Workforce Demand in Nursing-Intensive Healthcare Settings

2009 Vacancies and 2011 Growth Projections

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Addressing Nurse Workforce Issues for the Health of Florida

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Executive Summary

The Florida Center for Nursing (Center) conducted a survey of nurse employers in six industry groups from July through September 2009. All hospitals, psychiatric hospitals, skilled nursing facilities (nursing homes), home health agencies, public health departments, and hospices in Florida were asked about their current and future demand for nursing personnel as well as the impact of the economic recession on nurse employment. Of the 1,904 surveys distributed, 597 were returned for an overall response rate of 31.2 percent. Response rates were highest for public health departments (62.7%), hospices (47.5%), and hospitals (40.0%). Lower response rates were attained for skilled nursing facilities (30.6%) and home health agencies (25.4%).

Despite the current recession, employers reported higher than expected vacancies, turnover, and projected growth in nursing positions. The recession has eased the nursing shortage in several ways: more nurses have returned to work, nurses are working more hours, turnover has decreased, and employers have cut vacant positions. However, this situation is only temporary and the nursing shortage is expected to re-emerge once the economy stabilizes. Highlights of the 2009 survey include:

- The estimated number of vacant positions as of June 30, 2009 was approximately 6,800 RNs, 1,400 LPNs, and 4,000 CNAs.
- Vacancy rates have declined since our 2007 survey, but they follow the same pattern across industries. Full-time equivalent (FTE) position vacancy rates for RNs were highest within skilled nursing facilities (6.8%), hospices (7.0%), and home health agencies (8.6%). Home health agencies also reported high vacancy rates for LPNs (8.8%) and certified nursing assistants (CNAs, 6.7%). Psychiatric hospitals reported a CNA vacancy rate of 8.9 percent.
- Employers reported substantial unmet need for budgeted positions. Seventy percent of public health departments reported needing additional budget lines for RNs, as did 55 percent of psychiatric hospitals. Thirty-five percent of hospitals reported needing positions for direct care RNs. Thus, while vacancy rates have declined in these groups, the number of budgeted positions may not be keeping pace with perceived need within these industries.
- Although turnover rates have decreased since our last survey, median turnover rates remained above 15 percent in most industries and for most personnel types. Skilled nursing facilities reported the highest median turnover rates: 30.6 percent for RNs, 29.2 percent for LPNs, and 28.1 percent for CNAs.
- Even though growth is difficult to predict in the current economic climate, respondents reported that they did anticipate growth in new positions through 2011. Expected growth in nursing positions through 2011 is estimated to be about 8,200 RN positions, 3,100 LPN positions, and 5,000 CNA positions.
- Percentage growth in budgeted positions varies widely by industry. By 2010, hospitals expect to increase their RN staffs by 2.2 percent. In contrast, home health agencies expect to increase their RN staffs by 35 percent.

Although the nursing shortage has eased with the current recession, a greater shortage looms in the near future. Once the recession abates, older nurses will retire and those who rejoined the profession

may decide to leave as well. At the same time, an aging population will begin to demand more health care. Therefore, the nursing shortage is likely to intensify over the coming decade. Nurse employers will continue adapt to the shortage, but their adaptations may not yield positive healthcare outcomes for Florida's citizens.

A number of research, advocacy, and policy recommendations flow from the study. Each is intended to better understand or ease the impact of the current and projected nursing shortage:

1. *The Center should conduct further analysis of the 2009 employer survey data and continue to replicate the study biennially.* Future reports will focus on industry-specific and regional data, quantification of open-ended survey questions, and long-range forecasting of nurse employment. Replication of the employer survey every two years will allow the Center to track nurse employment changes in relation to changing economic conditions and fine-tune long range forecasts.

2. *Ways to improve employer participation in nursing demand surveys must be explored.* Surveying nurse employers is critical for quantifying the nursing shortage, and higher survey response rates generally translate into more complete and accurate data. Without data from employers, we would not have accurate statistics on nurse employment, turnover, or projected growth – all of which are crucial for workforce planning. Collaboration with the Agency for Health Care Administration (AHCA), the regulatory body licensing and regulating most healthcare facilities in the state, would be one method of increasing response rates through incorporating the employer survey into the license renewal process.

3. *Emphasis must remain on retaining the current nursing workforce.* There is high demand among all surveyed industry groups for experienced nurses, as they have skill sets gained by years of experience and fill important roles as mentors and teachers to new graduate nurses. However many of these older, experienced nurses who recently returned to work may leave once the economy stabilizes. Likewise, high turnover in nursing positions must be addressed. Retaining the aging nurse workforce and reducing turnover requires consideration of the physical demands of nursing work, the multigenerational workforce, and creating positive changes to the work environment.

4. *Access to and quality of care must be carefully monitored as the nursing shortage intensifies, and both should be analytically linked to the nursing shortage to establish causality.* Researchers in academic, government, and philanthropic settings are studying issues related to nurse staffing and quality of care. This research, when considered alongside workforce demand data, can provide a clearer indication of the extent and consequences of a nursing shortage. Funding for research related to healthcare access and quality should be prioritized, and recognition of the impact of regional and industry-specific nursing shortages on access and quality of care should be emphasized.

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Introduction

In 2007, the Florida Center for Nursing (Center) conducted its first survey of nurse employers in Florida.[1] At that time, Florida and the nation were in the midst of a severe nursing shortage. The employer survey was used to estimate both current nurse demand and projected nurse demand over the next two years within five key industries employing nurses (hospitals, skilled nursing facilities, home health agencies, public health departments, and hospices).[2] Based on these data, the Center estimated there were over 10,400 RN vacancies and almost 3,000 LPN vacancies as of June 30, 2007. Furthermore, data from the 2007 survey was used to estimate growth of almost 6,500 new RN positions and over 1,800 new LPN positions expected through 2008.

The nation's economic landscape has changed dramatically since our 2007 survey. Florida now has one of the highest unemployment rates in the nation – 11.5 percent as of November 2009.[3] Anecdotal reports indicate that new nursing graduates are struggling to find employment as hospitals initiate hiring freezes in response to the economy; meanwhile other reports indicate some hospitals continue to search for nurses in specialty positions. Indeed, RN employment has increased nationwide during the recession. This increase in RN employment was driven by both older nurses and nurses with young children returning to work, part-time nurses working more hours, and an increased number of foreign-born nurses.[4] On the other hand, healthcare spending decelerated to the slowest rate in almost 50 years, which impacted hospitals and healthcare goods and services.[5] Consequently, one of the goals of our 2009 nurse employer survey was to evaluate the impact of the recession on Florida's nurse employers.

