



The Economic Benefits of Resolving Florida's Nursing Shortage

The Florida Center for Nursing's Board of Directors has proposed a set of strategies for resolution of the nursing shortage in Florida that include 1) retaining existing nurses in the Florida nurse workforce by improving the nursing work environment, 2) maximizing capacity within Florida nurse education programs in order to increase the number of new graduate nurses, and 3) planning for nursing needs in a strategic, data-driven fashion.¹ Solutions to the nursing shortage are often viewed as *costs* to be borne by the state legislature, nurse employers, professional and trade organizations, and other stakeholders who recognize the value of an adequate nurse supply for the health of Floridians. Years of research have made clear the association between adequate nurse staffing and positive patient outcomes,² and many stakeholders have evaluated the benefits of quality healthcare as worth these costs.

The tangible *economic benefits* of resolving Florida's nursing shortage may be less obvious:

- If vacant nursing positions were filled, the salaries earned by these nurses would contribute to the gross state product, propelling economic growth in Florida as nurses spend their wages on goods and services in the state.
- Salaries earned by these employed nurses would also contribute to state and local tax revenues, which would help to offset the costs of state-funded efforts to resolve the shortage.
- Adequate nurse staffing in our state's healthcare facilities would help to reduce nurse turnover, a costly loss of productivity that increases the operating costs of facilities and ultimately the healthcare costs – in out-of-pocket expenses and health insurance premiums – for Floridians.
- Improved patient outcomes are not only desirable for social and moral reasons; they may also help to decrease the cost of healthcare for employers and consumers.
- Expansion of nursing programs, while generally viewed as a cost, actually benefits the local economy when students and their families spend money in college and university communities and when new graduates choose to stay in the communities in which they were educated.

Economic Benefits of Filling Current Vacancies

The Center conducted a survey of nursing-intensive healthcare settings in the summer of 2007, obtaining information on the number of full and part time vacancies that existed in responding facilities as of June 30, 2007.³ The information provided by respondents was used to estimate the statewide number of vacant full-time equivalent (FTE) positions reported in our recent forecast of licensed nurse supply and demand.⁴ We separated those vacancies by healthcare setting and used salary data from multiple sources⁵ to estimate the economic impact of filling vacancies in each setting. Table 1 provides our overall estimates for Registered Nurse (RN) and Licensed Practical Nurse (LPN) FTE vacancies, the average salaries for those vacant positions, and the estimated economic impact of filling the positions.

Table 1. Estimated Impact of Filling Vacant Licensed Nurse FTEs

Nurse Type	Estimated # of Vacant FTEs	Average Annual Salary for These Vacancies	Estimated Combined Annual Earnings	Estimated State and Local Tax Revenues on Combined Earnings
RN	10,850.0	\$55,148.19	\$598,355,144.69	\$44,278,280.71
LPN	2,644.2	\$40,279.25	\$106,504,785.30	\$7,881,354.11
Totals	13,494.2		\$704,859,929.99	\$52,159,634.82

If the estimated vacancies in 2007 were filled by nurses who earn an average salary within each setting experiencing the vacancy, *over \$700 million* would enter Florida’s economy annually by way of spending on goods and services. In addition to the economic benefits of spent salaries, state and local governments would generate additional revenue due to taxes. The tax burden of the average Floridian is estimated at 7.4 percent of per capita income,⁶ and when applied to the estimated combined earnings reported above, we find that *\$52 million* in revenue could be collected annually by state and local government in Florida if these vacancies were filled.

Tempering these estimates is the fact that some vacancies could be filled by nurses who currently work outside the field of nursing and thus already contribute to state and local economies in their current jobs. On the other hand, nurse employers in each of the five industries also reported that they expected substantial growth in budgeted positions during calendar year 2008. The Center estimated that more than 6,400 new RN positions and 1,800 new LPN positions were expected by employers in the five industries we surveyed in 2007.⁷ As we enter the latter half of 2008, it is possible that newly created positions – were they filled – would add even more to the economic benefits of resolving the nursing shortage.

Economic Benefits of Reducing Nurse Turnover

Employee turnover is inevitable, since individuals retire, change jobs to advance careers, and find positions that better fit their interests and goals. Some turnover may even be desirable for employers, such as turnover that leads to new employees with fresh ideas or the loss of less competent or motivated employees.⁸ Excessive position turnover, however, is costly for employers in a number of ways: expense related to recruiting and hiring costs, lost productivity when positions are vacant or new employees are being trained, and increased payments for overtime hours or agency personnel to fill the gap. Excessive turnover may occur because of a poor nursing work environment in individual facilities, but labor market shortages also contribute to turnover. When nurses are unavailable to fill vacant positions, existing staff must work longer and take on heavier workloads – leading to burnout, stress, and eventual turnover. A vicious cycle of turnover and increasing facility-level staffing shortages can ensue.

A number of researchers have estimated the cost of replacing a single nurse, and estimates range widely. The rule of thumb reported in the literature is at least as much as one year’s salary for the position vacated, considering direct (recruiting, hiring) and indirect (lost productivity) costs.⁹

Turnover costs in the aggregate can be astonishingly high. The New York State Nurses Association reported RN turnover costs in New York State to be as much as \$1 billion dollars in

2002.¹⁰ It is possible to estimate the cost of nurse turnover in Florida using data from the Center’s 2007 Nurse Employer Survey and the average salary figures used to estimate the economic benefits of filling vacancies. The number of separations (turnover) was multiplied by the estimated annual salaries of RNs within each industry surveyed. Our overall economic impact estimates for RN and LPN turnover is reported in Table 2.

