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The Illinois Nursing Shortage: Assessing the Need for Safe Patient Limits and Collective Bargaining

Jill Manzo
Frank Manzo IV
Robert Bruno



Project for Middle Class Renewal
Labor Education Program
School of Labor and Employment Relations



Executive Summary

Illinois is experiencing a shortage of Registered Nurses (RNs). This shortage of RNs is caused by numerous factors, including rising demand for health care services, the labor market competitiveness of Illinois nursing jobs, and insufficient staffing levels that can exacerbate the occupational hazards of the profession and undermine the quality of patient care.

While demand for care is rising, the nursing workforce is not keeping pace.

- By 2060, the 65 years old and older population is expected to more than double.
- 89 percent of Illinois nurses are women and 50 percent are aged 55 years old and older.
- Over the next ten years, Illinois is estimated to need more than 19,100 additional RNs, a projected employment growth of 15 percent– nearly triple the rate for other occupations.

Occupational hazards are a barrier to retaining qualified nurses.

- Registered Nurses suffer from overexertion, sprains, cuts, workplace violence, sexual harassment, psychological trauma, and other injuries.
- Illinois has the 2nd-highest injury rate for nurses in the Midwest.
- An estimated 30 to 50 percent of all new RNs decide to either change positions or leave nursing completely within the first three years of clinical practice.

Registered Nurses are highly educated but relatively underpaid in Illinois.

- In Illinois, 67 percent of full-time RNs have at least a bachelor's degree.
- Illinois' full-time RNs earn between 6 percent and 10 percent less than their counterparts in other states, relative to their high levels of educational attainment.
- Average pay for full-time RNs in Illinois ranks 22nd in the nation– trailing states like Minnesota, Wisconsin, Louisiana, and Texas.

Increased access to collective bargaining can improve the labor market competitiveness of nursing occupations.

- Unionization fosters higher incomes for RNs in Illinois, lifting their weekly wages by between 13 percent and 15 percent.
- For every dollar invested in union membership RN's earnings rise by \$12.
- Currently, only 17 percent of Illinois nurses are union members.

Safe patient limits promote better outcomes for patients, workers, and health care facilities.

- 75 percent of Registered Nurses report that understaffing affects the quality of their care.
- A comparison between Illinois and eight neighboring Midwest states reveals that as nurse staffing levels increase, injury rates for nurses fall.
- Mortality rates are 17 percent lower in hospitals with above-average nurse staffing levels.
- After California implemented safe patient limits for nurses, the likelihood of in-patient death, the time spent in intensive care units, and hospital readmission rates all fell.
- Research has found that by improving patient outcomes, reducing injuries, and decreasing employee turnover costs, safe patient limits produce financial savings for hospitals.

To improve patient outcomes, Illinois needs to attract and retain more Registered Nurses. Broader support for collective bargaining can encourage more competitive RN salaries. In addition, safe patient limits for nurses would help reduce occupational hazards– which can dissuade many from joining the profession– while also improving patient outcomes and saving lives.

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About the Authors

Jill Manzo is the Midwest Researcher at the Illinois Economic Policy Institute (ILEPI). She earned a Bachelor of Arts in Political Science and International Studies from Iowa State University. She can be contacted at jmanzo@midwestepi.org.

Frank Manzo IV, M.P.P. is the Policy Director of the Illinois Economic Policy Institute (ILEPI). He earned his Master of Public Policy from the University of Chicago Harris School of Public Policy. He can be contacted at fmanzo@illinoisepi.org.

Robert Bruno, Ph.D. is a Professor at the University of Illinois at Urbana-Champaign School of Labor and Employment Relations and is the Director of the Project for Middle Class Renewal. He earned his Doctor of Philosophy in Political Theory from New York University. He can be contacted at bbruno@illinois.edu.

Introduction

Nurses play a central role in the health care system and in communities across America. While many nurses work in hospitals, many others work in schools, small clinics, private homes, and assisted living facilities— impacting all residents in a local community. Everyone needs the care of a nurse at some point in their lives, whether as a young child who has broken a bone, as an elderly individual who will need a knee replacement, or as a working-age adult recovering from an injury or illness.

While nursing can provide pathways into the middle class for women, who make up 89 percent of the nursing workforce, the nursing industry is experiencing a shortage of workers across the United States (Carnevale et al., 2015). An aging population, the increasing frequency of chronic disease, and limited capacity in nursing education programs have all contributed to the nursing shortage. In addition, many factors have made nursing a less attractive career opportunity for women and men. Insufficient resources and staffing levels have led to nurses being stressed and overworked. Violence and harassment in the workplace increase job dissatisfaction and health risks. To address the nursing shortage, governments and the health care industry may need to implement safe patient limits and boost competitive pay to attract individuals to this demanding but rewarding career.

