Louisiana's Nursing Workforce Demand Report 2014
Louisiana Center for Nursing

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Executive Summary

According to the Bureau of Labor Statistics' 2012-2022 Employment Projections (2015), employment of registered nurses (RNs) is projected to grow 19 percent, faster than the average for all occupations. Growth will occur for a number of reasons, including an increased emphasis on preventative care; growing rates of chronic conditions, such as diabetes and obesity; demand for healthcare services from the baby boomer population, as they live longer and more active lives; and the Affordable Care Act, which is increasing the number of persons that are insured and seeking healthcare providers and services. The RN workforce is expected to grow from 2.71 million in 2012 to 3.24 million in 2022, an increase of 526,800. The Bureau also projects the need for 525,000 nurses to replace those exiting the workforce, bringing the total number of job openings for nurses due to growth and replacement to 1.05 million by 2022. There is a growing concern about the ability of our nation to produce the number of new nurses that will be needed to fill the demand, because nursing schools across the country are struggling to expand capacity, faculty members are retiring, and the qualified faculty needed for their replacement appears to be dwindling (AACN, 2014).

If we hope to improve health and healthcare outcomes in our nation and state, it is imperative that we are proactive in assessing the current and future demand for nurses. In 2014, the Louisiana Center for Nursing launched the state's second Nurse Employer Survey to determine the demand for registered nurses (RNs), advanced practice registered nurses (APRNs), licensed practical nurses (LPNs), and nursing assistants (NAs) in Louisiana based on data obtained from employers. Major healthcare industries employing the vast majority of nurses such as hospitals, long term care (LTC) facilities, home health agencies, hospices, and public health facilities were surveyed to gather information about vacancy rates, turnover rates, and growth rates for the various types of nursing personnel. Additional questions related to the employer's preference for hiring baccalaureate prepared RNs, hiring of new graduates, pay differentials, and supporting nurses going back to school were added to the 2014 survey. A total of 1,281 surveys were sent to actively functioning health care facilities across the state and 499 were returned resulting in an overall 39 percent response rate.

In 2010 when the first Nursing Workforce Demand Study was conducted, the nation was just beginning to recover from a significant recession. The economy was unsettled during that period. Employers were downsizing, jobs were not secure, and household incomes decreased significantly due to the loss of income by one, or in some situations, both spouses. Many that planned to retire had to continue to work. June 2014 marked the five year anniversary of the end of the great recession that began in 2007, and although the economy has not returned to its pre-recession state, it is looking much better. Findings from the current study are in line with an improving economy.

Highlights from the 2014 Nurse Employer Survey:

➢ There was a significant increase in unmet demand for RNs between 2010 and 2014, driven largely by an increase in the number of direct care RN vacancies in hospitals. When the current unmet demand for personnel (vacancies) is combined with anticipated

growth, the additional 2015 demand for all types of nursing personnel in Louisiana is estimated at 8,983.

➢ Of all healthcare industries surveyed, psychiatric hospitals, long term care (LTC), public health, and hospice had the highest vacancy rates for direct care RNs, 13.8 percent, 11.9 percent, 11.7 percent, and 10.9 percent, respectively. High vacancy rates are generally associated with a nursing shortage. These industries are struggling to attract qualified nurses, and though it may not indicate a statewide shortage, it certainly indicates a shortage of personnel qualified and willing to work in these industries.

➢ Between July 1, 2013 and June 30, 2014 (or the most current report year), there were an estimated 6,602 RN separations, 3,509 LPN separations and 9,817 NA separations. The majority of the separations for RNs were within hospitals, whereas the majority of the separations for LPNs and NAs were in LTC/SNF and hospitals.

➢ The median turnover rate for direct care RNs in hospitals, the largest personnel category identified in the employer survey in terms of budgeted positions, was 13.8 percent over the course of one year.

Psychiatric hospitals had the highest median turnover rate for direct care RNs (56.6%) and NAs (45.8%). The largest median turnover rate for LPNs occurred in LTC/SNF (33.3%).

➢ The utilization of temporary nursing staff was up in several industries, which is also consistent with an improving economy and increased difficulty in hiring permanent staff. In 2014, there was a substantial increase in the percentage of temporary staff utilized by the public health system when compared to 2010. Approximately 43% of the public health system nursing personnel were temporary employees in 2014.

➢ The healthcare industries included in the current study reported that they expected a substantial increase in new direct care RN positions over the next year. In particular, elder care settings such as hospice and home health expect their direct care RN positions to grow at a faster rate than acute care hospitals over the next year – a sign that the aging population is anticipated to increase demand in settings offering specialized aging care.

Recommendations

➢ Continue to support Louisiana's nursing programs through federal, state, and private funding to ensure that there will be a continuous pipeline of new RNs available to meet the ongoing demand for nurses in Louisiana.

➢ Academic nurse leaders across all schools of nursing should work together to increase the proportion of nurses with a baccalaureate degree by partnering with education accrediting bodies, private and public funders, and employers to ensure funding, monitor progress, and increase the diversity of students to create a workforce prepared to meet the demands of diverse populations across the lifespan (IOM Report on the Future of Nursing, 2011).

➢ Seek funding to develop nurse residency programs that will prepare new graduates for successful transition into practice in both traditional (i.e., acute care) and nontraditional settings (i.e., LTC/SNF, home health).

➢ Provide nurses that are interested in taking on leadership positions within the various healthcare industries with the advanced education and training needed to successfully function as a leader.

➢ Work with healthcare industries that are experiencing large turnover rates to develop a plan of action to increase retention of nurses within their facilities, thereby decreasing the cost associated with high turnover rates.

➢ Support the Office of Public Health in securing state funding to fill permanent direct care RN staff positions.

➢ Develop nurse demand snapshots, or one-pagers, for each type of healthcare industry surveyed, making the information readily available to employers, policy makers, and other interested stakeholders.

➢ Repeat the Nursing Workforce Demand Study biennially for healthcare industries that employ the majority of nurses to allow LCN to track trends related to vacancy rates, turnover rates, and expected growth rates.

➢ Utilize findings from the Nursing Workforce Demand Study and the Nursing Education Capacity and Supply Report, to update the assumptions in Louisiana's Statewide Multi-Regional Nursing Workforce Forecasting Model.

Acknowledgements

Demand for Nurses in Louisiana: Results of the 2014 Nurse Employer Survey

Introduction

The questions continue to be: Is there a nursing shortage? If there is an actual or impending nursing shortage, what is being done at the national, state, and regional levels? The responses to these questions will vary depending on who is asked, the geographical location under consideration, and the data sources brought to bear. This report presents data from the 2014 Nurse Employer Survey which will provide Louisiana employers, health policy makers, healthcare workforce planners, nurses in practice, education, regulation, and research, and numerous other stakeholders information about the demand for nurses in Louisiana. It provides a series of critical data points that address the extent of the current Louisiana nursing shortage and clues regarding shortages that may arise in the near future.

There are numerous studies that address nursing workforce supply and demand at national and state levels, each having limitations including very small state level sample sizes on which estimates and projections are made and inferences from national level trends to the state level. Although these reports are informative, especially for states that do not collect their own state-level nursing workforce data, they can also be misleading if not interpreted correctly. It is in this context that a study of nurse demand specific to Louisiana was undertaken.

Having information readily available about nursing workforce supply and demand at the state and regional level is extremely important to the welfare of the citizens of Louisiana. Nurses represent the largest segment of the nation's healthcare workforce, the majority of whom are at the front line providing direct patient care. It would be shortsighted to say that there would be a healthcare crisis without nurses. In all honesty, there would be a collapse of our healthcare system as we know it and every citizen would be directly impacted.

In 2010, the newly established Louisiana Center for Nursing (LCN) conducted Louisiana's first Nurse Demand Study surveying major employers of nurses such as hospitals, long term care facilities, home health agencies, hospices, and public health facilities to determine the demand for nursing personnel (Registered Nurses [RNs], Advanced Practice Registered Nurses [APRNs], Licensed Practical Nurses [LPNs], and Nursing Assistants [NAs] in Louisiana based on data obtained from employers. Findings from the survey established a baseline for tracking vacancy rates, turnover rates, and growth rates for Louisiana's nursing workforce. Findings from the 2014 Nurse Employers' Survey will allow the Center for Nursing to begin the process of tracking changes that have occurred over the past 4 years. Additional questions related to an employer's preference for hiring baccalaureate prepared RNs, hiring of new graduates, pay differentials, and supporting nurses going back to school were added to the 2014 survey. In light of the limited resources that are available to healthcare administrators and policy makers, who have the responsibility of determining who will be hired and what will be funded, the findings from the 2014 Nurse Employer Survey can assist them in making more informed, data-driven decisions based on information gained from the employers of Louisiana's nursing workforce.

Nurse Demand

Nurse demand is an economic concept which describes the number of nurses employers wish to hire at the average or prevailing wage for nurses in the local labor market or geographical area (Lacey, Hoover, McKay, O'Grady, & Sechrist, 2005). Nurse demand data is the most difficult type of data to obtain because it comes directly from employers of nurses. Chief nursing officers, directors of nursing, administrators, and/or human resource personnel are able to provide the most accurate information on nurse demand. These individuals have vital roles to play within their healthcare facilities and are often bombarded with surveys to complete. The Center for Nursing is extremely grateful to those employers who took time out of their busy schedules to complete the 2014 Nurse Employer Survey. It is the Center for Nursing's desire that findings from the survey provide employers, policy makers, and workforce planners with information needed for strategic planning activities within their organizations.

The National Forum of State Nursing Workforce Center's Minimum Dataset for Nurse Demand was used as the template for the 2014 Nurse Employer Survey. Additional items such as the hiring of new RN and LPN graduates, preference for hiring BSN prepared RNs, pay differential for BSN prepared nurses, and nurse residency programs were included in the survey. The Center for Nursing would also like to acknowledge the Florida Center for Nursing for their generosity in sharing their employer surveys with other nursing workforce centers.

Industries Surveyed

Data from the annual Louisiana State Board of Nursing (LSBN) licensure renewal application was used to identify primary employers of nurses, which included hospitals, psychiatric hospitals, home health, hospice, long term care/skilled nursing facilities (LTC/SNF), public health, and select ambulatory care facilities including dialysis centers, ambulatory surgical care facilities, rural health clinics, and federally qualified health care centers. Note that offices of physicians and other healthcare providers were not included in the survey, as these offices typically employ a very small number of nurses.

As in 2010, LCN worked closely with the Department of Health Standards at the Louisiana Department of Health and Hospitals to obtain an updated list of all licensed healthcare facilities in the state. This list was compared with the list obtained in 2010 and it was noted that some of the agencies were no longer in existence, names for some of the agencies had changed, and the contact person's name as listed may have been incorrect. The process that was used in 2010 to contact employers via phone prior to disseminating the surveys was also followed in 2014. Employers were asked to identify the person(s) that would be responsible for completing the Employer Survey along with their contact information. Employers were also asked if they preferred receiving the survey electronically, via US mail, or per fax. It was very important to give employers the flexibility of deciding how they would like to complete the Employer Survey in an effort to increase the response rate.

Launching the Survey

The 2014 Nurse Employer Survey was officially launched on Thursday, September 18, 2014. Over 1,400 surveys were mailed (33%), emailed (65%), and/or faxed (2%) to employers of nurses across the state. There were a small number of employers that requested surveys in two formats (mail and email, or mail and fax). There were also healthcare facilities that had multiple locations but were included under one corporate-level survey. The surveys remained in the field for approximately eight weeks. Follow-up letters and/or emails were sent out every two weeks for the first six weeks. A copy of the Employer Survey was included with the initial mailing and week four follow-up letter. Phone calls were made to those employers who had not responded after six weeks. Although a greater number of completed surveys were returned via email, percentage wise, there was very little difference in response rate based on the type of survey completed; 38 percent of the surveys that were mailed were returned completed; 39 percent of those that were emailed were returned completed, and approximately 24 percent of those that were faxed were completed. Some employers chose to return completed surveys via fax instead of electronically.

Public Health Department
The Office of Public Health provides essential healthcare services to the citizens of Louisiana and in 2014 employed over 300 nurses, the vast majority of which were RNs. The Louisiana Public Health Department uses a centralized system in the administration of health care services to the public which involves controlling staffing at the state level and not by individual public health units/clinics. In an effort to ensure that the most accurate data relative to nurses employed by the Office of Public Health was obtained, one Employer Survey was completed by the Director of Nursing for the Office of Public Health for the 55 public health units across the state.

Response Rates

Overall and Statewide Response Rate by Healthcare Industry

A total of 1,281 surveys were sent to actively functioning health care facilities across the state and 499 were returned resulting in an overall 39 percent response rate (see Table 1), which is comparable to other states that have conducted nurse employer surveys. In 2013, the Florida Center for Nursing reported a 25 percent overall response rate for their 2013 employer survey. In a study conducted by Baruch and Holtom (2008), the average expected return rate for organizational surveys was found to be 35.7 percent. In this study, forty-seven percent of the hospitals that were surveyed returned the employer survey along with forty-two percent of the home health agencies. Over a third of the psychiatric hospitals, long term care facilities, hospices, dialysis centers, and rural health clinics also completed the 2014 Nurse Employer survey.

Table 1. Overall and Statewide Response Rate by Healthcare Industry

Type of Facility	# Facilities Surveyed	Total # Surveys Returned	Return Rate
Hospitals	185	87	47%
Psychiatric Hospitals	42	16	38%
Long Term Care/Skilled Nursing Facility	279	100	36%
Home Health	202	85	42%
Hospice	141	52	37%
Department of Public Health	*1	*1	*100%
Generic –Dialysis Centers	153	56	37%
Generic - Rural Health	123	45	37%
Generic - Ambulatory Surgical Care	83	42	51%
Generic – Federally Qualified Health Care	72	15	21%
Overall Statewide Response Rate	**1,281**	**499**	**39%**

*Department of Public Health – One survey was completed by the Director of Nursing for the 55 Public Health Units in Louisiana.