The nursing shortage, though perhaps temporarily eased by the increase in recession-related nursing employment, continues to be a looming problem for Florida. Drivers of the nursing shortage remain the same: older nurses who have returned to work will eventually retire, and an aging population will demand more healthcare. Once the recession eases, we will see the nursing shortage re-emerge. The Bureau of Labor Statistics (BLS) projects that demand for RNs will increase more than any other type of worker through 2016, with more than new 587,000 RN positions projected during this time in the United States.[6] Hence, we expect long-term demand for nurses to increase in response to population trends.

Although population growth and aging will drive the demand for health care, it is ultimately the staffing decisions of health care facilities and providers – such as hospitals, skilled nursing facilities, home health agencies, government providers, and physicians – that will control the demand for nursing services. The Center's biennial employer survey serves as the sole source of information on nurse demand for most of these healthcare settings and functions as a resource for nurse employers, professional associations, and state government.

To learn about the current and future demand for nursing personnel across Florida's different health care industry groups, the Center conducted its second biennial survey of nurse employers from July – September 2009. All hospitals, psychiatric hospitals, skilled nursing facilities, home health agencies, hospices, and public health departments in Florida were invited to participate. Psychiatric hospitals were a new addition to our survey strategy. Employers were asked about vacancies, turnover, future

demand for nurses, recruiting difficulty encountered over the past year, and how the current economic recession has affected their nurse staffing and hiring practices. This information will help the Center better understand the effect of the recession on nurse demand and what employers can expect in the short-term future, given the fluctuations of the current economic situation. In addition, the data are used to estimate total vacancies and anticipated job growth when the reported values of respondents are combined with estimated values for non-respondents. This report presents statewide, cross-industry results on each of the key metrics we computed (such as staff size and mix, vacancy and turnover rates, and short-term growth projections) as well as estimated statewide current nursing vacancies and job growth through 2011.

Survey Methods

Industry Groups

The industry groups selected for inclusion in the study were chosen based on their prominence as nurse employers, their strategic importance to the healthcare delivery system, and the feasibility of surveying individual facilities within the group. Ideally, every industry group employing nurses and providing direct health care to patients would be included in a survey of nurse employers. Unfortunately, it is not cost effective or efficient to survey physicians' offices and ambulatory care facilities. We surveyed six employment settings: **hospitals**, **psychiatric hospitals**, **home health agencies**, **skilled nursing facilities (nursing homes), public health departments** and **hospices**. To account for temporary employees, we asked employers to count the number of temporary agency nurses working at their facilities. Thus we were able to gauge the contribution of employment services to the business models and staff mixes of the other industry groups.

Instruments

The survey instruments used for the 2009 study were revised from our 2007 study[1] to include questions from the Forum of State Nursing Workforce Center's Minimum Nurse Demand Dataset.[7] Using the Minimum Dataset questions will ensure continuity over time and facilitate comparability with other states that are using the same questions. Separate questionnaires were deployed for the six different industry groups. The basic metrics for all RNs, LPNs, and nursing assistants are computed identically across industries, but the clinical or administrative specialties referenced in our questions about recruiting difficulty were specific to each industry. The Center's Research and Workforce Analysis Committee reviewed and approved the instruments. Florida Department of Health staff reviewed our instruments and study design, and we were granted an exemption from full Institutional Review Board (IRB) review since the study was not judged to be human subjects research. The final questionnaires are presented in the Appendices of our companion report, 2009 Nurse Employer Survey Technical Documentation.[8]

Population Lists and Contact Information

In order to provide information that is as accurate as possible at the regional level, our study employed a census (a survey of the population) rather than a random or other type of sample survey. Lists of the facilities within each of the six industry groups were obtained from the Agency for Health Care

Administration (AHCA), the regulatory body licensing and regulating most healthcare facilities in the state. Further details can be found in our technical documentation.[8]

Survey Distribution

The survey and a cover letter explaining the survey were mailed in August 2009. An initial follow-up letter to non-respondents was mailed approximately two weeks after the initial surveys were mailed. A second follow-up occurred two weeks later (one month after fielding) and included a second copy of the survey instrument. The third and final follow up occurred six weeks after fielding. To increase lagging response rates within the hospital sector, the final follow-up for this group occurred by telephone.

Response Rates and Representativeness

A total of 1,914 surveys were distributed to the six different industry groups, after exclusions and facility aggregations (in home health) were accomplished. The largest industry groups, by far, were home health agencies and skilled nursing facilities. Of all surveys distributed, 597 were returned for an overall response rate of 31.2 percent. This overall rate masks notable differences in response rates by industry, shown in Table 1. The response rate was highest among public health departments (62.7%), and lowest among skilled nursing facilities (30.6%) and home health agencies (25.4%).

Table 1. Statewide Response Rates by Industry Group and Overall

Industry Group	# Surveys Expected	# Surveys Returned	Response Rate
Hospitals	255	102	40.0%
Home Health	840	213	25.4%
Skilled Nursing	676	207	30.6%
Public Health	67	42	62.7%
Hospice	40	19	47.5%
Psychiatric Hospital	36	13	36.1%
Totals	**1,914**	**597**	**31.2%**

To determine how representative our survey respondents were of the population of facilities in each group, we conducted a bias analysis. Details of this analysis, along with response rates by region of the state, can be found in our technical documentation.[8] We judge our data to be adequately representative of the population for use in analysis and estimation.

Results

Skill Mix and Staff Size

The skill mix of nurses employed varied by industry group (Table 2). Within hospitals, 78.1 percent of the nursing staff were RNs, 4.9 percent were LPNs and 16.3 percent were CNAs. Public health department nurse employees were also predominantly RNs. Hospices and psychiatric hospitals had a similar nursing skill mix, almost half of their nursing employees were RNs and over 30 percent were CNAs. Skilled nursing facilities and home health agencies responding to our survey used a different

skill mix of nursing personnel than do the other groups, which are more heavily populated by registered nurses. Nearly two-thirds of nursing employees in SNFs are unlicensed assistive personnel, as are 44 percent of home health nursing employees. Approximately one percent of the nursing staff of hospitals and psychiatric hospitals are Advanced Registered Nurse Practitioners (ARNPs).