This Illinois Economic Policy Institute (ILEPI) and Project for Middle Class Renewal (PMCR) at the University of Illinois at Urbana-Champaign report discusses the shortage of Registered Nurses (RNs) and presents data on the level of educational attainment and compensation for full-time RNs in Illinois. Then, the potential for union organizing to help increase the number of workers who pursue careers in nursing is evaluated. Finally, data are subsequently compared on resources, staffing levels, and occupational injury rates for Illinois and neighboring Midwest states before considering the effects of safe patient limits (also called “safe-staffing ratios”) on patient health outcomes. A concluding section recaps key findings.

Supply and Demand Causes of the Shortage of Registered Nurses in Illinois

In economics, a labor shortage is caused by problems on one or both sides of the supply and demand equation. Public policies, societal trends, and employers each play a role in increasing demand for a specific occupation. On the supply side, if young individuals are not joining the career due to occupational hazards such as harassment or because it requires a significant investment of time and money to acquire the necessary skills, then a workforce shortage may occur. A workforce shortage can also be caused by a high turnover rate; stress and burnout are among the top six causes for turnover among nurses (UNM, 2016). Often, the simplest solution to a workforce shortage is for employers to offer a competitive salary that attracts workers into the field, allows educational investments to pay off, and compensates for the risks or undesirable attributes of the career.

The United States is experiencing a shortage of Registered Nurses (RNs) that is only expected to worsen over time. There are many causes of this workforce shortage, such as the increasing demand for health services from the aging Baby Boomer generation. By 2060, the 65 years old and older population is expected to reach 98 million residents, more than double the 46 million residents in this

age group in 2016. This is likely to cause a 75 percent increase in the number of elderly Americans requiring nursing home care, as both Alzheimer's disease and obesity rates are on the rise among older adults (Mather, 2016).

Aging also affects the nursing workforce. A 2013 survey conducted by researchers at the National Council of State Boards of Nursing and the Forum of State Nursing Workforce Centers found that 53 percent of the nation's RN workforce is 50 years old or older (Budden et al., 2013). As a result, about 500,000 RNs are expected to retire by 2022 (ANA, 2018). In Illinois, a more-recent survey of the state's nursing workforce estimated that 50 percent of respondents were 55 years old or older, with one-third intending to retire within the next five years (ICN, 2017). Over the next ten years, Illinois is expected to need more than 19,100 additional RNs, a projected employment growth of 15.3 percent—nearly triple the state's 5.8 percent growth rate for all occupations (IDES, 2018). The combination of an aging population and a workforce nearing retirement exacerbates the nursing shortage.

The limited resources of nursing schools are another factor. According to the American Association of Colleges of Nursing, U.S. nursing schools turned down over 64,000 qualified applicants in 2016 due to budget constraints, insufficient faculty, and limited classroom space. Bachelor's programs in nursing are not enrolling enough nurses to meet the projected demand for nursing services (Rosseter, 2017). A recommendation to resolve this issue—which may be caused by inadequate funding by public sector entities and private health care providers—is beyond the scope of this analysis.

Consequently, many hospitals, nursing homes, veterans' homes, rehabilitation centers, mental health centers, and other health care facilities report insufficient staffing levels, which negatively impact both patients and the existing RN workforce. Insufficient staffing causes high stress levels that hurt job satisfaction. More than 75 percent of RNs report that the nursing shortage adversely affects the quality of their work life, the quality of patient care, and the amount of time nurses can devote to each patient. Fully 98 percent of RNs believe that the nursing shortage in the future will increase workplace stress and 93 percent say that it will cause nurses to leave the profession altogether (Rosseter, 2017).

In addition to stress caused by understaffing, RNs also face occupational hazards such as workplace violence and sexual harassment. Workers in the health care industry regularly experience threats of violence varying from verbal to physical to sexual abuse. In fact, violence in the health care industry "accounts for almost a quarter of all violence at work" (di Martino, 2003).

A report by Professor Emily E. LB. Twarog at the University of Illinois at Urbana-Champaign recently surveyed 275 nurses in Illinois. Fully 75 percent of nurses reported that workplace violence was a problem. Of nurses who experienced workplace violence, 90 percent experienced violence at least once in the past 12 months, with 50 percent experiencing it 6 or more times. The experiences ranged from verbal threats and name calling to physical assaults, such as pinching, punching, kicking, and having objects thrown at them. Furthermore, sexual assault and threats such as stalking, groping, and sexual harassment accounted for a significant portion of these events. The report found that one-fourth of nurses in Illinois suffered from "psychological symptoms such as anxiety [and] sleeplessness" and over one-third of nurses reported "difficulty concentrating on the job," citing "mental exhaustion and fatigue" and "low morale" (Twarog, 2018).