In 2010, the overall response rate for the Nurse Employer Survey was 46% (Figure 1). Response rates for all healthcare industries were lower in 2014 when compared to 2010 except for ambulatory surgical care, rural health clinics, and federally qualified healthcare centers (FQHCs).
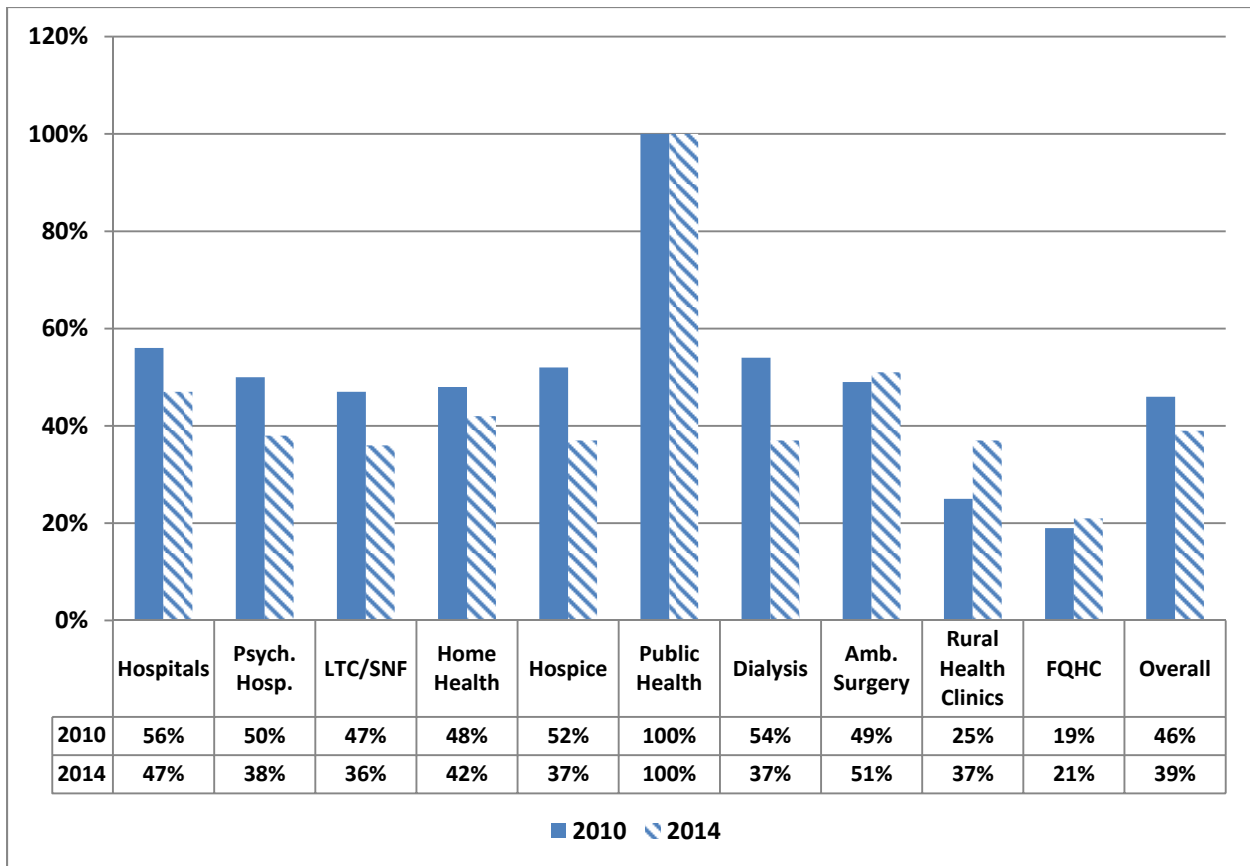
Figure 1. 2010 and 2014 Response Rates by Healthcare Industries. One survey was completed for all Public Health Clinics in 2010 and 2014.

Regional Response Rates

Regional Labor Market Areas (RLMAs) are economically integrated areas in which individuals can live and find employment within a reasonable distance or can feasibly change jobs without changing their place of residence (LWC, 2011). Occupational projections for all occupations are reported by the Louisiana Workforce Commission (LWC) according to the eight RLMAs in Louisiana. A map depicting Louisiana's sixty-four parishes included within the eight RLMAs can be found in Appendix A. Table 2 depicts response rates by health care industry and RLMA. The regional response rates for many of the healthcare industries were sufficient for future stratified data analysis. For example, over forty percent of the hospitals in each of the eight RLMAs completed the Nurse Employer Survey. In contrast, response rates for some of the healthcare industries such as rural health clinics and FQHCs were zero percent in some regions. Response rates for specific healthcare industries within certain RLMAs were not provided in an effort to maintain anonymity in regions where there were small numbers of healthcare facilities.

Table 2 – Regional Response Rates (%) by Healthcare Industry

Setting	Region 1 New Orleans	Region 2 Baton Rouge	Region 3 Houma	Region 4 Lafayette	Region 5 Lake Charles	Region 6 Alexandria	Region 7 Shreveport	Region 8 Monroe
Hospital	16/35 46%	17/35 49%	4/8 50%	14/29 48%	7/12 58%	8/18 44%	11/25 44%	10/23 43%
Psychiatric Hospital	4/10 40%	1/8 13%	*	2/8 25%	2/4 50%	2/4 50%	4/6 67%	*
LTC/SNF	14/46 30%	16/49 33%	5/11 45%	18/43 42%	5/18 28%	12/28 43%	17/51 33%	13/33 39%
Home Health*	17/44 39%	16/42 38%	4/6 67%	9/22 41%	7/14 50%	10/19 53%	11/26 42%	10/28 36%
Hospice	12/32 38%	9/30 30%	1/4 25%	8/17 47%	3/8 38%	5/15 33%	11/17 65%	3/18 17%
Generic - Dialysis	7/45 16%	14/28 50%	2/7 29%	5/20 25%	3/7 43%	4/7 57%	12/24 50%	9/15 60%
Generic - Rural Health	*	7/17 41%	*	5/17 29%	2/10 20%	7/18 39%	8/20 40%	16/31 52%
Generic - Ambulatory Surgical Care	10/25 40%	11/16 69%	3/5 60%	5/13 38%	4/6 67%	2/3 67%	5/9 56%	2/6 33%
Generic – Federally Qualified Health Care	2/29 7%	1/8 13%	3/3 100%	5/7 71%	*	1/9 11%	1/7 14%	2/8 25%
Overall Statewide Response Rate	86/274 31%	101/242 42%	26/55 47%	78/183 43%	37/84 44%	57/127 45%	90/195 46%	77/174 44%

*Response rate by RLMA was not provided in an effort to maintain anonymity in regions where there were small numbers of healthcare facilities. Regional level response rates were not given for Public Health because one survey was completed for all public health units.

Representativeness – Bias Analysis

When the entire population within an industry does not respond to a survey, a bias analysis can be conducted to determine how similar or how different the responders are when compared to non-responders on variables that are available for the full population of facilities. This process helps to determine if the responders are truly representative of the entire population (Burns and Grove, 2009). To reach the conclusion that non-response introduces little bias, bias analysis variables were selected that are known to be related to key metrics from the survey. It was assumed that similarities between respondents and non-respondents on bias analysis variables translate into similarities in responses to survey items. Two variables – number of licensed beds and rurality - were used to determine the representativeness for hospitals, psychiatric hospitals, and long term care facilities. Rurality was used to determine the representativeness for the remaining healthcare industries.

When hospitals, psychiatric hospitals, and LTC/SNF were categorized according to size (small and large), the bias analysis revealed that there was very little difference between the response rate for small and large healthcare facilities, which suggest very little response bias owing to bed size between responding and nonresponding healthcare facilities. When assessing the rurality of responding and nonresponding hospitals and LTC/SNF, the bias analysis revealed very little bias if any based on rurality. In contrast, the bias analysis for psychiatric hospitals revealed that there was a substantial difference between the response rate for rural psychiatric hospitals and the response rate for urban psychiatric hospitals, primarily owing to the underrepresentation of urban psychiatric hospitals. This is important to keep in mind when looking at findings from the employer survey in that there could potentially be significant bias toward psychiatric hospitals in rural areas. The bias analysis for the remaining healthcare industries were based on rurality. There were very little differences in the response rates between rural and urban home health agencies, but differences were noted in response rates between rural and urban dialysis centers owing to the small number of dialysis centers (6) in rural areas when compared to urban areas (147). A bias analysis was unnecessary for public health because one survey was completed for all of the public health units/clinics, representing 100 percent of the public health nursing workforce. For more information on the bias analysis see Appendix B.

Findings from the Nurse Employer Survey

Healthcare facilities that completed the Nurse Employer Survey provided information on 31,205 permanent, regularly scheduled full or part-time nursing personnel across eight industry groups. When 5,899 additional temporary personnel were included, the number of nurses employed by responding healthcare industries totaled 37,104 (Table 3). The Louisiana Workforce Commission's 2012-2022 employment estimates help to put these survey results into statewide perspective (LWC, 2012). Based on LWC's annually revised 2012-2022 long term employment estimates and estimated annual growth, there were 41,270 RNs, 22,930 LPNs, and 37,280 nurse aides, psychiatric and home health aides employed in Louisiana in 2012. Taking into consideration the non-responders (those healthcare facilities that were surveyed, but did not respond) and the health care industries that were not surveyed (i.e., physician's offices, anesthesiology groups, etc.), the current study collected information on approximately 49.2 percent of employed RNs (not including APRNs), 26.8 percent of LPNs, and 25.8 percent of NAs in Louisiana. Therefore, the counts for vacancies, separations, and new jobs to be created through 2015 based on survey respondents will underestimate the totals for Louisiana substantially. Undercounts in the surveyed industries will be addressed using imputed data for vacancies, separations and growth.

Skill Mix

According to the 2014 LSBN Annual Report, the majority of RNs in Louisiana provide direct care to their patients/clients. There were questions on the 2014 Nurse Employer Survey that addressed direct care RNs (RNs spending 74-100 percent of their scheduled workday providing care to patients) and indirect care RNs (RNs spending 25 percent or less of their scheduled work time providing direct care to patients and 75 percent or more of their time performing administrative or supervisory duties).

The skill mix of nurses employed varied by industry group (Table 3). Public health had the largest proportion of RNs among nursing staff (87.2%) followed by ambulatory surgical care centers (74.0%), and hospitals (72.5%). APRNs comprised 32.2 percent of the nursing staff in FQHCs, 23.6 percent in rural health clinics, and 12.8 percent in public health. LPNs comprised 41.2 percent of the nursing personnel employed by rural health clinics, 38.3 percent by FQHCs, 29.9 percent by LTC/SNF and 29.8 percent by home health. As expected, nurse aides (NAs) represented 62.5 percent of the nursing staff in LTC/SNF, 53.0 percent in psychiatric hospitals, and 49.7 percent in dialysis centers.

From this point forward there will be no further analysis of the nursing workforce employed by FQHCs and rural health clinics due to the overall low response rates for FQHCs and the very small number of nurses employed by rural health clinics, which prevents the determination of accurate nursing workforce metrics for these industries.

Table 3. Nursing Personnel Employed by Respondents in Eight Healthcare Industry Groups Including Temporary Agency Personnel (June 30, 2014)

	Hospital	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Ambulatory Care Surgery	Public Health	Rural Health	FQHC	Total
RNs Direct Care	12,439	214	291	739	309	212	355	156	30	14	14,759
RNs Indirect Care	1,423	29	220	297	106	50	29	14	18	4	2,190
Temp/ Agency RNs	2,747	31	56	201	47	22	126	117	2	0	3,349
Total RNs	**16,609**	**274**	**567**	**1,237**	**462**	**284**	**510**	**287**	**50**	**18**	**20,298**
	72.5%	30.3%	7.3%	52.1%	44.9%	48.1%	74.0%	87.2%	15.2%	9.8%	54.7%
NPs	305	15	14	4	63	6	1	14	74	56	552
Temp/ Agency NPs	41	2	6	2	14	0	0	0	4	3	72
CRNAs	216						34				250
Temp/ Agency CRNAs	82						53				135
CNSs	5	0	1	4	1	0	0	1	0	0	12
Temp/ Agency CNSs	1	0	0	1	0	0	0	0	0	0	2
CNMs	2							0	0	0	2
Temp/ Agency CNMs	0							0	0	0	0
Total APRNs	**652**	**17**	**21**	**11**	**78**	**6**	**88**	**15**	**78**	**59**	**1,025**
	2.8%	1.9%	0.3%	0.5%	7.6%	1.0%	12.8%	4.6%	23.6%	32.2%	2.8%
LPNs	1,987	113	2,040	553	112	7	49	2	*130	70	5,063
Temp/ Agency LPNs	556	20	289	155	48	0	5	5	6	0	1,084
Total LPNs	**2,543**	**133**	**2,329**	**708**	**160**	**7**	**54**	**7**	**136**	**70**	**6,147**
	11.1%	14.7%	29.9%	29.8%	15.6%	1.1%	7.8%	2.1%	41.2%	38.3%	16.6%
NAs	2,501	451	4,446	305	275	281	18	2	62	36	8,377
Temp/ Agency NAs	597	28	414	112	53	12	19	18	4	0	1,257
Total NAs	**3,098**	**479**	**4,860**	**417**	**328**	**293**	**37**	**20**	**66**	**36**	**9,634**
	13.5%	53.0%	62.5%	17.6%	31.9%	49.7%	5.4%	6.1%	20.0%	19.7%	26.0%
Total	22,902	903	7,777	2,373	1,028	590	689	329	330	183	37,104

Note: Counts include permanent staff (full and part-time) and temporary agency personnel. Healthcare facilities/agencies were asked to report Advanced Practice Registered Nurses (APRNs) separately from RNs. The four types of APRNs are: nurse practitioners (NPs); certified registered nurse anesthetists (CRNAs); clinical nurse specialists (CNSs); and certified nurse midwives (CNMs). Throughout the document, NA is used to refer to unlicensed assistive personnel functioning as nurse aides, psychiatric aides, and home health aides.

As shown in Figure 3, the greatest increase in the percentage of RNs employed since 2010 was in ambulatory surgical care centers, followed by home health, hospitals, and dialysis centers. The healthcare industry experiencing the greatest decrease in the percentage of RNs employed was psychiatric hospitals.

