injuries, and diseases through the use of massage, exercise, and effective properties of air, water, heat, cold, and electricity, according to prescription of a physician. May consult with other therapists to coordinate therapeutic programs for individual patients. Requires completion of a four-year bachelor's degree at an approved school of physical therapy.

Occupational Therapists: Evaluates the self-care, work, or leisure time and task performance skills of well and disabled patients of all ages. Plans and implements treatment programs and social and interpersonal activities designed to restore, develop, and/or maintain patients' ability to satisfactorily accomplish those daily living tasks required to the specific age and necessary to the particular occupational role adjustment. Requires a four-year bachelor's degree in occupational therapy.

Respiratory Therapists: Respiratory therapists, under the supervision of a physician, administer respiratory care and life support to patients with heart and lung difficulties.

Previous WWAMI Center for Health Workforce Studies and Rural Health Research Center Working Papers

The WWAMI Rural Health Research Center was established in 1988. The WWAMI Center for Health Workforce Studies was established in 1998.

1. Hart, L. Gary; Rosenblatt, Roger A.; and Amundson, Bruce A. Is There a Role for the Small Rural Hospital? January 1989.
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3. Amundson, Bruce A. and Hughes, Robert D. Are Dollars Really the Issue for the Survival of Rural Health Services? June 1989.
4. Nesbitt, Thomas S.; Rosenblatt, Roger A.; Connell, Frederick A.; and Hart, L. Gary. Access to Obstetrical Care in Rural Areas: Effect on Birth Outcomes. July 1989.
5. Schleuning, Dianne; Rice, George; and Rosenblatt, Roger A. Addressing Barriers to Rural Perinatal Care: A Case Study of the Access to Maternity Care Committee in Washington State. October 1989.
6. Rosenblatt, Roger A.; Whelan, Amanda; and Hart, L. Gary. Rural Obstetrical Access in Washington State: Have We Attained Equilibrium? January 1990.
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9. Hart, L. Gary; Pirani, Michael; and Rosenblatt, Roger A. Causes and Consequences of Rural Small Hospital Closures from the Perspectives of Mayors. September 1990.
10. Welch, H. Gilbert; Larson, Eric H.; Hart, L. Gary; and Rosenblatt, Roger A. Readmission Following Surgery in Washington State Rural Hospitals. January 1991.
11. Amundson, Bruce A.; Hagopian, Amy; and Robertson, Deborah G. Implementing a Community-Based Approach to Strengthening Rural Health Services: The Community Health Services Development Model. February 1991.
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14. Larson, Eric H.; Hart, L. Gary; and Rosenblatt, Roger A. Is Rural Residence Associated with Poor Birth Outcome? June 1991.
15. Williamson, Harold A.; Rosenblatt, Roger A.; Hart, L. Gary. Physician Staffing of Small Rural Hospital Emergency Departments: Rapid Change and Escalating Cost. September 1991.
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20. Rosenblatt, Roger A.; Saunders, Greg; Tressler, Carolyn; Larson, Eric H.; Nesbitt, Thomas S.; Hart, L. Gary. Do Rural Hospitals Have Less Obstetric Technology than their Urban Counterparts? A Statewide Study. March 1993.
21. Williamson, Harold A.; Hart, L. Gary; Pirani, Michael J.; Rosenblatt, Roger A. Market Shares for Rural Inpatient Surgical Services: Where Does the Buck Stop? April 1993.
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49. Geyman, John P.; Hart, L. Gary; Norris, Thomas E.; Coombs, John B.; Lishner, Denise M. Physician Education and Rural Location: A Critical Review. February 1999.

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53. Lishner, Denise M.; Rosenblatt, Roger A.; Baldwin, Laura-Mae; Hart, L. Gary. Emergency Department Use by the Rural Elderly. November 1998.

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60. Wright, George E.; Paschane, David M.; Baldwin, Laura-Mae; Domoto, Peter; Cantrell, Diana; Hart, L. Gary. Distribution of the Dental Workforce in Washington State: Patterns and Consequences. March 2001.

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