While strong job growth makes nursing an attractive route to upward economic mobility, both supply and demand factors have fostered a nursing shortage in Illinois and across the United States. The aging workforce is increasing the demand for new nurses. However, insufficient staffing levels, high patient-to-nurse ratios, and workplace violence are all causing stress and reducing job satisfaction—causing an estimated 30 to 50 percent of all new RNs decide to either change positions or leave nursing completely within the first 3 years of clinical practice (Aiken et al, 2002; MacKusick & Minick, 2010). Evidence suggests that addressing these issues and offering compensation that offsets the risks and hazards of the job are likely critical to resolving the nursing shortage.

Illinois Nurses are Highly Educated but Relatively Underpaid

Illinois has a highly educated workforce. Approximately 41 percent of all full-time Illinois workers have a bachelor’s degree or higher—ranking 9th in the nation. Due to high levels of educational attainment, Illinois workers are well compensated with competitive salaries. In 2016, the average full-time Illinois worker earned \$65,300 in 2016—9th in the nation (Figure 1).

Registered Nurses in Illinois are also highly educated and increasingly receive additional training in specialty areas. Yet these workers are comparatively underpaid. In Illinois, about 67 percent of all full-time RNs have at least a bachelor’s degree. Illinois’ nursing workforce ranks 14th nationally in terms of educational attainment. However, the average full-time RN—working at least 35 hours per week and at least 48 weeks per year—earned \$66,400 in Illinois in 2016, an income that places Illinois nurses just 22nd across the United States (Figure 1).

Figure 1: Full-Time Income and Educational Attainment in Illinois (and Rank), Registered Nurses and All Workers, 2016

Educational Attainment or Income Metric	Illinois	Illinois Rank	USA
Full-Time Workers with At Least a Bachelor’s Degree	41.0%	9 th	37.2%
Average Full-Time Worker Salary	\$65,286	9 th	\$61,309
Full-Time RNs with At Least a Bachelor’s Degree	67.0%	14 th	61.9%
Average Full-Time RN Salary	\$66,401	22 nd	\$69,198
Nurse Compensation Premium	+1.7%	--	+12.9%

Source(s): 2016 American Community Survey (Ruggles et al., 2018).

While more nurses have bachelor’s degrees than the overall full-time workforce in Illinois, RNs do not earn an income premium over the average full-time worker in the state. RNs nationally earn 12.9 percent more than the average full-time worker; in Illinois, full-time RNs only earn 1.7 percent more than the average full-time worker. Overall, the compensation premium for choosing to work in nursing is currently 10.2 percent lower in Illinois (Figure 1).

Illinois also has a higher cost of living than neighboring Midwest states. Still, Illinois’ nurses earn less on average than their counterparts in Minnesota (\$67,900 per year) and Wisconsin (\$67,600 per year).

Illinois' nurses even earn less than their counterparts in lower-wage states like Arizona (\$73,200 per year) and Texas (\$68,100 per year) (Figure 2).

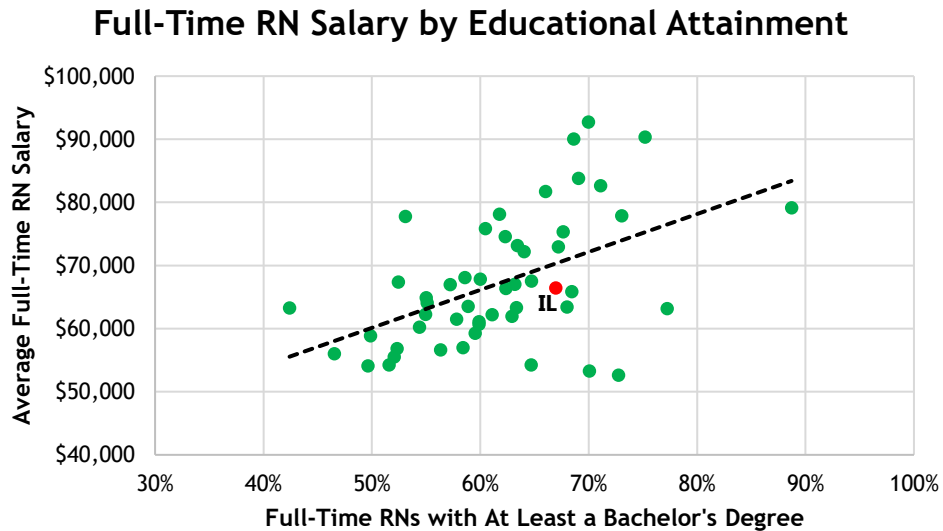
Figure 2: Full-Time Income and Educational Attainment by State, Registered Nurses, 2016