	Hospital	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	70%	37%	8%	45%	46%	46%	63%	87%
2014	73%	30%	7%	52%	45%	48%	74%	87%

■ 2010   ╲ 2014
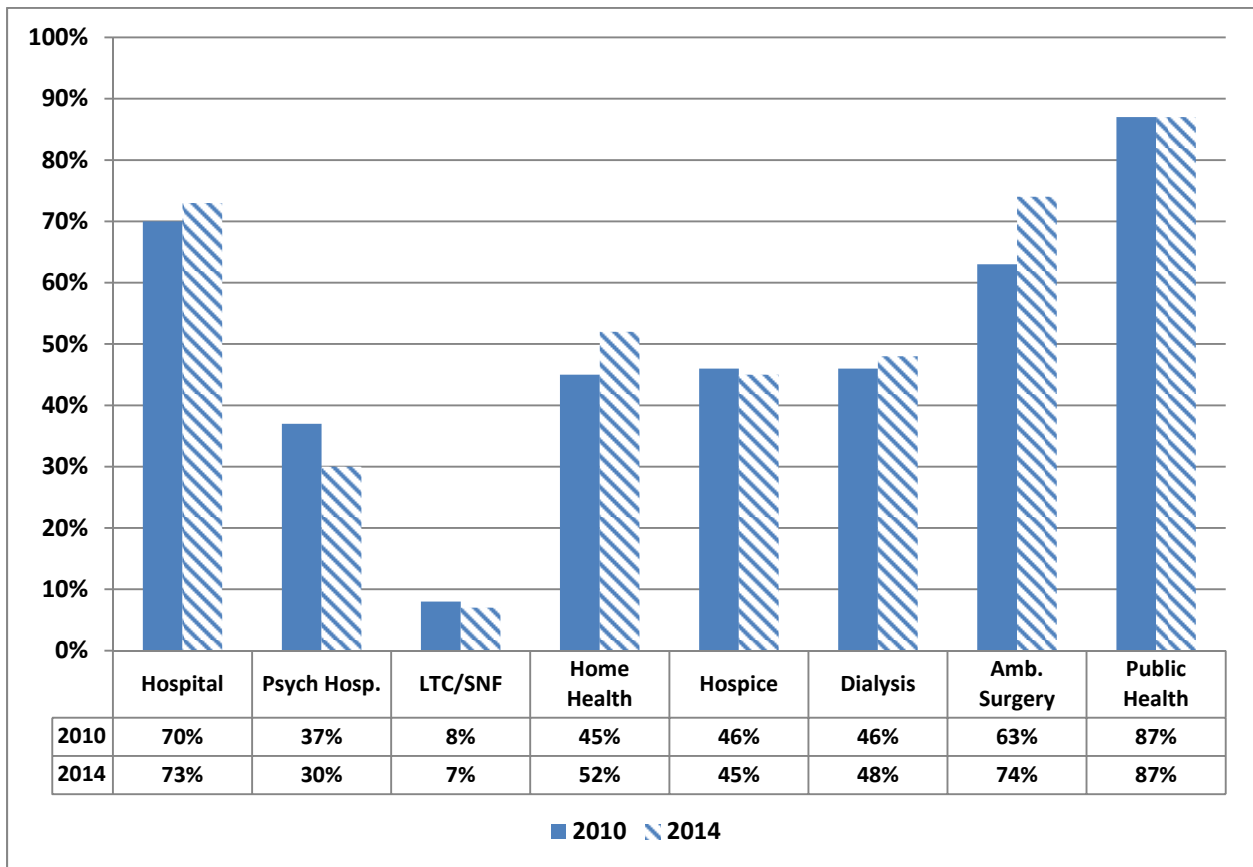
Figure 3. RNs as a percentage of the nursing workforce by healthcare industry

The greatest increase in the percentage of APRNs as a proportion of the total nursing workforce employed occurred in the hospice healthcare industry. The number of APRNs employed by hospice increased from four in 2010 to seventy-eight in 2014, the majority of which were NPs (Figure 4).

	Hospital	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	2.0%	1.0%	0.1%	1.0%	0.4%	1.0%	11.0%	6.0%
2014	3.0%	2.0%	0.3%	0.5%	8.0%	1.0%	13.0%	4.6%

■ 2010 ◹ 2014
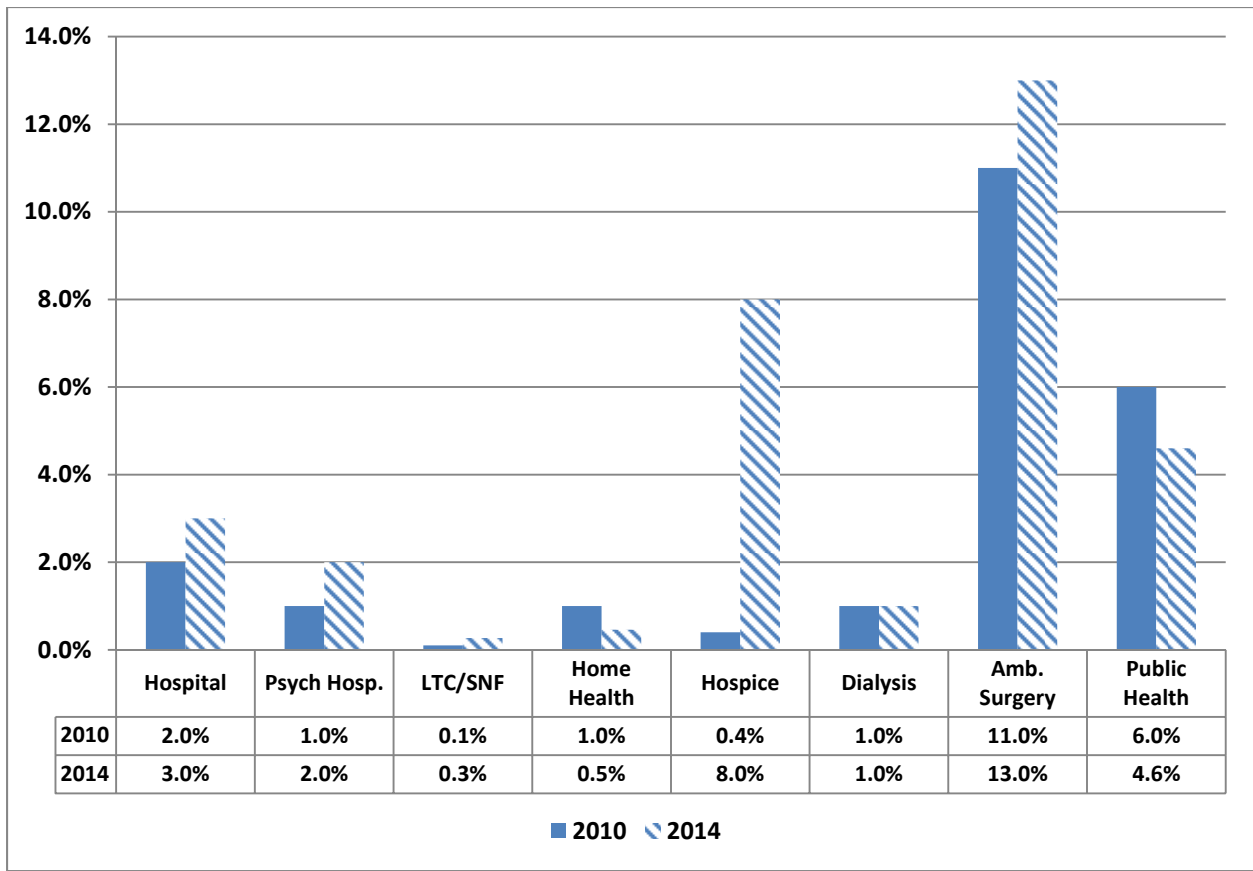
Figure 4. APRNs as a percentage of the nursing workforce by healthcare industry

The proportion of LPNs employed by the healthcare industries surveyed in 2014 were very similar to the proportion employed in 2010 (Figure 5), except in ambulatory surgical care and dialysis centers which showed a six and four percent decrease, respectively.

	Hospital	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	13%	13%	32%	29%	14%	5%	14%	2%
2014	11%	15%	30%	30%	16%	1%	8%	2%

■ 2010 ◩ 2014
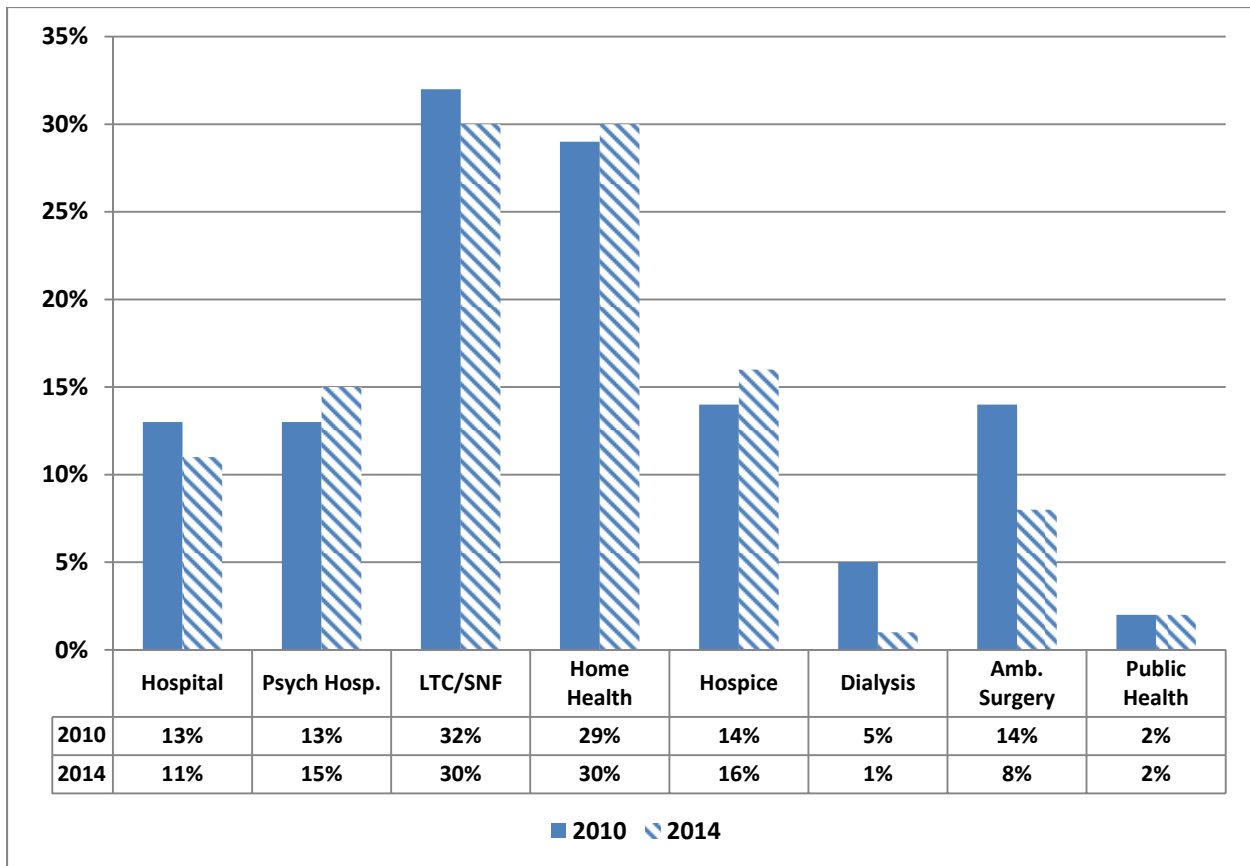
Figure 5. LPNs as a percentage of the nursing workforce by healthcare industry

Although there were relatively minimal changes in the proportion of the total nursing workforce represented by NAs reported by the majority of the responding healthcare industries in 2010 and 2014, there was a seven percent decrease in the percentage of NAs employed by home health, hospice, and ambulatory surgical care centers in 2014 when compared to 2010 (Figure 6).
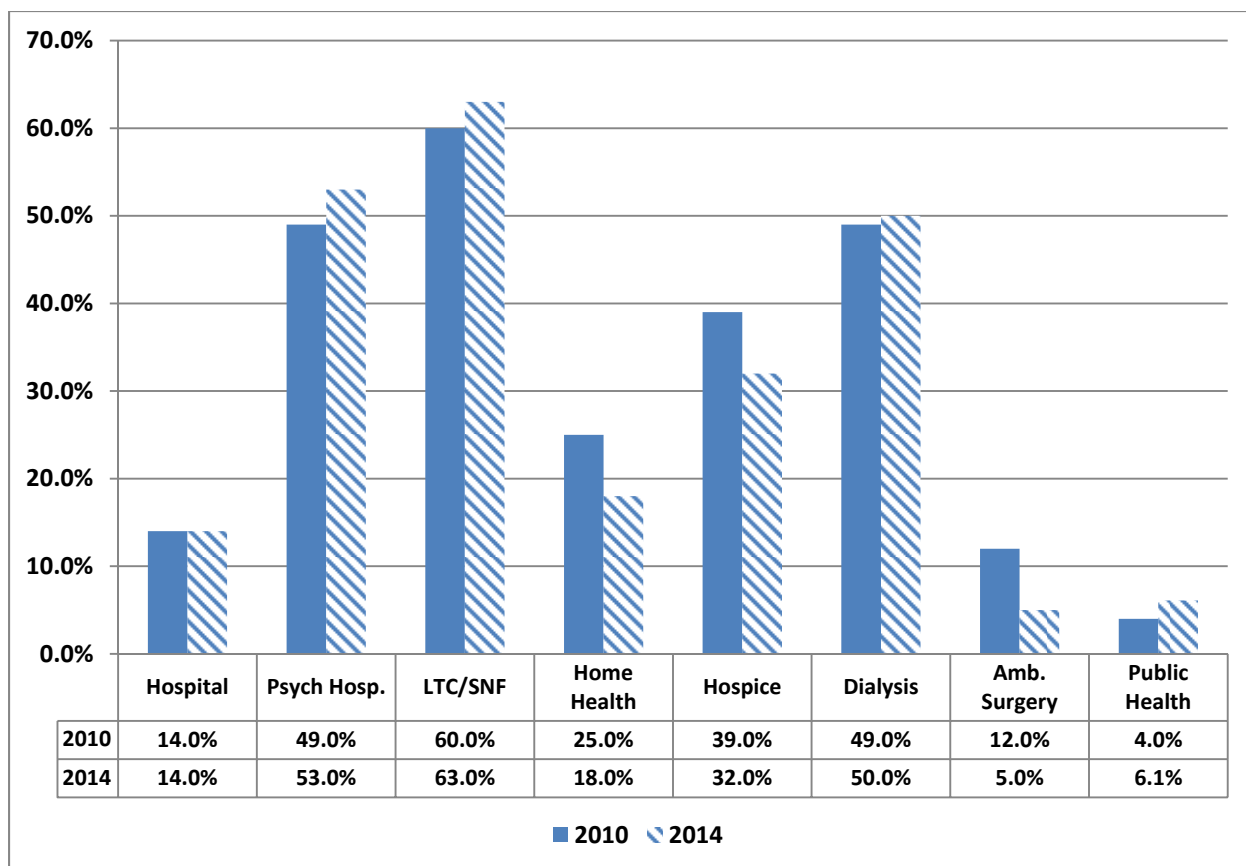
Figure 6. NAs as a percentage of the nursing workforce by healthcare industry

	Hospital	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	14.0%	49.0%	60.0%	25.0%	39.0%	49.0%	12.0%	4.0%
2014	14.0%	53.0%	63.0%	18.0%	32.0%	50.0%	5.0%	6.1%

Staff Size in Small and Large Hospitals

In addition to varying skill mix, the eight health care industries also vary in staff size, with hospitals clearly having the largest nursing staff. Because of the wide range in the number of beds reported by the responding hospitals (minimum of 0 beds, maximum of 478 beds), staff size was analyzed for small and large hospitals separately (Table 4). Small hospitals were defined as hospitals with less than or equal to 40 beds (median number of beds for responding hospitals) and large hospitals were identified as those hospitals with more than 40 beds.