Table 2. Percentage of Nursing Personnel Employed by Respondents in Six Industry Groups

	Hospitals	SNF	Home Health	Public Health	Hospice	Psychiatric Hospital
RNs	78.1	11.4	39.4	67.4	49.3	47.5
ARNPs	0.7	0.0	0.0	0.0	0.0	1.2
LPNs	4.9	26.6	16.7	13.5	20.1	13.8
CNAs	16.3	62.1	43.9	19.1	30.6	37.5
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: Percentages include both permanent staff (full and part-time) and temporary agency personnel. Hospitals were asked to report Advanced Registered Nurse Practitioners (ARNPs) separately from RNs. Throughout this document, CNA is used to refer to unlicensed assistive personnel functioning as nurse aides. The titles used for these personnel vary by industry.

In addition to varying in skill mix, the six industries also vary in staff size and in use of per diem staff and temporary agency personnel. Table 3 presents the average nursing staff sizes in each of the six industry groups. Clearly, hospitals have the largest nursing staff sizes, with around 520 licensed nurses working in each facility, on average. Skilled nursing facilities and home health agencies have considerably smaller staff sizes. Around 40 licensed nurses work in each SNF, on average, and home health agencies average only 24 licensed nurses. These differences in staff size must be considered when interpreting staffing metrics based on percentages, since a single vacancy or turnover can drastically inflate those metrics when staff sizes are very small.

Table 3. Average Nursing Personnel Staff Sizes by Industry and Personnel Type

	RNs	ARNPs	LPNs	CNAs	% Temporary Staff	% Part-time Employees
Hospitals	485.8	4.5	30.6	102.5	8.5%	13.7%
SNF	12.2		28.5	66.6	7.5%	17.2%
Home Health	16.8		7.2	18.8	52.8%	43.7%
Public Health	34.2		6.9	9.7	8.9%	10.7%
Hospice	118.6		48.4	73.5	20.4%	12.9%
Psychiatric Hospital	44.1	1.3	12.8	34.8	23.2%	9.8%

Notes: Averages include both permanent staff (full and part-time) and temporary agency personnel.

The two final columns in Table 3 also provide evidence that the business models of the six industry groups vary substantially in the percentage of temporary staff and part-time employees. More than one-fifth of hospice and psychiatric hospital personnel are temporary. Conversely, more than half of the personnel counted within home health agencies were per diem staff or temporary agency personnel, and almost 44 percent of their employees were part-time. While hospitals, skilled nursing facilities, and public health departments use temporary staff to supplement permanent staff when carrying a larger workload or larger number of vacancies, many home health agencies in Florida use temporary

personnel exclusively. Twenty-one percent of home health agencies responding to our survey reported they use mostly per diem, contract, or agency nurses. This business model complicates efforts to measure current demand for additional nurses, since "vacancy" is not typically used to describe demand for additional temporary or agency nurses.

Vacancies and Vacancy Rates

Respondents were asked to provide information on the number of full vs. part-time employees as well as full vs. part-time vacancies they had on June 30, 2009. This information was used to estimate the statewide total number of vacancies in each industry and personnel type.[8] The estimated number of vacancies can be used to understand how many *individual nurses* are currently demanded by nurse employers in the state.

We estimate that the six industries included in our study had over 6,800 vacancies for RNs on 06/30/2009 (Table 4). Additionally, we estimate there were over 1,400 LPN vacancies and 4,000 CNA vacancies, approximately 60 percent of which are in skilled nursing facilities. These figures reflect a substantial need for nursing personnel in Florida, despite the recession, and they are likely underestimates of the true number of nursing vacancies because not all nurse employers (such as physicians' offices or prisons) were included in the study. Vacancies and growth for Advanced Registered Nurse Practitioners (ARNPs) could not be estimated for non-respondents because the number of ARNPs employed within these industries was too small.

Table 4. Estimated Vacant Positions as of June 30, 2009

	RN Vacancies	LPN Vacancies	CNA Vacancies
Hospitals	4,840.0	185.9	969.3
Skilled Nsg. Facilities	572.9	745.5	2,338.3
Home Health	962.9	364.9	476.6
Public Health	49.1	28.3	10.5
Hospice	299.7	86.8	135.5
Psychiatric Hospital	82.3	6.1	117.0
Total (all groups)	**6,806.9**	**1,417.4**	**4,047.1**

Full-time equivalent (FTE) position vacancy rates were computed from the reported number of vacancies. Full-time equivalent vacancy rates are the standard metric used by workforce planners to understand the amount of nursing labor that is currently demanded by employers. Position vacancy rates represent the proportion of all FTE positions, by industry group and personnel type, that were vacant as of June 30, 2009. The position vacancy rate removes the influence of individual facilities with very high vacancy rates because filled and vacant positions are summed across facilities before the rate is constructed.
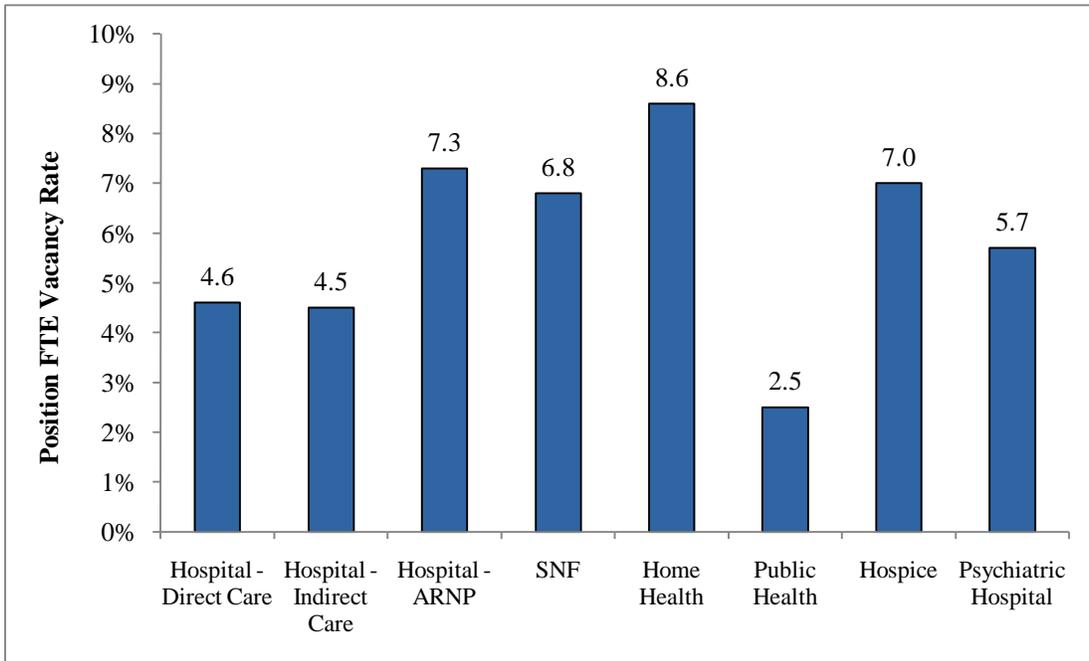
Figure 1. RN Full-Time Equivalent Vacancy Rates by Industry as of June 30, 2009