Salary Rank	State	Average Full-Time RN Salary	Share with Bachelor's Degree	Salary Rank	State	Average Full-Time RN Salary	Share with Bachelor's Degree
1	California	\$92,758	70.0%	26	New Hampshire	\$64,085	55.1%
2	Alaska	\$90,387	75.2%	27	Florida	\$63,524	58.9%
3	Hawaii	\$90,048	68.6%	28	Maine	\$63,441	68.0%
4	Massachusetts	\$83,842	69.1%	29	Idaho	\$63,330	63.3%
5	New Jersey	\$82,667	71.1%	30	Wyoming	\$63,298	42.4%
6	Oregon	\$81,729	66.0%	31	Vermont	\$63,184	77.2%
7	Rhode Island	\$78,121	61.8%	32	Ohio	\$62,263	55.0%
8	Connecticut	\$77,874	73.0%	33	Kansas	\$62,223	61.1%
9	New Mexico	\$77,782	53.1%	34	Georgia	\$61,973	62.9%
10	Delaware	\$75,840	60.5%	35	South Carolina	\$61,538	57.8%
11	New York	\$75,350	67.6%	36	North Carolina	\$61,099	59.9%
12	Nevada	\$74,605	62.3%	37	Missouri	\$60,716	59.9%
13	Arizona	\$73,185	63.4%	38	Oklahoma	\$60,268	54.4%
14	Maryland	\$72,985	67.2%	39	Indiana	\$59,278	59.5%
15	Washington	\$72,191	64.0%	40	Arkansas	\$58,861	49.9%
<i>US</i>	<i>United States</i>	<i>\$69,198</i>	<i>61.9%</i>	41	Tennessee	\$57,007	58.4%
16	Texas	\$68,093	58.6%	42	Montana	\$56,870	52.3%
17	Minnesota	\$67,860	60.0%	43	Mississippi	\$56,653	56.3%
18	Wisconsin	\$67,557	64.7%	44	Alabama	\$56,029	46.5%
19	Utah	\$67,385	52.4%	45	Kentucky	\$55,532	52.1%
20	Louisiana	\$67,044	63.2%	46	Iowa	\$54,275	51.6%
21	Virginia	\$66,984	57.2%	47	South Dakota	\$54,270	64.7%
22	Illinois	\$66,401	67.0%	48	West Virginia	\$54,112	49.6%
23	Pennsylvania	\$66,392	62.3%	49	Nebraska	\$53,316	70.1%
24	Colorado	\$65,898	68.5%	50	North Dakota	\$52,658	72.7%
25	Michigan	\$64,902	55.0%				

Source: 2016 American Community Survey (Ruggles et al., 2018).

In general, nurses across the United States are compensated based on their skills and high levels of education. Figure 3 graphically illustrates the average annual wage and salary income of full-time Registered Nurses by the share of those nurses with at least a bachelor's degree by state. There is a clear positive correlation between the educational attainment of the RN workforce and their average annual salary; states with a more highly educated RN workforce tend to have a more highly paid RN workforce. However, salaries in Illinois—marked in red—fall below the average “expected” annual income based on education. If Illinois nurses were to be paid at the expected level based on the national correlation, they would earn approximately \$70,319 annually. This is \$3,918, or 5.9 percent, more per year than the current average for full-time RNs in Illinois.

Figure 3: Graph of Full-Time Income and Educational Attainment by State, RNs, 2016



Source(s): 2016 American Community Survey (Ruggles et al., 2018).

Whether Illinois' full-time RNs are compared to other full-time workers in the state or other full-time RNs across the country, the finding is consistent: Illinois' nurses are relatively underpaid. The market analysis reveals that Illinois' nurses are expected to earn between 6 percent and 10 percent more, on average, than they currently do in the state. It is clear that one approach to combatting Illinois' current nursing shortage would be to provide RNs a competitive level of pay to attract, develop, and retain a skilled and talented workforce.

Unionization Boosts Salaries and Can Attract Talent

One way to boost the compensation of Registered Nurses in Illinois is to support efforts to organize into unions. Numerous studies have shown the positive impact that unionization has on raising incomes and improving equality. One 2018 report, for example, found that union membership has raised American worker incomes every year for the past 80 years, with an average earnings increase of between 15 percent and 20 percent for union members (Faber et al., 2018). In addition, if private-sector union density had not declined since 1979, *nonunion* weekly wages would have been 5 percent higher for male workers and about 3 percent higher for female workers (Rosenfield et al., 2016). As the gradual decline in union membership depressed the earnings of working-class men and women, both union and nonunion alike, it has contributed to growing economic inequality. In fact, research shows that the drop in unionization has accounted for between one-fifth and one-third of the growth in inequality since the 1970s (Western & Rosenfeld, 2011). Reversing this trend, especially in health care, could help address inequality, boost earnings for a mostly-female RN workforce, and attract talented young job seekers into the industry.