Other than acute care hospitals, psychiatric hospitals and home health agencies on average had the largest number of RNs on staff. Long term care and skilled nursing facilities had the largest number of NAs on staff. Although small in number, the vast majority of APRNs captured in this study were employed by hospitals. Differences in staff size must be considered when interpreting staffing metrics based on percentages for health care industries having small staff sizes, since a single vacancy or turnover can drastically inflate those metrics when staff sizes are very small. Because of the low numbers for CNSs and CNMs, only NPs and CRNAs will be included in analysis throughout the remainder of this report except in cases when they are too few in number to produce meaningful results.

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Table 4. Average Nursing Personnel Staff Sizes by Healthcare Industry

Healthcare Industry	RNs DC	RNs IC	NPs	CRNAs	CNS	CNMs	LPNs	NAs	Temp Staff	Part-time Staff
Small Hospital Less than or equal to 40 beds (n=46)	48	7	2	2	0	0	13	12	13	11
Large Hospital Greater than 40 beds (n=41)	312	31	6	6	0.1	0	48	62	83	41
Psychiatric Hospitals	13	2	1		0		7	28	5	16
LTC/SNF	3	2	.1		.01		20	44	8	13
Home Health	9	3	.1		.1		7	4	6	7
Hospice	6	2	1		.02		2	5	3	6
Dialysis	4	1	.1		0		.1	5	.6	1
Ambulatory Surgical Care	8	.7	.02	1	0		1	.4	5	4
Public Health	2.8	0.3	0.3		0.02	0	0.04	0.04	2.5	0

Note: Total nursing staff for small hospitals = 3,845; total nursing staff for large hospitals = 19,057
Averages include both permanent staff (full and part-time) and temporary agency personnel.

Temporary and Part-time Staff

The business models of the industry groups surveyed vary in the number and percentage of temporary staff and part-time nurse employees (Table 5). All of the responding healthcare industries utilized temporary or per diem staff to some extent, ranging from 30.4 percent of dialysis centers to 74.7 percent of hospitals. Seventeen of the fifty-five public health clinics (30.9%) utilized temporary or per diem nursing staff in 2014.

The percentage of temporary or per diem nursing staff utilized also varied across healthcare industries. For example, the percentage of temporary or per diem nursing staff ranged from 5.8 percent for dialysis centers to 42.6 percent for public health. It is interesting to note that 82 percent of the staff for the Nurse-Family Partnership (NFP) program, which is operated by the Louisiana Office of Public Health, is temporary or per diem; however, this program only accounts for two and a half percent of public health services. In contrast, the percentage of part-time nursing personnel employed by responding healthcare industries ranged from zero percent for public health to 30.3 percent for hospice. Health care industries using large percentages of temporary, per diem, contract or agency nurses tend to complicate efforts to measure current demand for additional nurses, since "vacancy" is not typically used to describe demand for additional temporary or agency nurses.

Table 5. Temporary Staff and Part-time Staff

Healthcare Industry	% of Facilities Hiring Temporary or Per Diem Nursing Staff	% of Temporary or Per Diem Employees	% of Part-Time Employees
Hospitals	74.7%	17.6%	9.4%
Psychiatric Hospitals	56.3%	9.0%	27.9%
LTC/SNF	39.0%	9.8%	16.9%
Home Health	50.6%	19.8%	25.0%
Hospice	34.6%	15.7%	30.3%
Public Health	30.9%	42.6%	0.0%
Dialysis – ESRD	30.4%	5.8%	9.0%
Ambulatory Surgical Care Center	66.7%	29.5%	23.5%

Note: Seventeen of the 55 public health clinics utilize temporary or per diem nursing staff. Eighty-two percent of the Department of Public Health's Nurse-Family Partnership Program staff are contract employees.

Between 2010 and 2014, of the healthcare industries surveyed, the greatest increase in the percentage of temporary nursing staff employed occurred in public health, going from 16 percent in 2010 to approximately 43 percent in 2014. There was also a substantial increase in the percentage of temporary or per diem nursing staff hired in ambulatory surgery care services between 2010 and 2014 (Figure 7). On the other hand, the greatest decrease in the percentage of temporary staff over the past four years occurred in psychiatric hospitals.

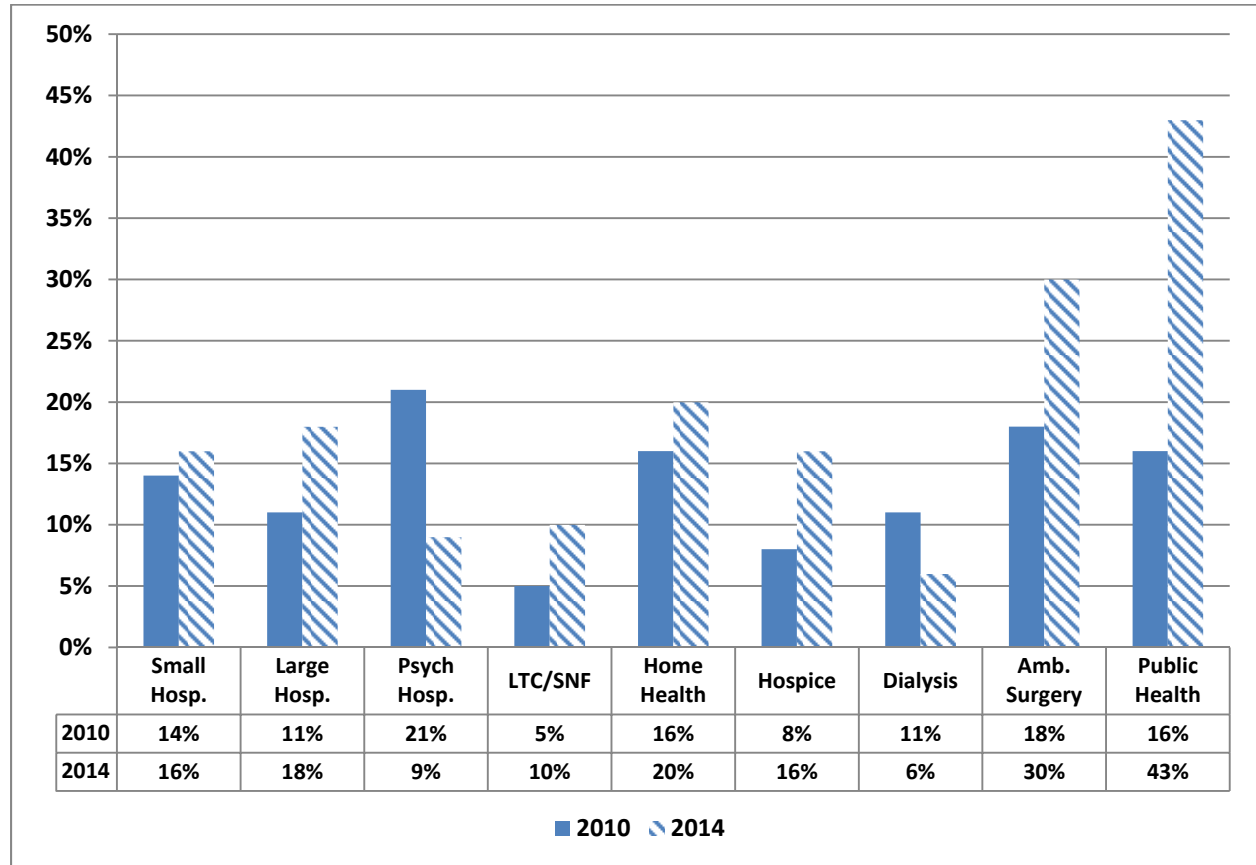|	Small Hosp.	Large Hosp.	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	14%	11%	21%	5%	16%	8%	11%	18%	16%
2014	16%	18%	9%	10%	20%	16%	6%	30%	43%

Figure 7. Temporary or per diem nursing staff hired in 2010 and 2014.

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When tracking the use of part-time nursing staff utilized by the healthcare industries surveyed, it was apparent that the most substantial increase occurred in hospice, which went from 3 percent of the entire nursing workforce employed in 2010 to 30 percent in 2014 (Figure 8). There was also a considerable increase in the percentage of part-time nursing staff employed by psychiatric hospitals. Conversely, a decrease in the percentage of part-time nursing personnel utilized occurred in home health, small and large hospitals, dialysis, and ambulatory surgery centers. It is interesting to note that part-time nursing staff were not employed by public health in 2010 or 2014.

	Small Hosp.	Large Hosp.	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	19%	12%	17%	17%	32%	3%	11%	26%	0%
2014	13%	9%	28%	17%	25%	30%	9%	24%	0%

■ 2010 ◧ 2014
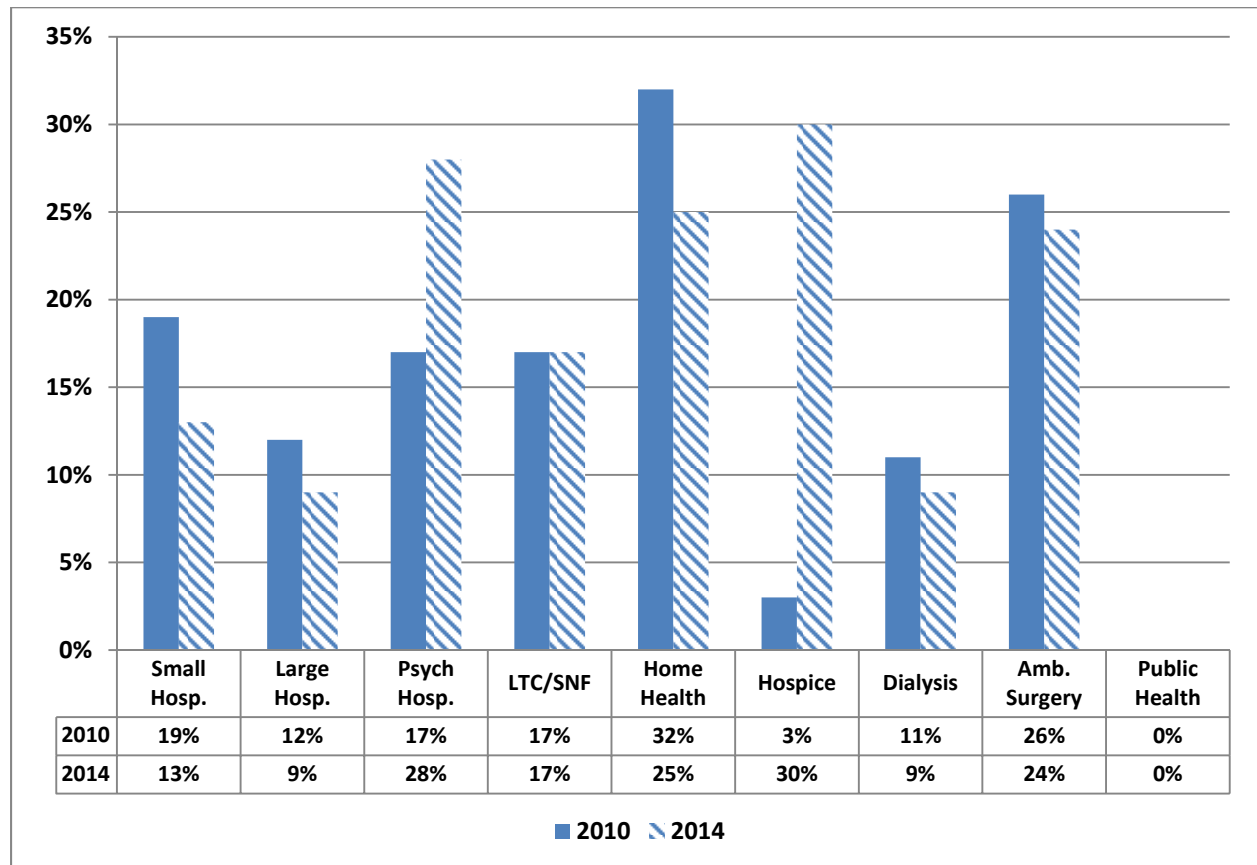
Figure 8. Part-time nursing staff hired in 2010 and 2014.

Vacancies

The nursing workforce vacancies reported by responding healthcare industries totaled 2,399 with the majority being RN vacancies (1,178), followed by 825 NA vacancies, and 362 LPN vacancies (Table 6). The majority of the APRN vacancies reported by responding healthcare industries were for NPs (26), primarily in hospitals.

Table 6. Full and Part-Time Vacancies Reported by Respondents as of June 30, 2014

		RNs	NPs	CRNAs	CNSs	CNMs	LPNs	NAs	Total
Hospital	Direct Care	881	23	5	2	0	126	255	1,331
	Indirect Care	39							
Psych hospital	Direct Care	33	0		0		21	32	88
	Indirect Care	2							
LTC/SNF	Direct Care	40	1		0		157	465	671
	Indirect Care	8							
Home health	Direct Care	69	0		0		41	34	152
	Indirect Care	8							
Hospice	Direct Care	42	1		0		12	24	84
	Indirect Care	5							
Public health	Direct Care	21	1		0	0	0	1	23
	Indirect Care	0							
Ambulatory Surgery	Direct Care	18	0	1	0	0	2	0	22
	Indirect Care	1							
Dialysis	Direct Care	10	0	0	0	0	3	14	28
	Indirect Care	1							
Totals		**1,178**	**26**	**6**	**2**	**0**	**362**	**825**	**2,399**

When vacancies were imputed for non-responding facilities, the total number of vacancies for all types of nursing personnel more than doubled (5,755). The majority of the RN vacancies (2,504) were for direct care RNs (Table 7). The majority of NP vacancies (57) and CRNA vacancies (12) also occurred in hospitals, whereas the majority of the LPN vacancies were in LTC/SNF (443) followed by hospitals (271). Over half (61.4%) of the vacant NA positions were in LTC/SNF facilities, followed by 26.1 percent in hospitals. There were healthcare industries in which too few facilities provided data relative to the number of vacancies, therefore for those industries, estimated vacancies were not computed. In addition, there was no need to estimate vacancies for public health because of the one hundred percent response rate (vacancies were reported on one survey for all public health units/clinics).