RN FTE vacancy rates for each industry are presented in Figure 1. Hospitals and public health departments had the lowest RN vacancy rates. Skilled nursing facilities, home health agencies, and hospices reported RN vacancy rates between 6.8 and 9 percent. Although RN vacancy rates have decreased from 3 to 6 percentage points since our 2007 survey,[1] the vacancy rate pattern remains the same with skilled nursing, home health, and hospice having the highest vacancy rates. Our RN hospital vacancy rates are comparable to the 4.0 percent vacancy rate for RNs reported by the Florida Hospital Association (FHA) in 2009.[9]

LPN and CNA FTE vacancy rates are presented in Figure 2. Most notably, home health and hospice report the largest vacancy rates for LPNs, 8.8 percent and 6.3 percent respectively. Psychiatric hospitals and home health reported the highest vacancy rates for CNAs, 8.9 percent and 6.7 percent respectively. Again, there was a decrease in the vacancy rates compared to our 2007 survey results.[1] For LPNs, the hospital vacancy rate decreased 4.2 percentage points, the SNF vacancy rate decreased 6.2 percentage points, and the home health vacancy rate decreased 12.6 percentage points. CNA vacancy rates decreased 5.6 percentage points in hospitals and 8.7 percentage points in home health agencies.
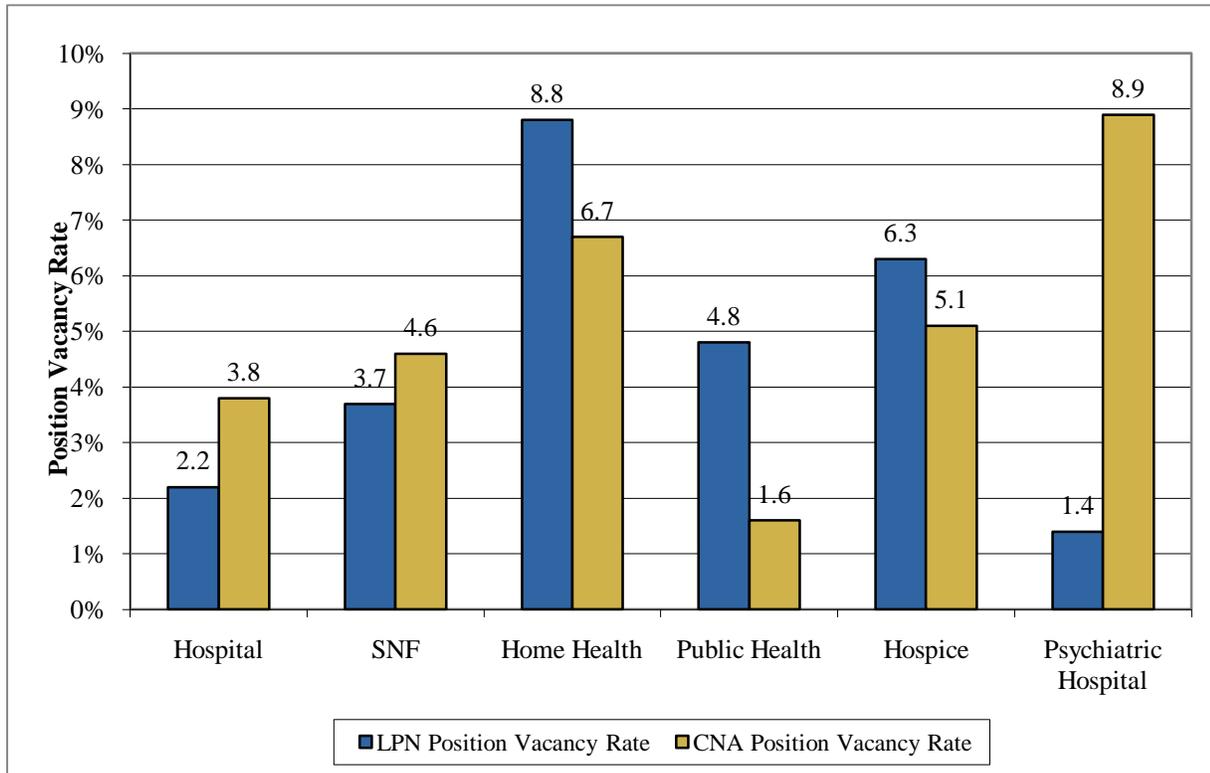
Figure 2. LPN and CNA Full-Time Equivalent Vacancy Rates by Industry as of June 30, 2009

The vacancy rates reported by our respondents may underestimate the *need* for nursing personnel. Budgeted positions reflect *demand* for nurses: the number of nurses businesses are willing to employ given the wages they must pay those nurses. In many cases, businesses are unable to afford the number of budgeted positions they would consider ideal for the provision of safe patient care. We asked respondents whether actual need was greater, equal, or less than the number of budgeted positions they held. As Table 5 shows, many respondents reported unmet need for budgeted positions. One-third of responding hospitals reported unmet need for RNs (in direct care), as did 54.5 percent of psychiatric hospitals and 70 percent of public health departments. Thus, while vacancy rates for RNs were lower in these industries, this may occur because the number of budgeted positions is not keeping pace with perceived need for personnel.