About one-in-six nurses in Illinois are union members (Figure 4). According to five years of data from the *Current Population Survey Outgoing Rotation Groups* (CPS ORG) conducted by the Bureau of Labor Statistics (BLS) at the U.S. Department of Labor, an estimated 17.0 percent of all Illinois nurses were union members from 2013 through 2017. While Illinois’ nurses had a higher unionization rate than Illinois workers overall (15.1 percent) during this time, the share of Illinois’ nurses in a union was lower than the U.S. average for nurses (17.5 percent) (CEPR, 2018).

Figure 4: Unionization Rate of Registered Nurses and All Workers, Illinois and USA, 2013-2017

Unionization Rate	Illinois	United States
All Workers	15.1%	11.0%
Registered Nurses	17.0%	17.5%
Difference	+1.9%	+6.5%

Source(s): 2013-2017 Current Population Survey Outgoing Rotation Groups (CEPR, 2018).

Registered Nurses in Illinois statistically earn higher weekly earnings if they are union members. Figure 5 displays results from a simple t-test on the real weekly wages of union nurses compared to nonunion nurses in Illinois. The five-year dataset includes 506 responses from employed Registered Nurses in Illinois with a margin of error of ± 4.4 percent. The real, inflation-adjusted weekly earnings of Illinois nurses are about \$168 higher if they are union members, or more than \$8,700 per year. This is statistically significant and represents a 14.8 percent union wage premium (Figure 5).

Figure 5: Inflation-Adjusted Union Wage Premium, Registered Nurses, Illinois, 2013-2017

Group	Observations	Real Weekly Wages	Standard Error
Union Registered Nurses	86	\$1,299.34	(31.46)
Nonunion Registered Nurses	420	\$1,131.50	(75.34)
Difference	–	+\$167.84	(77.43)
Statistically Significant?	t= 2.17	YES	

Source(s): 2013-2017 Current Population Survey Outgoing Rotation Groups (CEPR, 2018).

Nationally, there were responses from 14,864 Registered Nurses– enough to conduct an advanced analysis on the impact of union membership on weekly wages (Figure 6). After accounting for other important factors such as age, gender identification, racial or ethnic background, urban status, and sector of employment, union membership is found to statistically boost earnings for U.S. nurses by about \$149 per week, or more than \$7,700 per year. This represents a 13.3 percent union wage premium for U.S. nurses– close to but slightly less than the Illinois estimate from Figure 5.

Figure 6: Inflation-Adjusted Union Wage Premium, Registered Nurses, USA, 2013-2017

Variable	Coefficient	Standard Error	t=
Union Membership	148.84***	(20.78)	7.16
<i>Controls: Age, Gender, Race, Citizenship Status, Urban Status, Public Sector, and Educational and Health Services Industry, State Dummies Observations= 14,864 Registered Nurses from 2013 through 2017; Weighted R²= 0.13</i>			

Source(s): 2013-2017 Current Population Survey Outgoing Rotation Groups (CEPR, 2018).

Accordingly, the analysis reveals that unionization fosters higher incomes for Registered Nurses in Illinois, lifting their weekly wages by between 13 percent and 15 percent. This estimated union wage premium for nurses is in line with the union wage premium of all Illinois workers. A recent study found that the union wage premium of all Illinois workers is about 11 percent (Manzo et al., 2018). Thus, one

of the most effective ways to raise the wages of Registered Nurses in Illinois would be promote collective bargaining among the state’s nurses.

Economic data clearly demonstrates that Registered Nurses benefit substantially from joining nurses’ unions. Figure 7 uses data filed in annual LM-2 union reports to show the union dues and agency fees collected by the Illinois Nurses Association over the five-year period from Fiscal Year 2013 through Fiscal Year 2017 (OLMS, 2018). After adjusting for inflation, the average membership dues equate to about \$734 per year, or about \$14 per week, for unionized RNs in Illinois. This is just a fraction of the nearly \$8,700 per year salary increase associated with union membership.