The over 5,700 estimated vacancies in Table 7 reflect a substantial need for nursing personnel in Louisiana and are likely underestimates of the true number of nursing vacancies because not all employers of the nursing workforce (i.e., physicians' offices) were included in the study.

Table 7. Estimated Full and Part-Time Vacancies as of June 30, 2014

	RNs		NPs	CRNAs	CNSs	CNMs	LPNs	NAs	Total
Hospital	Direct Care	1948	51	11	2*	0*	271	556	2,924
	Indirect Care	85							
Psych hospital	Direct Care	81	0*		0*		52	79	217
	Indirect Care	5							
LTC/SNF	Direct Care	112	1*		0*		443	1,309	1,887
	Indirect Care	22							
Home health	Direct Care	162	0*		0*		95	82	358
	Indirect Care	19							
Hospice	Direct Care	115	4		0*		33	64	228
	Indirect Care	12							
Public health**	Direct Care	21	1		0	0	0	1	23
	Indirect Care	0							
Ambulatory surgery	Direct Care	36	0*	1*	0*	0*	4	0	43
	Indirect Care	2							
Dialysis	Direct Care	29	0*	0*	0*	0*	3*	40	75
	Indirect Care	3							
Totals		**2,652**	**57**	**12**	**2**	**0**	**901**	**2,131**	**5,755**

*Too few facilities provided data for estimation therefore respondent reports are provided.
**No need for estimation due to 100 percent response rate.

When compared to 2010, the number of estimated RN vacancies increased in all of the healthcare industries surveyed except for home health, which showed a decrease in RN vacancies in 2014 when compared to 2010 (Figure 9). Hospitals had the greatest increase in estimated RN vacancies between 2010 and 2014 primarily due to the size of the industry, which employs the bulk of RNs in the state. Although small in number, the number of RN vacancies in public health went from zero in 2010 to twenty-one in 2014.
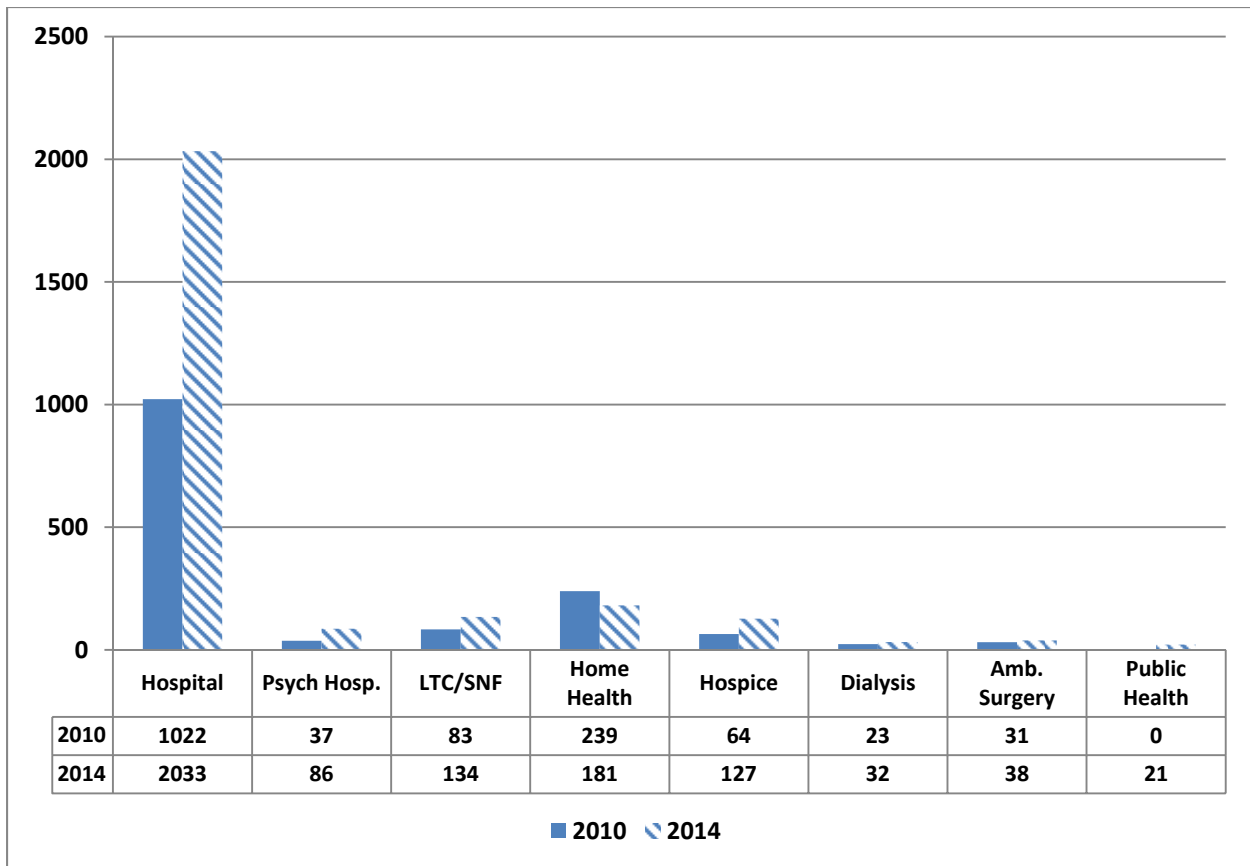
Figure 9. Estimated full and part-time RN vacancies in 2010 and 2014.

	Hospital	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	1022	37	83	239	64	23	31	0
2014	2033	86	134	181	127	32	38	21

■ 2010   ◿ 2014

Vacancy Rates

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 FTE positions, by industry group and personnel type, that were vacant as of June 30, 2014. 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.

RN FTE vacancy rates for each industry are presented in Table 8. Vacancy rates for RNs were presented in terms of direct care RNs (RNs spending 74-100 percent of their scheduled workday providing care to patients) and indirect care RNs (RNs spending 25 percent or less of their scheduled work time providing direct care to patients and 75 percent or more of their time performing administrative or supervisory duties). The highest vacancy rates for direct care RNs were 13.8 percent for psychiatric hospitals, 11.9 percent for long term care facilities, 11.7 percent for public health, and 10.9 percent for hospice. The healthcare industry with the highest vacancy rate for indirect care RNs was psychiatric hospitals.

Table 8. Full-time Equivalent (FTE) Vacancy Rates (%) by Healthcare Industry Type as of June 30, 2014

	RNs		NPs	CRNAs	LPNs	NAs
Hospital	Direct Care	6.6	6.8	1.2	5.3	8.9
	Indirect Care	2.6				
Psych hospital	Direct Care	13.8	*		13.9	4.8
	Indirect Care	6.7				
LTC/SNF	Direct Care	11.9	*		6.6	8.7
	Indirect Care	4.0				
Home health	Direct Care	7.6	*		5.6	8.8
	Indirect Care	2.2				
Hospice	Direct Care	10.9	0.0		7.7	6.2
	Indirect Care	4.4				
Public health	Direct Care	11.9	6.7		N/A	*
	Indirect Care	0				
Ambulatory surgery	Direct Care	3.7	*	*	2.3	0.0
	Indirect Care	3.5				
Dialysis	Direct Care	4.8	*	*	*	3.7
	Indirect Care	0.0				

*Too few on staff to produce a meaningful vacancy rate.

It is important to note that the vacancy rate for direct care RNs in hospitals was 6.6 percent in 2014. Hospitals are the largest employers of RNs and the vast majority of RNs in the hospital setting provide direct patient care. According to the 2015 National Healthcare Retention and RN Staffing Report, the national RN vacancy rate is 7.2 percent. In our neighboring state of Texas, the RN vacancy rate was 8.1 percent in 2012 (Texas Center for Nursing Workforce Analysis, 2013).

The highest LPN vacancy rates were for psychiatric hospitals, (13.9%), hospice (7.7%), LTC/SNF (6.6%) and home health (5.6%). Health care industries having the highest vacancy rate for NAs were hospitals (8.9%), home health (8.8%), LTC/SNF (8.7%), and hospice (6.2%). There is a substantially higher vacancy rate for LPNs in psychiatric hospitals than NAs. On the other hand, there is a higher vacancy rate for NAs in hospitals, LTC/SNF, and home health when compared to LPNs.

Vacancy Rates Over Time - 2010 and 2014

Between 2010 and 2014 there were substantial increases in direct care RN vacancy rates in public health, psychiatric hospitals, and LTC/SNF with the greatest increase occurring in public health (Figure 10). There was a zero percent direct care RN vacancy rate in public health in 2010 compared to a twelve percent vacancy rate in 2014. The direct care RN vacancy rate has decreased over the past four years in home health and dialysis.

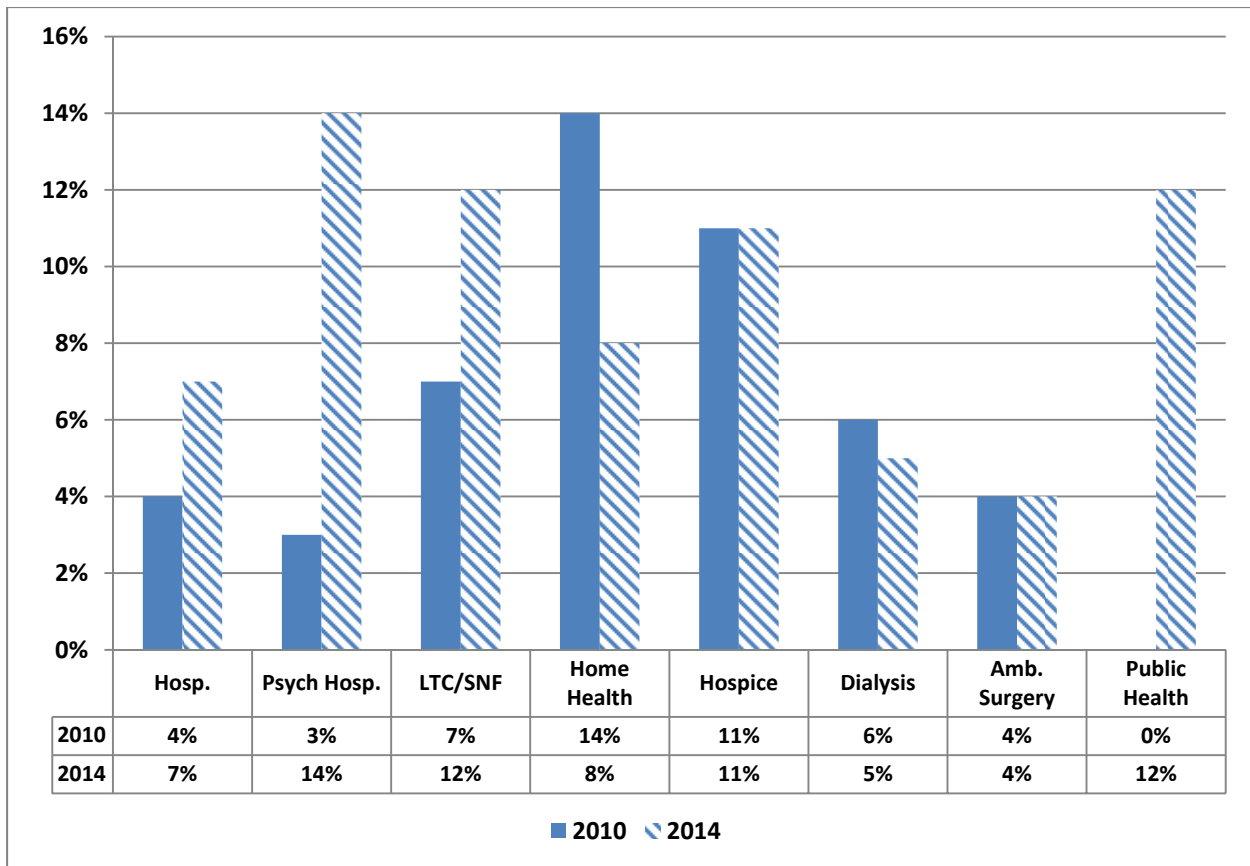|	Hosp.	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery	Public Health
2010	4%	3%	7%	14%	11%	6%	4%	0%
2014	7%	14%	12%	8%	11%	5%	4%	12%

■ 2010 ◨ 2014

Figure 10. RN Full-Time Equivalent Vacancy Rates by Industry for 2010 and 2014

In contrast to the RN vacancy rates, there has been a decrease over the past four years in the LPN vacancy rate for the majority of the healthcare industries surveyed with the most substantial decrease occurring in dialysis centers which went from a vacancy rate of 12 percent in 2010 to 0 percent in 2014 (Figure 11). On the other hand, the vacancy rate for LPNs increased for psychiatric hospitals.