Table 5. Percentage of Respondents Reporting Unmet Need for Budgeted Positions

	RNs	ARNPs	LPNs	CNAs
Hospitals - Direct Care - Indirect Care	34.6% 6.9%	5.5%	5.6%	23.5%
SNF	27.4%		15.9%	15.4%
Home Health	33.8%		20.0%	14.5%
Public Health	70.0%		34.2%	29.4%
Hospice	23.5%		17.7%	17.7%
Psychiatric Hospital	54.5%	14.3%	9.1%	10.0%

Separations and Turnover Rates

Turnover is not as directly associated with a nursing shortage as are vacancies and unmet need, but turnover can (and does) result from inadequate staffing caused by a nursing shortage. In these situations, existing staff often work overtime hours or cope with heavier workloads to compensate for unfilled positions. Table 6 details the total number of separations between July 1, 2008 and June 30, 2009 reported by respondents to our survey.

Table 6. Separations Reported by Respondents, 07/01/08-06/30/09

	RNs	ARNPs	LPNs	CNAs	Total (all personnel)
Hospitals	5,587	51	403	1,384	**7,425**
SNF	620		1,462	4,021	**6,103**
Home Health	342		139	265	**746**
Public Health	152		21	34	**207**
Hospice	316		167	187	**670**
Psychiatric Hospital	97	0	36	73	**206**
Total (all groups)	**7,114**	**51**	**2,228**	**5,964**	**15,357**

Notes: Separations include all permanent/regularly scheduled employees, but not temporary, agency, or per diem employees. Separations do not include persons hired but never reporting for work or persons moving from one position to another within the facility.

Although hospitals employed the largest number of nursing personnel by far, their number of reported separations is closely followed by the number of separations from skilled nursing facilities. However, the types of nurses separating from these two industries are vastly different. Two-thirds of separations from responding SNFs were CNAs, consistent with SNF use of unlicensed personnel. In contrast, 75 percent of the hospital separations were RNs. Indeed, RN separations were more prevalent than CNA turnover among all industries but SNFs.

FAWI produces employment projections each year including the number of openings that can be expected due to job growth and separations.[10] In 2009, they estimated that 2,336 job openings for registered nurses and 1,174 job openings for licensed practical nurses would occur each year in Florida (between 2009 and 2017) due to separations. Our study suggests that the number of openings due to turnover is much, much higher than FAWI estimates. Respondents alone reported over 7,000 RN separations and over 2,000 LPN separations – and this excludes non-respondents and industries not surveyed.

Table 7 presents turnover rates by industry group and personnel type. Turnover rates were computed using information on separations between July 1, 2008 and June 30, 2009 along with information on the number of budgeted positions (full and part time counted equally) as of June 30, 2009. Turnover is considered a facility-level phenomenon because it is motivated by facility characteristics and deficiencies. Average turnover rates can be heavily skewed by facilities with very high (or very low) turnover rates. For this reason, both average and median facility rates are presented in Table 7. The median turnover rate describes a rate at which half of facilities fall below the rate and half fall above the rate, which removes the influence of outliers.

Table 7. Turnover Rates Reported by Respondents, by Industry Group and Personnel Type

	RNs		ARNPs		LPNs		CNAs	
	Average	Median	Average	Median	Average	Median	Average	Median
Hospitals - Direct Care - Indirect Care	16.3 13.0	14.3 8.3	18.8	2.6	22.1	15.2	23.3	19.5
SNF	42.3	30.6			37.9	29.2	35.2	28.1
Home Health	33.1	18.2			23.9	0.0	55.3	2.6
Public Health	10.0	8.7			8.3	0.0	7.3	3.1
Hospice	32.9	20.3			31.9	27.0	26.3	22.2
Psychiatric Hospital - Direct Care - Indirect Care	29.6 30.1	15.0 2.8	0	0	39.4	22.5	30.4	20.0

Notes: A zero percent median indicates that at least half of facilities had a zero percent turnover rate. The much higher average rates indicate the presence of outliers that skew the average higher.

Among hospital RNs in direct care – the largest personnel category included in our survey in terms of budgeted positions reported – median turnover was 14.3 percent over the course of one year. The median turnover rate for RNs was about 30 percent in SNFs, 20 percent in hospices, and 15 percent in psychiatric hospitals. Skilled nursing facilities had the highest median turnover rate among all categories of nurses, 29.2 percent for LPNs and 28.1 percent for CNAs. Clearly, turnover in Florida's skilled nursing facilities is at problematic levels. These findings are not limited to our survey. Nursing homes report turnover rates on a quarterly basis to AHCA, and in 2008 the statewide facility turnover for licensed nurses was 31.2 percent.[11]

These findings illustrate the importance of nurse retention efforts. Turnover costs – which include the cost of advertising, recruiting, and hiring for a position as well as orienting a new employee and productive capacity lost during the process – can be as high as a year's salary for RNs. Beyond the financial costs of turnover, high rates of staffing instability cause heavier workloads and increased dissatisfaction among existing personnel. They may also compromise the continuity and quality of care received by patients.

Projected Two-Year Growth in Budgeted Positions

We asked respondents to estimate the total number of positions they would budget through 2011. About 60-75 percent of survey respondents answered this question. The response rate for this question was much lower than for other questions, likely because industries have difficulty estimating their future hiring needs given the current state of the economy and the slowing of Florida's population growth. We used the respondents' answers to estimate the number of new nursing personnel, and the percentage of staffing growth, that can be expected over the next two years throughout Florida.[8] It should be noted that these expected positions reported by respondents reflect the desire of facilities to expand but may not reflect the reality of expansion in an era of nursing shortage and budget constraints. Facilities may revise their expectations if current economic pressures change or if the prevailing wages of nursing personnel increase considerably.

Table 8 shows the expected growth in nursing jobs through 2011 when data are estimated for non-respondents. If non-respondents expect similar growth as their respondent counterparts, over 8,200 RN jobs, more than 3,100 LPN jobs, and more than 5,000 CNA jobs may be generated over the next two years by the six industry groups included in our study.