Figure 7: Inflation-Adjusted Union Dues and Fees Per Member, Illinois Nurses Association, FY2013-FY2017

LM-2	Members	Inflation-Adjusted Dues Per Member
FY2013	2,900	\$756
FY2014	3,008	\$732
FY2015	3,192	\$717
FY2016	3,312	\$721
FY2017	3,195	\$748
SUM	15,607	\$734
AVG	3,121	\$734

Source(s): Illinois Nurses Association LM-2 Reports for FY2013-FY2017 (OLMS, 2018).

Unionization boosts the average RN’s weekly earnings by about \$168 in Illinois at a cost of just \$14 per week in dues. This means that unionized RNs earn \$12 in income for every \$1 contributed in membership dues– nearly a 1,100 percent return on investment (Figure 8). This financial return on investment is in addition to other personal benefits that come from union membership, such as improved health coverage, legal representation, and a greater voice in bargaining for better staffing levels and related workplace issues.

Figure 8: Inflation-Adjusted Union Wage Premium to Membership Dues Return-on-Investment Ratio, Illinois, 2013-2017

Inflation-Adjusted Benefit-to-Cost Ratio	Annual	Weekly
Benefit: Union Wage Premium	\$8,728	\$168
Cost: Membership Dues and Fees	\$734	\$14
Return on Investment Per Dollar	+\$11.88	+\$11.88

Source(s): 2013-2017 Current Population Survey Outgoing Rotation Groups (CEPR, 2018); Illinois Nurses Association LM-2 Reports for FY2013-FY2017 (OLMS, 2018).

More Resources Can Reduce Workplace Injuries and Improve Safety

Hospitals are one of the most hazardous places to work in America (OSHA, 2013). Registered Nurses and other hospital workers lift, reposition, and transfer patients who have limited mobility, which can cause overexertion, sprains, and strains. They are exposed to needlesticks, medical equipment, and substances that can cause cuts and other injuries. Workplace violence and sexual harassment can cause

psychological trauma. And, as tragic events at Chicago’s Mercy Hospital demonstrated in November 2018, hospitals are not immune to mass shootings (Grinberg et al., 2018). In terms of lost-time injury rates, it is more hazardous to work in a hospital than in construction or manufacturing (OSHA, 2013).

For Registered Nurses in the Midwest, fewer resources are associated with more workplace injuries and illnesses (Figure 9). In Illinois, the annual rate of on-the-job injuries and illnesses is 7.9 per 1,000 Registered Nurses. This is significantly higher, for example, than neighboring Iowa (4.9 injuries per 1,000 RNs). However, Iowa has 18.0 full-time RNs per 1,000 workers and 3.0 hospital beds per 1,000 residents compared to just 15.7 full-time RNs per 1,000 workers and 2.5 hospital beds per 1,000 residents in Illinois. The nonfatal injury rate is likely lower for Registered Nurses in Iowa because health care facilities are better staffed and have more resources to support RNs and care for patients.

Figure 9: Injury Rates, Full-Time RN Staffing Rates, and Hospital Bed Densities, Illinois and 8 Neighboring States, 2016

State	Average Full-Time RN Salary	Nonfatal Injuries and Illnesses Per 1,000 Registered Nurses	Full-Time RNs Per 1,000 Workers	Hospital Beds Per 1,000 Residents
Illinois	\$66,401	7.9	15.7	2.5
Indiana	\$59,278	7.0	16.9	2.6
Iowa	\$54,275	4.9	18.0	3.0
Kentucky	\$55,532	7.7	19.8	3.2
Michigan	\$64,902	7.8	15.1	2.5
Minnesota	\$67,860	12.1	14.5	2.6
Missouri	\$60,716	3.2	17.5	3.0
Ohio	\$62,263	6.2	19.0	2.9
Wisconsin	\$67,557	7.4	14.7	2.1

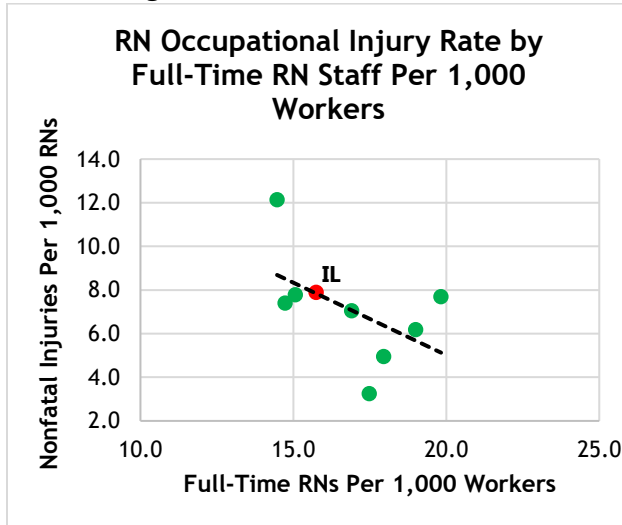
Source(s): 2016 American Community Survey (Ruggles et al., 2018); “Nonfatal Cases Involving Days Away from Work” (BLS, 2018); Henry J Kaiser Family Foundation (KFF, 2016).