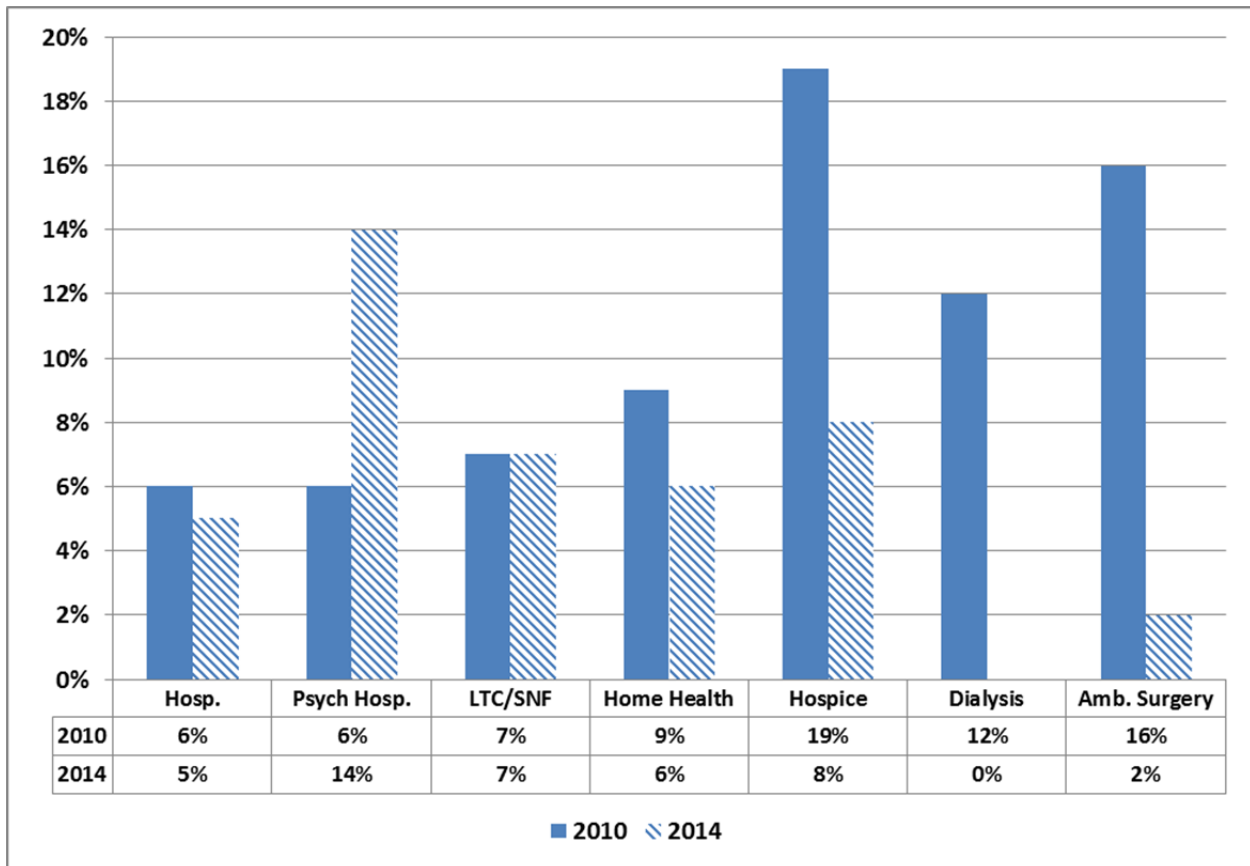|	Hosp.	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery
2010	6%	6%	7%	9%	19%	12%	16%
2014	5%	14%	7%	6%	8%	0%	2%

■ 2010 ◧ 2014

Figure 11. LPN Full-Time Equivalent Vacancy Rates by Industry for 2010 and 2014. Public health does not hire LPNs.

In terms of NAs, the only industry showing an increase in vacancy rates since 2010 was LTC/SNF (Figure 12). In all other healthcare industries surveyed, there was a decrease in the vacancy rate for NAs with the greatest decrease occurring in ambulatory surgical centers which went from a vacancy rate of nine percent in 2010 to zero percent in 2014.

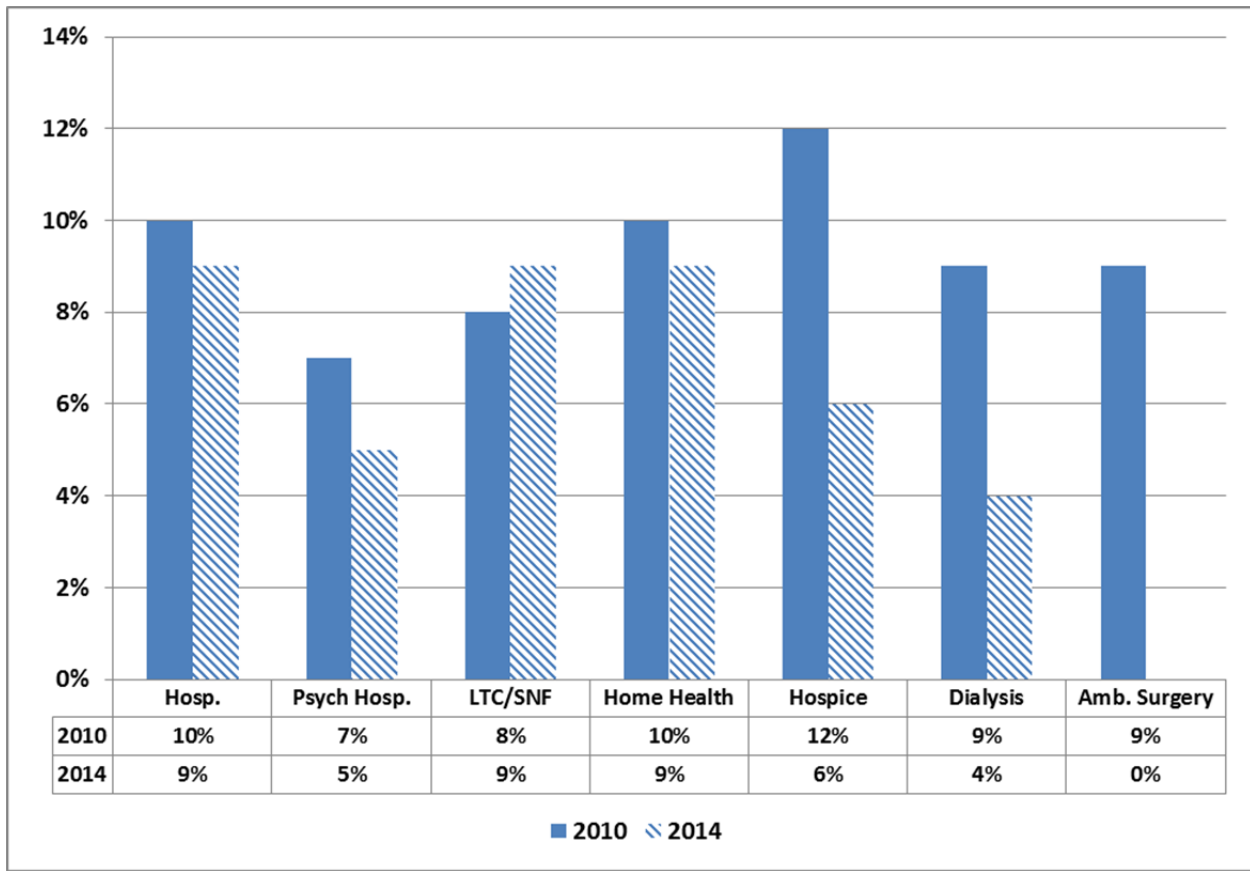|	Hosp.	Psych Hosp.	LTC/SNF	Home Health	Hospice	Dialysis	Amb. Surgery
2010	10%	7%	8%	10%	12%	9%	9%
2014	9%	5%	9%	9%	6%	4%	0%

■ 2010 ◩ 2014

Figure 12. NA Full-Time Equivalent Vacancy Rates by Industry for 2010 and 2014. Vacancy rates for NAs were not computed due to the small number of NAs employed.

Separations and Turnover Rates

The number of separations is very important when addressing the economic impact of high turnover rates within health care facilities. Nursing turnover is a major issue impacting healthcare industries across the country. Highly trained, stable, and fully engaged nursing staff are needed to provide high quality, patient centered, and cost effective care (Hunt, 2009). The Nursing Turnover Cost Calculation Methodology shows that each nurse that leaves his or her position costs the hospital approximately $88,000 (Krsek, 2011). Nurses are critical to the provision of healthcare and when there is high turnover among nursing staff the impact is felt in a variety of ways: decreased quality of patient care; loss of patients; further increase in nursing staff turnover; and increased accident and absenteeism rates, all of which has a spiraling effect on the bottom line for the healthcare industry (Hunt, 2009). Turnover rates are highest when jobs are plentiful, the economy is doing well, and nurses who are unhappy with their present positions have more options. On the other hand, turnover is lowest when the economy is not doing well and employers have cut back on hiring, therefore nursing positions are not as readily available (Kovner, Brewer, & Fatehi, 2014).

In the current study, employers were asked to report the number of separations that occurred between July 1, 2013 and June 30, 2014. Separations are defined as the number of nursing personnel, full and part-time, that were employed by a health care facility within a specified time

frame and left the facility either voluntarily or involuntarily. Separations do not include nursing personnel that moved from one position to another within a facility or persons hired but never reporting for work. Respondents alone reported 2,864 RN separations, 1,365 LPN separations, and 3,647 NA separations in one year – these numbers exclude non-respondents, as well as industries that were not surveyed (Table 9).

Table 9. Separations Reported by Respondents, July 1, 2013 thru June 30, 2014

		RNs	APRNs	LPNs	NAs	Total
Hospital	Direct Care	1,915	45	377	749	3,192
	Indirect Care	106				
Psych hospital	Direct Care	114	0	53	224	398
	Indirect Care	7				
LTC/SNF	Direct Care	133	8	755	2,479	3,436
	Indirect Care	61				
Home health	Direct Care	229	2	147	61	489
	Indirect Care	50				
Hospice	Direct Care	110	7	26	72	243
	Indirect Care	28				
Public health	Direct Care	14	1	0	1	18
	Indirect Care	2				
Ambulatory surgery	Direct Care	46	2	5	7	60
	Indirect Care	0				
Dialysis	Direct Care	40	0	2	54	105
	Indirect Care	9				
Total		**2,864**	**65**	**1,365**	**3,647**	**7,941**

When data were imputed for non-respondents, the estimated separations reported for RNs and LPNs more than doubled and the number of separations for NAs was two and one half times that reported by respondents (Table 10). Between July 1, 2013 and June 30, 2014 (or the most current report year), there were an estimated 6,602 RN separations, 3,509 LPN separations and 9,817 NA separations. The majority of the separations for RNs were within hospitals, whereas the majority of the separations for LPNs and NAs were in LTC/SNF and hospitals. There were also 126 APRN separations with the majority for NPs and occurring in hospitals.

Table 10. Estimated Separations July 1, 2013 thru June 30, 2014

		RNs	APRNs	LPNs	NAs	Total
Hospital	Direct Care	4,194	95	813	1,620	6,953
	Indirect Care	231				
Psych hospital	Direct Care	342	0*	152	664	1,179
	Indirect Care	21				
LTC/SNF	Direct Care	371	8*	2,111	7,030	9,690
	Indirect Care	170				
Home health	Direct Care	544	2*	349	146	1,161
	Indirect Care	120				
Hospice	Direct Care	289	18	72	195	647
	Indirect Care	73				
Public health**	Direct Care	14	1	0	1	18
	Indirect Care	2				
Ambulatory surgery	Direct Care	91	2*	10	12	115
	Indirect Care	0				
Dialysis	Direct Care	115	0*	2*	149	291
	Indirect Care	25				
Totals		**6,602**	**126**	**3,509**	**9,817**	**20,054**

*Too few facilities provided data for calculation of estimates therefore respondent reports are provided.
**Data not imputed due to 100% response rate.

Between 2010 and 2014, the number of separations for RNs across all healthcare industries surveyed increased while the number of LPN and NA separations decreased, with the most significant decrease occurring among NAs (Figure 13).

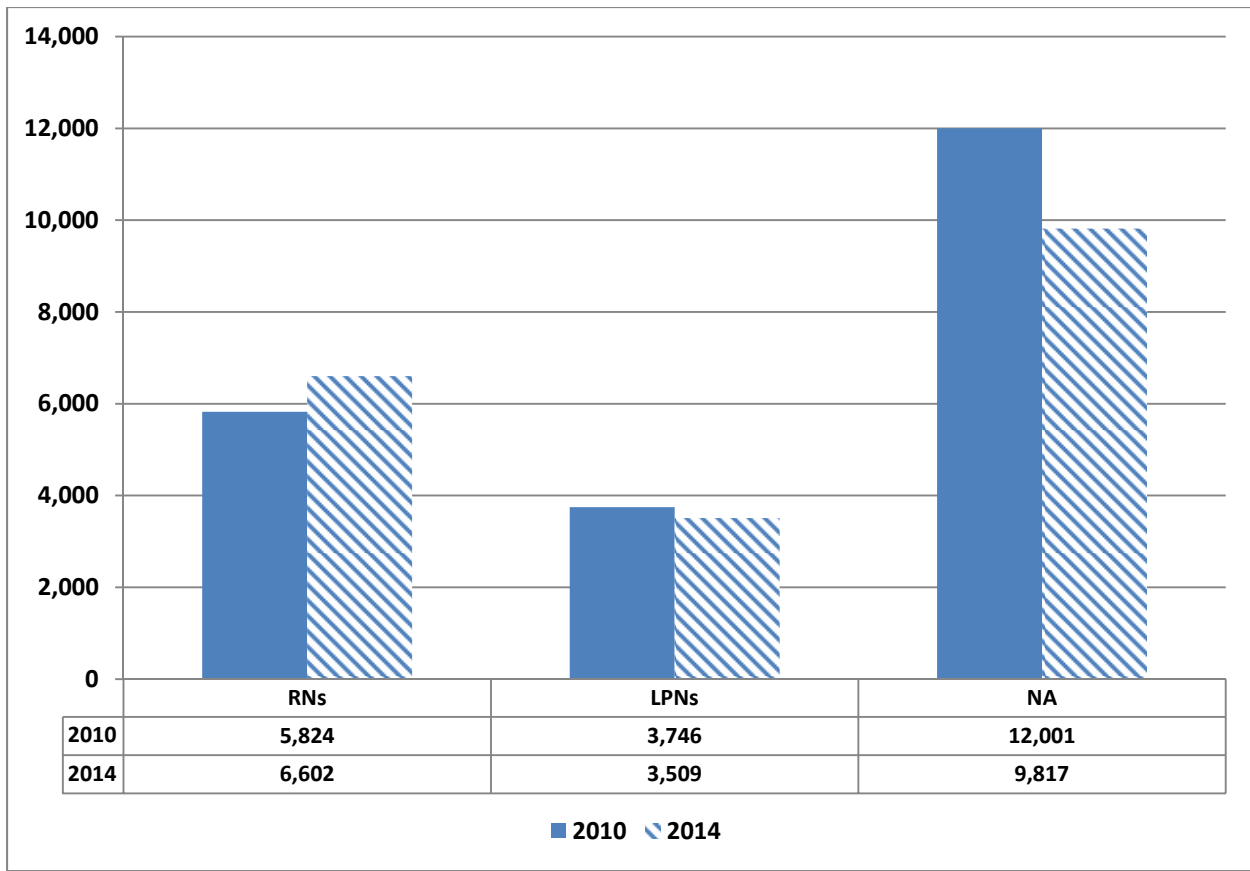|	RNs	LPNs	NA
2010	5,824	3,746	12,001
2014	6,602	3,509	9,817

■ 2010 ◨ 2014

Figure 13. Estimated separations for RNs, LPNs, and NAs for 2010 and 2014.