Table 8. Two-year Estimated Growth in Positions through 2011

	New RN Positions	New LPN Positions	New CNA Positions
Hospitals	3,075.4	285.3	730.5
Skilled Nsg. Facilities	459.7	414.4	1,195.7
Home Health	4,138.9	2,210.2	2,669.2
Public Health	122.9	38.7	68.2
Hospice	308.1	193.1	285.7
Psychiatric Hospital	152.0	36.8	74.7
Total (all groups)	**8,256.9**	**3,178.4**	**5,023.8**

FAWI estimates that the average annual "new job" openings (those created by job growth, not turnover) will be 4,192 for RNs, 1,195 for LPNs, and 2,379 for CNAs between 2009 and 2017.[10] Our imputed estimate for RN growth in one year is 4,128 – very close to FAWI's estimate. However, our imputed estimates for one year of growth for LPNs (1,589 per year) and for CNAs (2,512 per year) were slightly higher than FAWI's estimates. FAWI also estimates the *percentage* growth expected in nursing positions. FAWI estimates an annual increase in nursing jobs of 2.80 percent for RNs, 2.63 percent for LPNs, and 2.59 percent for CNAs.

Figure 3 shows the one-year percentage increase[i] expected by survey respondents, within industry and personnel type. As the figure shows, hospitals expect to increase their RN staffs by about 2.2 percent. Home health and hospice both expect to dramatically increase their nursing staff. Home health agencies expect to increase their nursing staff by 35 to 41 percent. Hospices expect to increase their RN staff by 19 percent, LPNs by 40 percent, and CNAs by 27 percent.

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[i] These percentages were constructed by summing the total number of new positions expected through 2011, and the total number of positions in 2009 (baseline), computing the percentage growth and dividing by two.
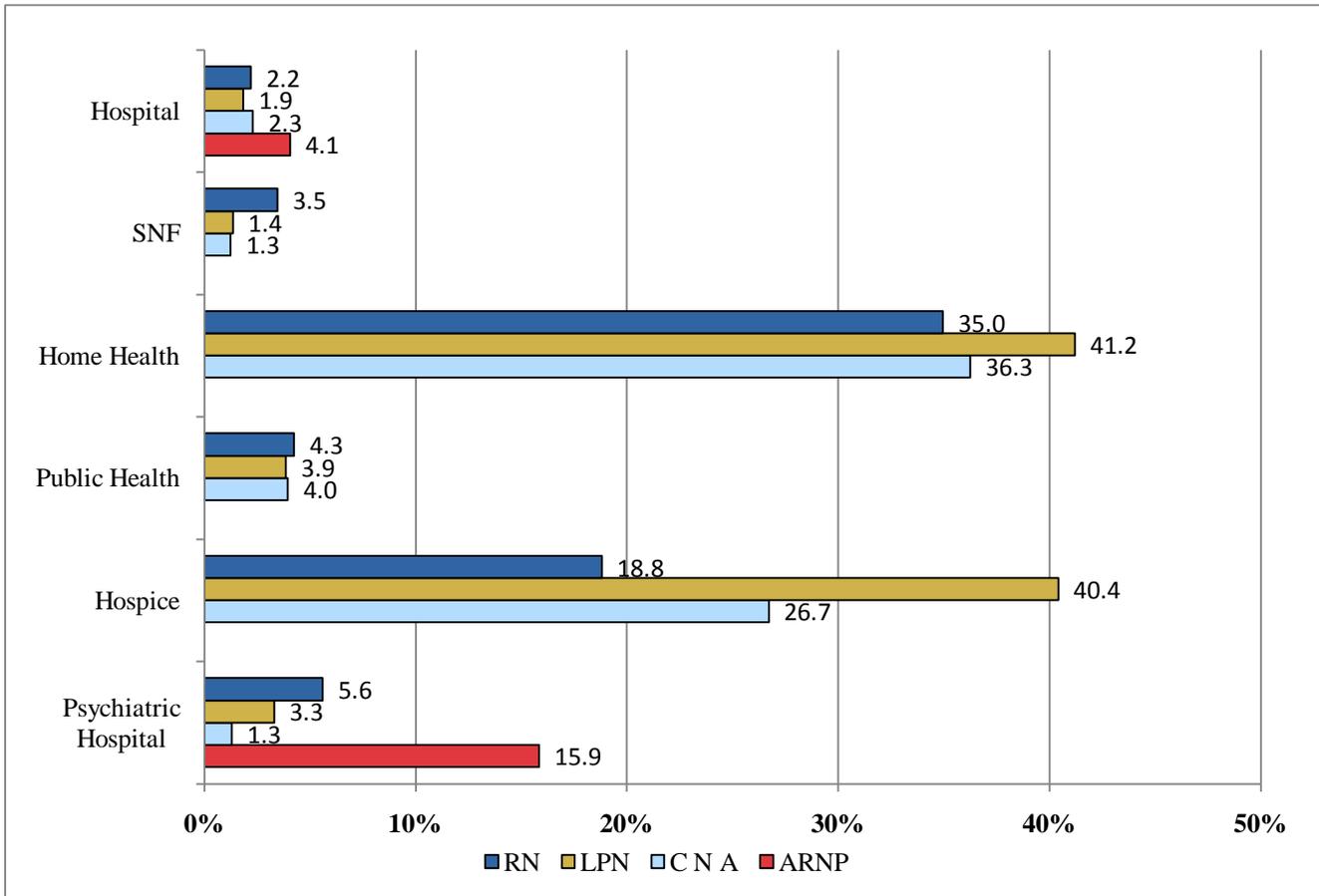
Figure 3. Percentage Growth in Budgeted Positions Expected, 2009-2010

Overtime and Outside Staffing Expenditures

Two strategies health care providers use to deal with inadequate staffing due to vacancies are overtime for permanent staff and the employment of temporary agency personnel. We asked respondents to estimate the percentage of their nursing personnel budgets spent on these two strategies. The average amounts spent on each strategy are presented for each industry in Figure 4.