Figures 10 and 11 visually display the relationship between health care resources and RN injury rates in Illinois and eight nearby states. There is a negative association between full-time RNs per 1,000 workers and the rate of RN occupational injuries in a state, with a strong correlation coefficient of -0.53 (Figure 10). In other words, as nurse staffing levels increase, injury rates for nurses tend to fall. Likewise, the number of hospital beds per 1,000 residents has an inverse relationship with the rate of RN occupational injuries in a state (Figure 11). The moderate correlation coefficient of -0.40 means that states with relatively more resources tend to have lower injury rates for nurses. To improve workplace safety, reduce stress, and make nursing a more attractive career opportunity, the data indicate that Illinois should boost the number of full-time Registered Nurses and reduce overcrowding in hospitals by investing in more hospital beds and other resources.

Currently, at least 14 U.S. states— including Illinois— have passed laws which address nurse staffing levels in hospitals. In Illinois, hospitals are required to publicly disclose staffing levels. In addition, Illinois law prohibits health care employers from mandatory overtime except in emergency situations and stipulates that any nurse who works 12 consecutive hours in a shift must immediately be given at

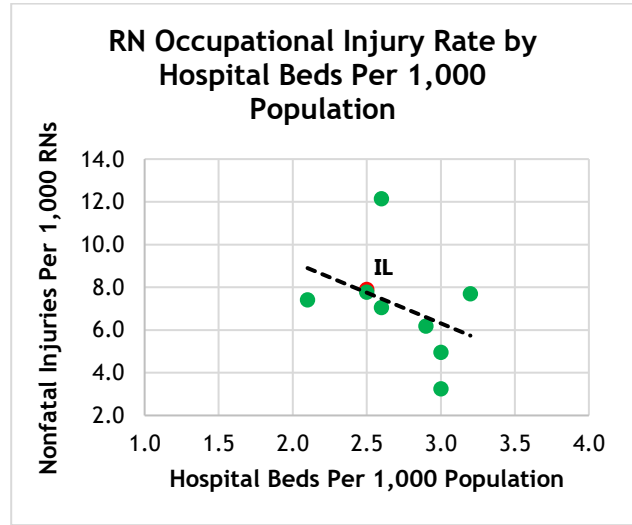
least 8 consecutive hours of rest (AFL-CIO DPE, 2014). Illinois does not, however, have safe patient limits for nurses, which could reduce nurse stress levels and improve nurse retention rates while improving patient outcomes and saving lives. In fact, Illinois nurses report that they are sometimes responsible for as many as 15 patients at one time (Mahr, 2019; Berens, 2000).

Figure 10: Injury Rates and Full-Time RN Staffing Rates, 9 Midwest States, 2016



Source(s): 2016 American Community Survey (Ruggles et al., 2018); "Nonfatal Cases Involving Days Away from Work" (BLS, 2018).

Figure 11: Injury Rates and Hospital Bed Densities, 9 Midwest States, 2016



Source(s): 2016 American Community Survey (Ruggles et al., 2018); Henry J Kaiser Family Foundation (KFF, 2016).

Safe Patient Limits Promote Better Health Outcomes for Patients

Safe patient limits save lives. Numerous studies have found that safe patient limits (also sometimes referred to as "safe-staffing ratios") are necessary for effective patient care. For example, high nurse-to-patient ratios are associated with an increase in medical errors, patient infections, bedsores, and heart failure as well as higher rates of hospital mortality (Laschinger et al., 2006; Hughes, 2008; Aiken et al., 2007; Neuraz et al., 2015). In trauma centers, wait times for diagnostic evaluation increased from 30 minutes to 61 minutes when an emergency room nurse cared for three additional patients in 24 hours—increasing the likelihood of patient mortality (Shindul-Rothschild et al., 2017a). Another recent study found that mortality rates of patients undergoing general surgery in hospitals with above-average nurse staffing levels are 17 percent lower than those with below-average nurse staffing levels (Silber et al., 2016).

Safe patient ratios are also associated with greater patient satisfaction. Research has found that inadequate RN staffing levels can cause lower levels of patient surveillance, less patient education, and fewer patients receiving timely medications. As a result, the most important factor affecting hospital patient satisfaction is the availability of Registered Nurses (Aiken et al., 2018). In addition, patients' perceptions of pain control have been found to significantly improve with higher numbers of nursing staff (Shindul-Rothschild et al., 2017b).