The Louisiana Workforce Commission produces employment projections each year including the number of openings that can be expected due to job growth and replacement growth (LWC, 2011). Annual replacement is defined as the number of workers who leave their jobs to enter other occupations, retire, or leave the workforce for other reasons. This number is very important in terms of training new members of the workforce. In estimates revised in 2014, LWC estimated that 1,080 job openings for RNs, 560 job openings for LPNs, and 710 job openings for NAs would occur each year in Louisiana (between 2012 and 2022) due to annual replacements (LWC, 2014).

Turnover Rates

Table 11 presents turnover rates by industry group and personnel type. Turnover rates were based on the number of nursing personnel (RNs, APRNs, LPNs, NAs) leaving a healthcare facility between July 1, 2013 and June 30, 2014 divided by the average number of personnel employed by the facility during the year, estimated by averaging the number employed on the first and last day of the fiscal year. 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 11. The median turnover rate describes a rate at which half of the facilities fall below the rate and half fall above the rate, which removes the influence of outliers.

The median turnover rate for direct care RNs in hospitals, the largest personnel category identified in the survey in terms of budgeted positions was 13.8 percent over the course of one year compared to a median overall turnover rate of 17.0 percent for all RNs employed by responding hospitals in 2010. In 2011 the national turnover rate for RNs in hospitals was reported to be 13.5 percent and in 2015 the hospital turnover rate for RNs increased to 17.2 percent (NSI National Healthcare and RN Retention Report, 2015). Psychiatric hospitals had the highest median turnover rate for direct care RNs (56.6%) and NAs (45.8%). The largest median turnover rate for LPNs occurred in LTC/SNF (33.3%). Average turnover rates were computed for public health based on data taken from one survey which included all public health nursing personnel. The average turnover rate for direct care RNs in public health was 8.6 percent compared to a turnover rate of 13.3 percent for indirect care RNs.

Table 11. Turnover Rates (%) Reported by Respondents, by Industry Group and Personnel Type (July 1, 2013 – June 30, 2014)

		RNs		APRNs		LPNs		NAs	
		Avg.	Med.	Avg.	Med.	Avg.	Med.	Avg.	Med.
Hospital	Direct Care	22.2	13.8	16.2	0.0	23.6	13.1	37.0	27.5
	Indirect Care	15.2	0.0						
Psych hospital	Direct Care	59.0	56.6	*	*	51.4	30.8	50.9	45.8
	Indirect Care	31.8	0.0						
LTC/SNF	Direct Care	72.2	23.6	9.1	0.0	44.8	33.3	62.6	42.4
	Indirect Care	42.2	0.0						
Home health	Direct Care	39.5	20	*	*	29.9	16.3	19.6	0.0
	Indirect Care	19.1	0.0						
Hospice	Direct Care	45.8	33.3	14.4	0.0	39.5	0.0	40.0	24.5
	Indirect Care	41.9	0.0						
Public health	Direct Care	**8.6		6.5		0.0		40.0	
	Indirect Care	13.3							
Ambulatory surgery	Direct Care	18.8	7.0	10.6	0.0	4.8	0.0	34.0	0.0
	Indirect Care	0.0	0.0						
Dialysis	Direct Care	21.0	0.0	*	*	20.0	0.0	28.1	22.2
	Indirect Care	16.6	0.0						

Note: 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.
*Numbers too small to calculate reliable turnover rates.
**Average turnover rate computed based on data taken from one survey inclusive of all public health nursing personnel.

Projected One-Year Growth in Budgeted Positions (2014-2015)

Employers were asked to report the total number of new positions they intended to create over the next year. Some health care facilities may not have answered the question because of the difficulty associated with estimating future hiring needs given the current state of the economy. The actual numbers reported by responding healthcare industries can be seen in Table 12. The number of openings due to job growth in 2015 reported by respondents alone was 737 RNs (556 in 2010), 255 LPNs (244 in 2010), and 316 NAs (349 in 2010). These numbers do not include non-responding health care facilities.

Table 12. One-Year Growth in Positions for Nursing Staff (2014-2015) Reported by Respondents

	RNs		NPs	CRNAs	CNMs	CNSs	LPNs	NAs
Hospital	Direct Care	305	9	3	1	1	51	88
	Indirect Care	50						
Psych hospital	Direct Care	20	1			1	5	22
	Indirect Care	1						
LTC/SNF	Direct Care	15	3			0	41	78
	Indirect Care	13						
Home health	Direct Care	122	3			0	123	41
	Indirect Care	22						
Hospice	Direct Care	93	11			0	29	70
	Indirect Care	29						
Public health	Direct Care	4	2		0	0	0	1
	Indirect Care	1						
Ambulatory surgery	Direct Care	37	0	4	0	0	3	1
	Indirect Care	0						
Dialysis	Direct Care	23	0	0	0	0	3	15
	Indirect Care	2						
Totals		**737**	**29**	**7**	**1**	**2**	**255**	**316**

Table 13 shows the expected growth in nursing jobs through 2015 when data is imputed for non-respondents. If non-responders expect similar growth as their responding counterparts, 1,741 new RN jobs, 619 new LPN jobs, and 796 new NA jobs will be generated over the next year for the eight industry groups that were surveyed. These figures are underestimating total growth because of the health care industries that were not included in the survey (i.e., physician's offices). There is a substantial difference in the expected annual growth reported by employers in the current study when compared to LWC's yearly projections for jobs for RNs (740). On the other hand, the difference in LWC's projections for annual growth for LPNs (440) and NAs (880) is not as great when compared to the current study's findings. The differences in the projections may be attributable to the different methodologies used, hearing directly from the employers at the ground level vs the utilization of projection models, as well as the perception of those that completed the surveys (i.e., chief nursing officers, administrators, human resource).

Table 13. Estimated One-Year Growth in Positions (2014-2015)

	RNs		NPs	CRNAs	CNSs	CNMs	LPNs	NAs
Hospital	Direct Care	678	20	6	1*	1*	112	190
	Indirect Care	111						
Psych hospital	Direct Care	54	1*		1*		13	60
	Indirect Care	2						
LTC/SNF	Direct Care	42	3*		0*		115	219
	Indirect Care	36						
Home health	Direct Care	291	3*		0*		292	98
	Indirect Care	52						
Hospice	Direct Care	246	30		0*		78	183
	Indirect Care	79						
Public health**	Direct Care	4	2		0	0	0	1
	Indirect Care	1						
Ambulatory surgery	Direct Care	76	0*	4*	0*	0*	6	2
	Indirect Care	0						
Dialysis	Direct Care	63	0*	0*	0*	0*	3*	43
	Indirect Care	6						
Totals		**1,741**	**59**	**10**	**2**	**1**	**619**	**796**

*Too few facilities provided data for calculation of estimates, therefore respondent reports are provided.

**No need to make estimates due to 100 percent response rate by public health.

Annual Growth Rate

The healthcare industry group with the greatest overall expected annual growth rate for all types of nursing personnel was hospice, showing an expected growth rate of 29.1 percent for direct care RNs, 26.4 percent for indirect care RNs, 25.0 percent for LPNs, and 24.4 percent for NAs which is consistent with 2010 findings (Table 14). The home health industry came in second in terms of the highest growth rate over the next year for direct care RNs (16.2%), LPNs (21.9%) and NAs (13.4%). The expected growth rate for direct care RNs in hospitals (2.4%), LPNs (2.6%), and NAs (3.5%) in 2015 is very similar to the 2010 expected annual growth rates. Created positions reported by respondents reflect the healthcare facility's desire to expand, but may not reflect the reality of the facility's ability to expand in an era of budget constraints. Expectations may be revised based upon current economic pressures or if the current wages for nursing personnel increase considerably.

Table 14. One-year Industry Growth Rate (%) for Nursing Personnel (2014-2015)

		RNs	NPs	CRNAs	LPNs	NAs
Hospital	Direct Care	2.4	2.6	1.4	2.6	3.5
	Indirect Care	3.5				
Psych hospital	Direct Care	9.3	*		4.4	4.9
	Indirect Care	3.4				
LTC/SNF	Direct Care	4.5	*		2.0	1.8
	Indirect Care	5.9				
Home health	Direct Care	16.2	*		21.9	13.4
	Indirect Care	6.4				
Hospice	Direct Care	29.1	12.7		25.0	24.4
	Indirect Care	26.4				
Public health	Direct Care	2.6	14.3		0.0	50.0
	Indirect Care	7.1				
Ambulatory surgery	Direct Care	10.4	*	5.9	2.0	*
	Indirect Care	0.0				
Dialysis	Direct Care	10.8	*	*	*	3.9
	Indirect Care	4.0				

*Too few on staff to produce a meaningful growth rate for the healthcare industry.

Clinical or Administrative Specialties in High Demand

Employers were asked about their experience in recruiting nursing personnel in a number of clinical and administrative specialty positions. Rankings of difficulty in recruiting were based on the employer's level of difficulty in recruiting (very easy to recruit [1] to very difficult to recruit [5]). Because the industry groups employed nurses with different specialties, surveys were tailored to each industry.

The top five most difficult nursing positions to recruit in each healthcare industry group can be found in Table 15. The number of respondents for dialysis, and ambulatory surgery were too small for analysis and therefore the findings are not shown in the table. Interestingly, Administrators/Supervisors represented one of the top five most difficult positions to fill in each of the five industry groups, similarly to findings in the 2010 Nurse Employer Survey. Direct care staff RN positions and clinic staff RNs were also ranked as one of the top five most difficult positions to fill by psychiatric hospitals, LTC/SNF, home health and public health. In contrast, direct care staff RNs were not identified as one of the top most difficult positions to fill in hospitals. Case Managers/Discharge Planners were reported as the most difficult positions to recruit for four of the five health care industries.

Table 15. Top Five Most Difficult Nursing Positions to Fill, by Industry (July 1, 2013-June 30, 2014)

	Hospital	Psych Hospital	LTC/SNF	Home Health	Hospice	Public Health
1	Case Managers/ Discharge Planners	Registered Nurses	Nurse Administrator	Nurse Administrator	Nurse Administrator	Nurse Practitioners
2	Nurse Administrator	Nurse Administrator	Registered Nurses	Registered Nurses	Home Hospice Staff Registered Nurses	Epidemiology Nurses
3	Clinical Nurse Specialist	Licensed Practical Nurses	Minimum Dataset Nurses	Clinical Nurse Specialist	Patient Care Managers / Coordinators	Nurse Administrators
4	Nurse Practitioner	Psychiatric Aides/Techs	Nurse Aides /Assistants	Case Manager/ Discharge Planner	Nurse Practitioners	Regional Level Nurse Managers/ Supervisors
5	Nurse Anesthetist	Case Managers/ Discharge Planners	Licensed Practical Nurses	Licensed Practical Nurses	Nurse Aides / Direct Care Assistants	Clinic Staff Registered Nurses

Note: Rankings are based on the respondent's level of difficulty in recruiting various types of nursing personnel. The number of respondents for the industries not shown in the table were too small for analysis.

Educational Preparation of RNs Employed

The majority of the RNs employed in all of the healthcare industries listed in Table 16 were prepared at the associate and baccalaureate level, with associate degree nurses being the majority in hospitals, LTC/SNF, home health, and hospice. The majority (55.0%) of RNs in psychiatric hospitals were BSN prepared as well as nearly half (47.0%) of public health nurses. Over 6 percent of the public health nurses were prepared at the Masters' level, compared to 3.5 percent of the RNs employed in hospitals. It is also interesting to note that public health reported the largest percentage of RNs prepared at the doctoral level.

Table 16. Educational Preparation of RNs in Louisiana according to Health Care Industry Group 2013-2014

Type of Degree	Hospital n=58 %	Psych Hospital n=12 %	LTC/SNF n=77 %	Home Health n=71 %	Hospice n=46 %	Public Health n=55 %
Diploma	3.7%	13.2%	6.2%	8.6%	6.6%	6.0%
AD	52.4%	30.3%	59.3%	53.8%	57.1%	35.0%
BSN	40.2%	55.0%	32.5%	36.1%	32.7%	47.0%
Masters	3.5%	1.4%	1.9%	1.5%	3.3%	11.0%
Doctorate	0.04%	0.08%	0.0%	0.0%	0.29%	1.0%

Hiring of New Graduates, Nurse Residency, Pay Differential, and Educational Support

In the 2014 Employer Survey, employers were asked questions about hiring practices related to new graduates, residency programs, pay differentials, and support for nurses to go back to school. A total of 850 new RN grads and 242 new LPN grads were hired in the last year by the responding healthcare industries with the majority of new RN graduates being hired by hospitals and the majority of new LPN graduates being hired by LTC/SNF (Table 17). Sixty-four percent of the hospitals said that they hired new graduates, 27 percent preferred BSN graduates, and 15 percent paid a differential for a BSN. A little over three fourths (76%) of the hospitals indicated that they provided support for their nurses to go back to school. Seventy-six percent of the LTC/SNF facilities reported hiring new LPN graduates, but only 26 percent said they hired new RN graduates. The Office of Public Health prefers to hire RNs with a minimum of a baccalaureate degree in nursing and supports nurses that are continuing their education. Across the board, very few of the healthcare facilities offered a nurse residency program for their new graduates.

Table 17. New RN and LPN Graduates Hired in the Last Year by Responding Health Care Industries (2013-2014)

	Hospital	Psych Hospital	LTC/SNF	Home Health	Hospice
Hire New RN Grads	64%	19%	26%	1%	4%
How Many RN Grads Hired	812	2	33	1	2
Prefer RNs with BSNs	27%	0%	8%	16%	26%
Hire New LPN Grads	38%	6%	76%	N/A	N/A
How Many LPN Grads Hired	76	5	161	N/A	N/A
Nurse Residency Program	6%	6%	0%	1%	4%
Pay Diff for BSN	15%	0%	3%	2%	16%
Support Nurses in School	76%	38%	33%	43%	45%

Major Findings

➤ *Demand for Additional RNs in Louisiana*

A rough estimate of demand for additional RNs in 2014-2015, for the healthcare industries surveyed can be computed by adding the estimated number of vacancies in 2014 (2,652) to the projected growth over the next year for RNs (1,741), which equals a demand for 4,393 new RNs in 2014-2015. This is the number of new nurses needed to fill all vacant positions in these industries along with the new positions they will create in 2015.

In 2014 there were 2,081 new RN graduates and 1,864 new RN endorsements into the state, which equals a total of 3,945 new RNs available to meet the additional demand (2014 LSBN Annual Report). The number of new RNs does not quite cover the estimated demand for additional RNs, and the true demand (incorporating other industries not surveyed) may be higher still. Although this is a crude comparison, it suggests that Louisiana is not in a state of RN surplus – as has been feared by some, owing to the poor economy and recent national increase in RN graduates – and may move even more into shortage territory as 2015 proceeds.