Psychiatric hospitals spent the largest percentage on overtime pay (10.7%), closely followed by skilled nursing facilities (9.0%). Hospices and home health agencies spent the largest percentage on outside staffing, 8.1 percent and 8.3 percent respectively. Hospitals and SNFs spend a much larger percentage on overtime pay than on outside staffing.
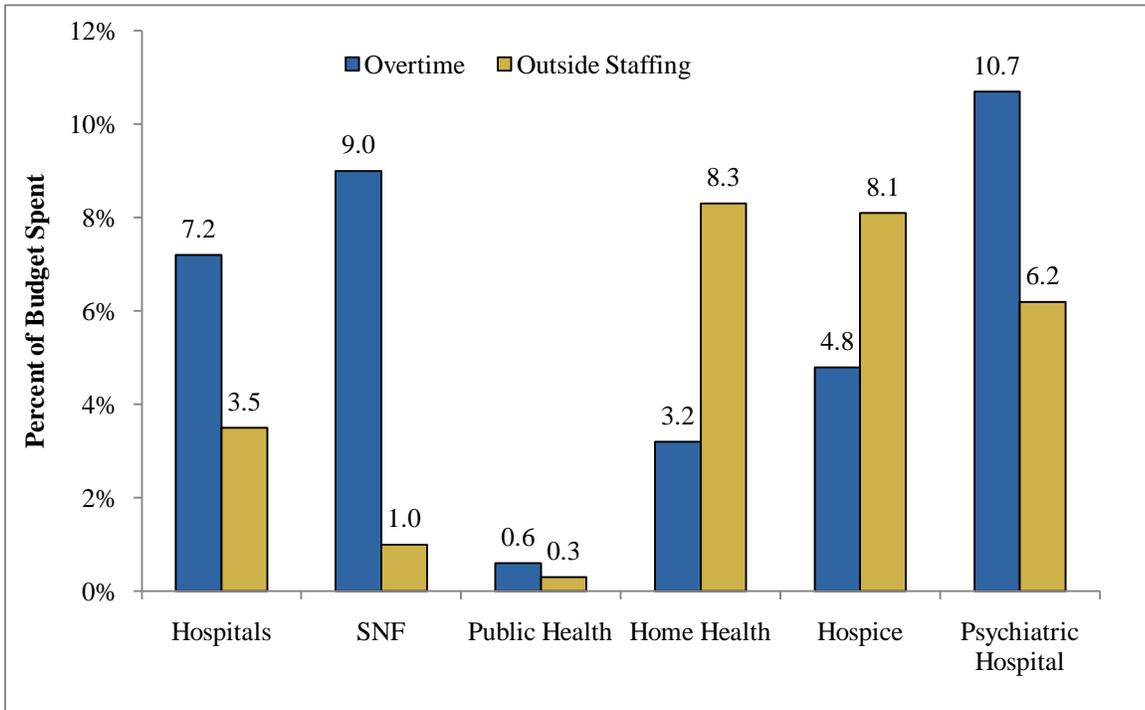
Figure 4. Average Percentage of Nursing Personnel Budget Spent on Overtime and Outside Staffing, Reported by Respondents

Clinical or Administrative Specialties in High Demand

We asked employers about their experiences in recruiting and filling positions in a number of clinical and administrative specialty positions. We also asked about employers' future demand for personnel with these specialties. Because the six industry groups we included employ nurses with very different specialties, surveys were tailored to each industry. Psychiatric hospitals were not included in this table because the number of responses was fewer than 3. The complete list of specialties for each industry can be found in the survey instruments and data tables in the corresponding technical documentation.[8]

Table 9 provides the top five most difficult specialties to fill in each industry group. The rankings are based on the average number of weeks it took to fill positions in each specialty. Interestingly, Administrators/Supervisors took the top spots in four of the five industry groups and nurse practitioners were difficult to fill among all groups. Infection control nurses were the most difficult to fill specialty in public health and hospice. In hospitals, cath lab nurses and adult critical care nurses were also difficult to fill positions. SNFs needed rehabilitation nurses, minimum dataset nurses, and administrators. Although the number of psychiatric hospital respondents was quite small, they reported Psychiatric/Behavioral RNs and LPNs were difficult positions to fill.

Table 9. Top Five Most Difficult Specialty Positions to Fill, by Industry

Rank	Hospitals	SNF	Home Health	Public Health	Hospice
1	Nurse Administrators	Rehabilitation RNs	Nurse Administrators	Infection Control and Quality Control Nurses	Infection Control Nurses
2	Cath Lab	Minimum Data Set Nurses	MSN-prepared CNS	Nurse Practitioners	Nurse Practitioners
3	Adult Critical Care	Administrators	QI Nurses	Nurse Supervisors	Patient Care Coordinators
4	Nurse Practitioners	Family / Adult NPs	NPs (all types)	Staff RNs	Quality Control Nurses
5	Unit Managers	QI Nurses	Case Managers	Case Managers	Home Hospice Staff RNs

Notes: Rankings are based on reports of the average number of weeks it took to fill open positions in the specialty.

While nurses with specialized experience and administrators are most difficult to recruit among the industry groups, the most growth in positions for four of the groups will occur for staff nursing positions and CNAs. Table 10 presents the top five specialties for which growth in budgeted positions is expected over the next two years. Staff RNs will be needed by SNFs, home health agencies, public health agencies, and hospices. All of these groups, with the exception of public health, also expect to increase the employment of CNAs and LPNs. Public health departments also will need nurse practitioners, case managers, community outreach and school nurses. Because they offer more specialized care, hospitals were given a longer list of staff nursing positions. Many expected growth for adult and pediatric critical care and emergency nurses. Psychiatric hospitals also reported a need for psychiatric RNs.

What is clear based on respondent reports of difficult-to-fill positions and high-growth positions is that employers demand nurses with *experience* – either in clinical specialties or in the industry in which they will work.

Table 10. Top Five Growth Specialties Over the Next Two Years

Rank	Hospitals	SNF	Home Health	Public Health	Hospice
1	Adult Critical Care	Staff RNs	Home Care Staff RNs	Staff RNs	CNAs
2	Pediatric Critical Care	CNAs	LPNs	Nurse Practitioners	Home Hospice Staff RNs
3	Emergency Department	LPNs	CNAs	Case Managers	LPNs
4	Labor and Delivery	Rehabilitation	Case Managers	Community Outreach Nurses	Patient Care Coordinators
5	Neonatal Critical Care	Minimum Data Set Nurses	Infusion specialists	School Nurses	Inpatient Staff RNs

Notes: Rankings are based on the percentage of respondents reporting that they would require more personnel with the specialty over the next two years.

Conclusions and Recommendations

The 2009 Nurse Employer Survey has provided a much needed update on the demand for nurses among Florida's employers. The nation's economic recession has had quite an impact on nurse employers, with many changes evident since our last survey. First, we have found an easing of the nursing shortage; however, not nearly as much as we expected based on anecdotal reports regarding the recession's effects on nurse employment. Demand for nurses has decreased somewhat, based on the estimated number of nursing vacancies in the state. In 2007, we estimated[2] that there were 10,437 RN vacancies statewide; by comparison our 2009 estimated data show there were 6,807 RN vacancies statewide. Similar declines in the estimated number of statewide vacancies were seen in LPN and CNA positions. Correspondingly, FTE vacancy rates for nurses have also declined since 2007. Employers reported an FTE vacancy rate of 4.6% for RNs in employed in direct care in hospitals, but this rate was almost twice as high in 2007 (9.5%).[1] Vacancy rates showed similar declines from 2007 across all types of nurses in all industries surveyed.