After becoming the first state to implement safe patient limits for nurses in 2004, patient health outcomes improved in California. California mandated that there be at least one nurse for every 2 patients in intensive care units, 3 patients in labor and delivery, 4 patients in pediatrics, 5 patients in medical-surgical units, and 6 patients in psychiatrics.¹ After California implemented these safe patient limits, the likelihood of in-patient death within 30 days of hospital admission fell, patient time spent in the intensive care unit fell by 24 percent, and patient time spent in surgical units fell by 31 percent (Aiken et al., 2010; Kane et al., 2007). Moreover, in a recent study on pneumonia readmission rates in hospitals, research has found that California has statistically lower rates of readmission than Massachusetts and New York due to the higher levels of RN staffing (Flanagan et al., 2016).

At the same time, research has found that safe patient limits have no negative impact on the financial performance of hospitals. Adding RNs to the workforce improves patient health outcomes, which produces medical savings (Silber et al., 2016). Additionally, more RNs on staff help reduce occupational injuries, resulting in additional financial savings for hospitals. Finally, safe patient limits have been found to improve the recruitment and retention of nurses, helping to reduce turnover costs for employers (Aiken et al., 2010). Specifically, researchers at the University of Florida, Suffolk University, and the University of Alabama-Birmingham have found that nurse staffing levels had a positive association with financial performance— especially in competitive hospital markets (Everhart et al., 2013). Instead of imposing significant costs on health care facilities, safe patient limits can improve hospital profit margins.

Similarly, recent research by economists at the University of Massachusetts Amherst, the University of Wisconsin-Milwaukee, and University of Maryland, College Park has revealed that nurses' unions also improve patient outcomes. Using data on hospital unionization in California between 1996 and 2005, the economists found that unionized hospitals outperformed hospitals that did not have a union election in 12 of 13 nurse-sensitive patient outcome measures. In particular, the research found that nurses' unions reduce the rates of pulmonary failure, central nervous system disorders such as depression and delusion, and metabolic derangement by between 15 percent and 60 percent (Dube et al., 2016). The researchers surmised that nurses' unions improve patient outcomes because they boost nurse retention, morale, and effectiveness from higher compensation. They also noted that many nurses' unions collectively bargain for safe patient limits. Thus, promoting unionization may be a way to produce hospital-level safe patient limits that positively impact patient outcomes.

¹ While California has, at most, 6 patients to a nurse, media reports show that some Illinois health facilities currently assign as many as 15 patients to a single nurse (Mahr, 2019; Berens, 2000).

Conclusion

Illinois is experiencing a shortage of Registered Nurses (RNs). Illinois is projected to need 15 percent more RNs over the next ten years, nearly triple the employment growth rate for the entire state economy. This shortage of RNs is caused by numerous factors, including the growth in health care patients due to the aging Baby Boomer generation and insufficient staffing levels– which are associated with high stress levels and low job satisfaction.

Occupational hazards are a barrier to retaining qualified nurses. Registered Nurses suffer from overexertion, sprains, cuts, workplace violence, sexual harassment, psychological trauma, and other injuries. As a result, many nurses decide to either change positions or leave nursing completely after just a few years in the profession.

The simplest solution to a labor shortage is for employers to offer a competitive salary that attracts workers into the field, allows educational investments to pay off, and compensates for occupational hazards. In Illinois, RNs are highly educated, with 67 percent of full-time RNs having at least a bachelor's degree. However, Illinois' full-time RNs earn between 6 percent and 10 percent less than their counterparts in other states relative to their high levels of educational attainment.

One way to boost the compensation of Registered Nurses in Illinois is to support collective bargaining. Unionization fosters higher incomes for Registered Nurses in Illinois, lifting their weekly wages by between 13 and 15 percent. While every dollar invested in union membership dues raises an RN's earnings by \$12, only 17 percent of Illinois nurses are currently union members.

Safe patient limits save lives. Patient mortality rates are 17 percent lower in hospital with above-average nurse staffing levels. Safe patient ratios also reduce patient times spent in intensive care and surgical units, increase patient satisfaction, and decrease hospital readmission rates. A comparison between Illinois and eight neighboring Midwest states also reveals that as nurse staffing levels increase, injury rates for nurses fall. Finally, safe patient limits can enhance the financial performance of hospitals by improving care, reducing occupational injuries, and lowering employee turnover costs.

To improve patient outcomes, Illinois needs to attract and retain more Registered Nurses. Broader support for collective bargaining can encourage more competitive RN salaries. In addition, elected officials in Illinois could follow California's lead in implementing safe patient limits for nurses to reduce occupational hazards– which can dissuade many from joining the profession– while also improving patient outcomes and saving lives.

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