On the one hand, this is good news for new graduate RNs in Louisiana, who anecdotal reports suggest have been struggling to find employment across the nation in recent years. Indeed, the 2011 and 2013 LCN New Graduate Surveys revealed that 94 percent of Louisiana's newly licensed RNs are successful in finding jobs. On the other hand, if shortage conditions worsen, the working conditions of these new nurses, and the ability of facilities to handle today's complex patient load, may deteriorate.

➤ *Vacancies and Vacancy Rates*

When compared to 2010, the number of estimated RN vacancies increased in most healthcare industries surveyed with the greatest increase noted in hospitals (1,022 in 2010 and 2,033 in 2014). The majority of the RN vacancies across healthcare industries (2,504) were for direct care RNs. The majority of NP vacancies (57) and CRNA vacancies (12) occurred in hospitals, whereas the majority of the LPN vacancies were in LTC/SNF (443) followed by hospitals (271). Over half (61.5%) of the vacant NA positions were in LTC/SNF facilities. Public health went from zero direct care RN vacancies in 2010 to twenty-one vacancies reported in 2014.

➤ *Separations and Turnover Rates*

Between July 1, 2013 and June 30, 2014 (or the most current report year), there were an estimated 6,602 RN separations, 3,509 LPN separations and 9,817 NA separations. The majority of the separations for RNs were within hospitals, whereas the majority of the separations for LPNs and NAs were in LTC/SNF and hospitals. There were also 129 APRN separations, the majority of which were for nurse practitioners (NPs) working in hospitals.

Between 2010 and 2014, the number of separations for RNs across all healthcare industries surveyed increased except for home health and public health, while the number of LPN and NA separations decreased, with the most significant decrease occurring among NAs.

The median turnover rate for direct care RNs in hospitals, the largest personnel category identified in the Nurse Employer survey in terms of budgeted positions, was 13.8 percent over the course of one year compared to a median overall turnover rate of 17.0 percent for all RNs employed by responding hospitals in 2010.

Psychiatric hospitals had the highest median turnover rate for direct care RNs (56.6%) and NAs (45.8%). The largest median turnover rate for LPNs occurred in LTC/SNF (33.3%). Dialysis centers had a zero percent median turnover rate for direct care RNs. The average turnover rate for direct care RNs working in public health was 8.6 percent and 13.3% for indirect care RNs compared to an overall turnover rate for all RNs in 2010 of 12 percent.

➢ *Expected Growth Rate for 2015*

The healthcare industry group with the greatest overall expected annual growth rate for all types of nursing personnel was hospice, showing an expected growth rate of 29.1 percent for direct care RNs, 26.4 percent for indirect care RNs, 25.0 percent for LPNs, and 24.4 percent for NAs which is consistent with 2010 findings.

Home health came in second in terms of the highest growth rate over the next year for direct care RNs (16.2%), LPNs (21.9%) and NAs (13.4%).

➢ *Difficult Clinical or Administrative Positions to Fill*

Administrators/Supervisors represented one of the top five most difficult positions to fill in six healthcare industry groups, similarly to findings in the 2010 Nurse Employer Survey. Direct care staff RN positions/clinic staff RNs were also ranked as one of the top five most difficult positions to fill by psychiatric hospitals, LTC/SNF, home health, and public health. Case managers/discharge planners were reported as the most difficult positions to recruit for four of the five health care industries

Direct care staff RNs were not identified as one of the top most difficult positions to fill in hospitals.

➢ *Educational Preparation of RNs*

The majority of the RNs employed in all of the healthcare industries were prepared at the associate and baccalaureate level, with associate degree nurses being the majority in hospitals, LTC/SNF, home health, and hospice. Public health had the largest percentage of baccalaureate prepared RNs of all of the healthcare industries surveyed.

Sixty-four percent of the hospitals said that they hired new graduates, 27 percent preferred hiring BSN graduates, and 15 percent paid a differential for a BSN. A little over three fourths (76%) of the hospitals indicated that they provided support for their nurses to go back to school. Seventy-six percent of the LTC/SNF facilities reported hiring new LPN graduates, but only 26 percent said they hired new RN graduates. Across the board, very few of the healthcare facilities offered a nurse residency program for their new graduates.

Recommendations

➢ Continue to support Louisiana's nursing programs through federal, state, and private funding to ensure that there will be a continuous pipeline of new RNs available to meet the ongoing demand for nurses in Louisiana.

➢ Academic nurse leaders across all schools of nursing should work together to increase the proportion of nurses with a baccalaureate degree by partnering with education accrediting bodies, private and public funders, and employers to ensure funding, monitor progress, and increase the diversity of students to create a workforce prepared to meet the demands of diverse populations across the lifespan (IOM Report on the Future of Nursing, 2011).

➢ Seek funding to develop nurse residency programs that will prepare new graduates for successful transition into practice in both traditional (i.e., acute care) and nontraditional settings (i.e., LTC/SNF, home health).

➢ Provide nurses that are interested in taking on leadership positions within the various healthcare industries with the advanced education and training needed to successfully function as a leader.

➢ Work with healthcare industries that are experiencing large turnover rates to develop a plan of action to increase retention of nurses within their facilities, thereby decreasing the cost associated with high turnover rates.

➢ Support the Office of Public Health in securing state funding to fill permanent direct care RN staff positions.

➢ Develop nurse demand snapshots, or one-pagers, for each type of healthcare industry surveyed, making the information readily available to employers, policy makers, and other interested stakeholders.

➢ Repeat the Nursing Workforce Demand Study biennially for healthcare industries that employ the majority of nurses to allow LCN to track trends related to vacancy rates, turnover rates, and expected growth rates.

➢ Utilize findings from the Nursing Workforce Demand Study and the Nursing Education Capacity and Supply Report, to update the assumptions in Louisiana's Statewide Multi-Regional Nursing Workforce Forecasting Model.

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Appendix A

Regional Labor Market Areas in Louisiana

Louisiana's Eight Regional Labor Market Areas

__Region 1__   Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist and St. Tammany Parishes

__Region 2__   Ascension, East Baton Rouge, East Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, Tangipahoa, Washington, West Baton Rouge and West Feliciana Parishes

__Region 3__   Assumption, Lafourche and Terrebonne Parishes

__Region 4__   Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, St. Mary and Vermilion Parishes

__Region 5__   Allen, Beauregard, Calcasieu, Cameron and Jefferson Davis Parishes

__Region 6__   Avoyelles, Catahoula, Concordia, Grant, LaSalle, Rapides, Vernon and Winn Parishes

__Region 7__   Bienville, Bossier, Caddo, Claiborne, DeSoto, Lincoln, Natchitoches, Red River, Sabine and Webster Parishes

__Region 8__: Caldwell, East Carroll, Franklin, Jackson, Madison, Morehouse, Quachita, Richland, Tensas, Union and West Carroll Parishes

Appendix B

Bias Analysis

Two variables – number of licensed beds and rurality - were used to determine the representativeness for hospitals, psychiatric hospitals, and long term care facilities. The information obtained from DHH's lists of hospitals and skilled nursing facilities included number of beds for all hospitals, psychiatric hospitals, and long term care facilities/skilled nursing facilities.

Bias Analyses Based on Bed Size – Hospitals, Psychiatric Hospitals, LTC/SNF

When hospitals, psychiatric hospitals, and LTC/SNF were categorized according to size (small and large), the bias analysis revealed that there was very little difference between the response rate for small and large healthcare facilities, which suggest very little response bias owing to bed size between responding and nonresponding healthcare facilities (Table 1).

The hospitals surveyed had a total of 16,598 licensed hospital beds, and the responding hospitals had a total of 8,170 beds or 49.2 percent of the total number of hospital beds in the state. It is important to note that most hospitals with skilled nursing facilities either housed within their hospital or on another campus preferred to include the SNF nursing workforce on the hospital employer survey. Therefore, the vast majority of facilities included under the category of LTC/SNF were independent long term care facilities. The total number of beds for LTC/SNF facilities that were surveyed was 35,572 with 12,764 beds or 36 percent accounted for by responding facilities.

Table 1. Response Rates by Facility Size – Hospitals, Psychiatric Hospitals, and LTC/SNF

Facility Size	Total in Category	# Responding	Response Rate in Category
Hospitals			
Small	94	46	48.94%
Large	91	41	45.05%
Psychiatric Hospitals			
Small	20	8	40.00%
Large	22	8	36.36%
LTC/SNF			
Small	140	51	36.43%
Large	139	49	35.25%

Note: Hospitals were classified as small if they had 40 beds or less (the median) and large if they had more than 40 beds; Psychiatric Hospitals were classified as small if they had less than or equal to 21 beds (the median) and large if they had more than 21 beds; LTC/SNF were classified as small if they had less than or equal 124 beds (the median) and large if they had more than 124 beds.

Bias Analyses Based on Rurality – Hospitals, Psychiatric Hospitals, LTC/SNF

Geographical location, rural vs urban, was also used to determine representativeness of the responding healthcare industries. The Federal Office of Rural Health Policy (ORHP) defines

rural as any geographical area located outside a metropolitan statistical area (MSA). MSAs are defined as a core geographical area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core (U.S Census, 2013).

When assessing the rurality of responding and nonresponding hospitals and LTC/SNF, the bias analysis revealed very little bias if any based on rurality (Table 2). In contrast, the bias analysis for psychiatric hospitals revealed that there was a substantial difference between the response rate for rural psychiatric hospitals and the response rate for urban psychiatric hospitals primarily owing to the underrepresentation of urban psychiatric hospitals. This is important to keep in mind when looking at findings from the employer survey in that there could potentially be significant bias toward psychiatric hospitals in rural areas.

Table 2. Response Rate by Rurality – Hospitals, Psychiatric Hospitals, LTC/SNF

Rurality	Total Hospitals in Category	# Hospitals Responding	Response Rate
Hospitals			
Rural	62	33	53.23%
Urban	123	54	43.90%
Psychiatric Hospitals			
Rural	7	5	71.43%
Urban	35	11	31.43%
LTC/SNF			
Rural	106	41	38.68%
Urban	173	59	34.10%

Representativeness of Remaining Healthcare Industries

The bias analysis for the remaining healthcare industries were based on rurality (Figure 1). There were very little difference in the response rates between rural and urban home health agencies, but differences were noted in response rates between rural and urban dialysis centers owing to the small number of dialysis centers (6) in rural areas when compared to urban areas (147). There also seemed to be a bias toward FQHCs in rural areas when compared to urban areas which was most likely attributable to more rural FQHCs responding to the survey (12) than FQHCs in urban areas (3). A bias analysis was not conducted for public health because each of the fifty-five public health units/clinics were represented in the single survey completed by the Office of Public Health.

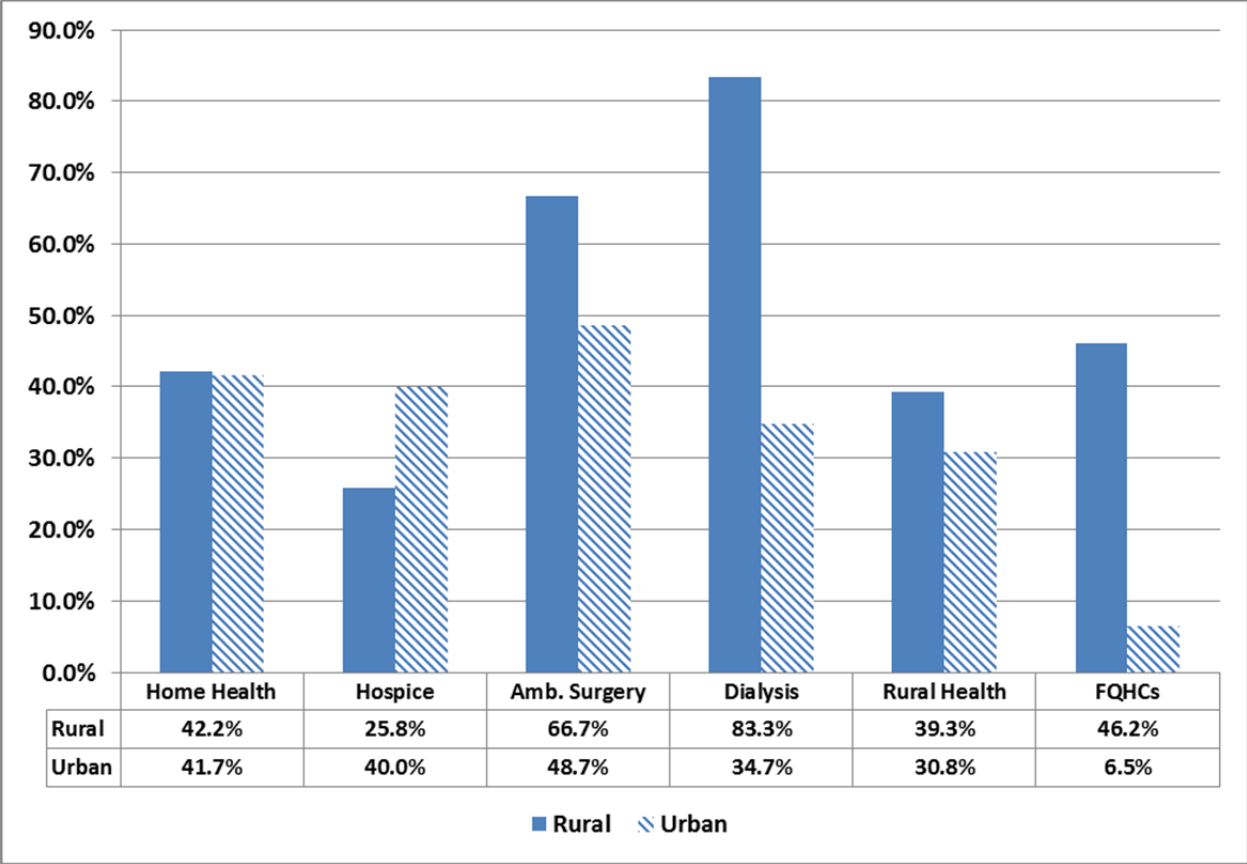|	Home Health	Hospice	Amb. Surgery	Dialysis	Rural Health	FQHCs
Rural	42.2%	25.8%	66.7%	83.3%	39.3%	46.2%
Urban	41.7%	40.0%	48.7%	34.7%	30.8%	6.5%

Figure 1. Rural and Urban Response Rates by Remaining Healthcare Industries