Second, we found that estimated growth in new nursing positions is still strong, but the estimated numbers of future positions are smaller than projected in our previous report. Based on our 2007 data, we estimated that 6,459 new RN positions and 1,840 new LPN positions would be created in 2008.[2] Our current estimations indicate there will be 4,126 new RN positions and 1,589 new LPN positions created in 2010. Likewise, our CNA job growth estimates are slightly lower for 2010 (2,512) compared to 2008 (2,716). Estimates of nursing job vacancies and strong expected growth over the next 2 years indicate that we continue to expect long-term demand to increase in response to long-term trends of an aging population needing more care. The healthcare industry continues to grow and remains a strong source of new jobs, even in an economic recession, as evidenced by the projected demand for nurses over the next two years.

Third, average turnover rates were lower in 2009 across all industries and nurse types, and the average percentage of the nursing budget spent on overtime and outside staffing also decreased. Lower turnover rates compared to 2007 are not surprising, given that in uncertain economic times people are much more likely to stay at a job than to search for a new position. Interestingly, both home health and hospice reported a decreased percentage of the nursing budget spent on overtime, but an increase in spending on outside staffing.

Demand remains strong for specialized nursing positions, such as supervisors and administrators, nurse practitioners, rehabilitation, and infection control/quality control nurses. Demand is not as strong for newly graduated nurses. When employers have a larger pool of nurses looking for employment, as is true during an economic recession, they often choose the more experienced person for open positions. As the economy continues to slowly improve, the nursing shortage will be exacerbated as older, experienced nurses who returned to work or delayed retirement leave the profession. Furthermore, the Center's education report shows that the number of nurse graduates has stagnated since 2008, which will continue to feed our long-term nursing shortage.[12]

A number of research, advocacy, and policy recommendations flow from the results of this study. Each is intended to better understand the long-term impact of the current economic recession and the projected nursing shortage.

Recommendation #1: The Center should conduct further analysis of the 2009 employer survey data and continue to replicate the study biennially.

The very rich employer survey data we collected must be more fully analyzed in order to provide a clearer picture of the demand for nurse employment. Future reports will focus on the following areas:

- Industry-specific Reports – The data will be used to create six industry-specific reports detailing current nurse demand so that employers can compare their specific data to the statewide data for that employment sector.
- Longitudinal Cohort Report – The cohort of nurse employers that answered both our 2007 and 2009 surveys will be analyzed to ascertain employment changes within this specific group.
- Quantification of Open-Ended Items – Respondents provided rich textual data in response to our open-ended question about the how the current economic recession has affected their nurse staffing and hiring practices and which specialized skills are most needed. This narrative data will be quantified by coding responses into themes so that the most relevant information for each industry can be identified.
- Long-range Forecasting – The data from this study will be used to inform long-range forecasts of nurse demand and nursing shortage in Florida.

Replication of the employer survey every two years will allow the Center to track the development of the nursing shortage and fine-tune long range forecasts.

Recommendation #2: Ways to improve employer participation in demand surveys must be explored.

Surveying nurse employers is critical for quantifying the nursing shortage. Without data from employers, we would not have accurate statistics on nurse employment, turnover, or projected growth – all of which are crucial for workforce planning. Unfortunately the response rates for our 2009 employer survey were lower than we had hoped. Higher survey response rates generally translates into more complete and accurate data, thus better quantification of the nursing shortage. Collaboration with the Agency for HealthCare Administration (AHCA), the regulatory body licensing and regulating most healthcare facilities in the state, would be one method of increasing response rates through incorporating the employer survey into the license renewal process.

Recommendation #3: Emphasis must remain on retaining the current nursing workforce.

Study results demonstrate that turnover of existing nurses is highly problematic. Turnover is influenced by employee dissatisfaction with the work environment and also by the exodus of older, experienced nurses from the workforce as they reach retirement age. Increasing the number of new nurses alone will not satisfy the healthcare system's need for experienced nurses with specialized skills.

There is high demand among all surveyed industry groups for experienced nurses. They also fill an important role as mentors and teachers to new graduate nurses. However, many of these older, experienced nurses who recently returned to work may leave once the economy stabilizes, as RNs age 51 and over comprise an estimated 44 percent of the RN population.[14] Retaining the aging nurse workforce requires consideration of the physical demands of nursing work and the multigenerational workforce. Work schedules, patient loads, and some physical demands (including patient lifting) will

have to be modified on a larger scale in order to accommodate an older nurse workforce. The effort is likely to be rewarded by nurses working later into their lives, thus preserving the valuable experiential knowledge developed over a nursing career. In addition, employers must recognize the very different values espoused by the different generations within the nursing workforce. Older and younger nurses alike must be educated about generational differences, and employers must learn how to draw from the strengths of each generation.

More generally, retaining the existing workforce requires careful attention to the broader work environments of today's nurse. Although individual nurse employers are experimenting with improvements to the work environment, a global approach backed by scientific evidence is underdeveloped. Funding for research and program implementation, such as the Center's Retention and Recruitment Funded Initiatives Program, must be continued and increased in scale.

Recommendation #4: Access to and quality of care must be carefully monitored as the nursing shortage intensifies, and both should be analytically linked to the nursing shortage to establish causality.

The ultimate consequence of a nursing shortage is reduced access to healthcare and/or reduced quality of healthcare. As noted previously, employers will adapt to the shortage by reducing services or working existing employees too hard for the provision of safe patient care. A number of researchers in academic, government, and philanthropic settings are studying issues related to nurse staffing and quality of care. This research, when considered alongside workforce demand data, can provide a clearer indication of the extent and consequences of a nursing shortage. Funding for research related to healthcare access and quality should be prioritized by grant-makers and government entities, but the research must be conducted *in consideration of the nursing shortage*. Too often such studies treat quality of care as though it occurs in the vacuum of a single unit or facility. A more global approach is required which recognizes the impact of regional and industry-specific nursing shortages on access and quality of care.

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