Table 2. Economic Impact of Turnover in Fiscal Year 2006-2007

Industry Group	Estimated # of Separations in FY 2006-2007	Estimated Cost of Turnover at One Year’s Salary Per Position
RNs	18,717.7	\$1,054,543,576.32
LPNs	9,091.9	\$369,187,145.60
Totals	27,809.6	\$1,423,730,721.92

The combined cost of turnover for RNs was estimated as slightly more than \$1 billion dollars in fiscal year 2006-2007, comparable to estimates released for New York state in 2002. We estimate another \$369 million was spent on LPN turnover in fiscal year 2006-2007.

Turnover costs cannot be completely eliminated, of course, but reductions in turnover could be achieved if the nursing shortage were resolved and nursing work environments improved. The \$1.4 billion spent on licensed nurse turnover could certainly be reduced, and facility-level cost savings could lead to higher quality, less expensive healthcare.

Other Economic Benefits of Resolving the Shortage

An emerging body of research suggests that the improved patient outcomes associated with adequate nurse staffing may have economic benefits as well, though research results are mixed and further study is needed.² Needleman and colleagues attempted to quantify the cost benefits of increased nurse staffing,¹¹ reasoning that the increased costs associated with employing more nurses should be offset to some extent by the cost savings of reducing adverse outcomes for patients. Their national estimates of cost for increased staffing, and reduced costs of prevented complications and reduced lengths of stay, showed a small *cost savings* for facilities when the proportion of licensed nurse hours performed by RNs was increased. Horn made a similar case for nurse staffing in long-term care, finding that increasing RN time per resident day from less than 10 minutes to 30-40 minutes generated a societal benefit of \$3,191 per resident year.¹² Continued research into the cost benefits of improved staffing will supplement the already well-established benefits for patient outcomes of this practice. Adequate facility-level staffing also depends on the availability of nurses in local labor markets. Resolving the shortage will allow facilities to take advantage of these cost offsets and improved patient outcomes.

Nursing education program expansion, while typically viewed as a cost for state governments, also produces economic benefits for the state and for the communities in which nursing programs are housed. Starck and Williams attempted to estimate the impact of one nursing program in Texas on the state and local economies, considering the potential earning power of graduates, personal and university expenditures associated with the program, and the impact of state and

local tax resources.¹³ They concluded that the economic benefits of nursing programs were many times over the costs of these programs to the Texas government.

It is critical for stakeholders to recognize the long-term economic promise – as well as the short-term costs – of resolving the Florida nursing shortage. Our state and local economies, and most importantly Florida’s residents, will benefit from more aggressive actions to resolve the shortage by government, nurse employers, and our state’s colleges and universities.

¹ Florida Center for Nursing. (2007). *Addressing the Nursing Shortage in Florida: Strategies for Success*. Retrieved June 30, 2008 from http://www.flcenterfornursing.org/files/FCN_Strategies_for_Success_Dec_2007.pdf

² Unruh, L. (2007). “Nurse Staffing and Patient, Nurse, and Financial Outcomes” *American Journal of Nursing* 108(1): 62-71.

³ Florida Center for Nursing. (2008). *2007 Nurse Employer Survey Methods and Statewide Results*. Retrieved June 15th, 2008 from http://www.flcenterfornursing.org/files/2007_Employer_Survey_Report.pdf

⁴ Florida Center for Nursing. (2008). *Forecasting Supply, Demand, and Shortage of RNs and LPNs in Florida, 2007-2020*. Retrieved September 2, 2008 from http://www.flcenterfornursing.org/files/RN_LPN_Forecasts.pdf

⁵ Salary data for hospitals was obtained from the Florida Hospital Association’s Annual Non-Management Salary Survey. The average hourly wage for RNs on medical-surgical units was used to estimate the annual salary of hospital-based RNs. Average hourly wage data for skilled nursing facilities and home health agencies were obtained from Florida’s Agency for Workforce Innovation. The Office of Public Health Nursing in Florida provided annual salary data for nurses in public health departments. The salary of Senior Community Health Nurses was used.

⁶ Prante, G. (2008). *Tax Foundation State and Local Tax Burden Estimates for 2008: An In-Depth Analysis and Methodological Overview*. Washington, D.C.: Tax Foundation.

⁷ Florida Center for Nursing. (2008). *Statewide Vacancies and Job Growth Expectations in Nursing-Intensive Healthcare Settings*. Retrieved June 15th, 2008 from http://www.flcenterfornursing.org/files/Vacancies_Job_Growth.pdf

⁸ Jones, C. (2007) “The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention” *Online Journal of Issues in Nursing* 12(3): 7p.

⁹ Robert Wood Johnson Foundation. (2006). *Wisdom at Work: The Importance of the Older and Experienced Nurse in the Workplace*. Princeton, NJ: Robert Wood Johnson Foundation.

¹⁰ Webber, N. (2005.) “The Hidden Costs of RN Turnover” *NYSNA Report* 36(2): 1.

¹¹ Needleman, J., P. Buerhaus, M. Stewart, K. Zelevinsky, and S. Mattke. (2006). “Market Watch: Nurse Staffing in Hospitals: Is There A Business Case for Quality?” *Health Affairs* 25(1): 204-211.

¹² Horn, S. (2008). “The Business Case for Nursing in Long-Term Care” *Policy, Politics, and Nursing Practice* 9(2): 88-93.

¹³ Starck, P. and W. Williams. (1988). “What Does Nursing Education Cost? Turning the Question Around” *Journal of Professional Nursing* 4: 38-44.