



Pandemic Preparedness in Illinois

Illinois' Union Hospitals Were
Better Positioned for the
Public Health Crisis

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Executive Summary

The coronavirus (COVID-19) pandemic has strained hospitals and exposed weaknesses in Illinois' health care system. By the end of June 2020, more than 142,000 people had tested positive for the virus and more than 7,000 residents had died. According to the Illinois Department of Public Health, more than 9,500 health care workers in the state have tested positive and more than 60 health care workers have died.

Prior to the COVID-19 outbreak, Illinois was already facing a shortage of about 20,000 registered nurses.

- Half of Illinois' nurses are 55 years old or older.
- 75 percent of registered nurses say that insufficient staffing levels hurts their job satisfaction.
- Illinois would have been better positioned to address the COVID-19 pandemic if the state had "safe patient limits," which would have eliminated the shortage of registered nurses and improved patient outcomes— including pneumonia readmissions rates in hospitals.

In Illinois, union hospitals were generally better prepared for the COVID-19 pandemic than nonunion hospitals. Compared with their nonunion counterparts, Illinois' union hospitals:

- Maintain better staffing levels, with registered nurses able to devote between 1 and 4 extra hours of care per patient compared with their counterparts at nonunion hospitals;
- Have up to 14 percent lower turnover for registered nurses;
- Have up to 45 percent fewer vacancies for registered nurses;
- Employ slightly more infection prevention and control staff, especially in Cook County; and
- Tend to be safer, healthier workplaces for frontline health care professionals, reporting 15 percent fewer OSHA violations and 29 percent fewer serious violations.

Illinois' hospitals have received at least \$1.1 billion in direct federal funding from the CARES Act.

- Union hospitals with at least 100 beds received \$107 million (\$26,148 per bed);
- Nonunion hospitals with at least 100 beds received \$737 million (\$30,336 per bed); and
- Smaller hospitals, which are primarily located in rural Illinois, received \$302 million.

With hospitals receiving over \$1 billion in federal subsidies and union hospitals being better positioned to deal with the pandemic, interest in union organizing is high in Illinois. Nurses' unions are the most highly-regarded type of union, enjoying positive net favorability ratings among both Republicans and Democrats. Additionally, union hospitals have been found to outperform nonunion hospitals on 12 out of 13 nurse-sensitive patient outcomes, including hospital-acquired pneumonia and in-hospital deaths.

While further research is necessary to discuss the performance of Illinois' hospitals during the COVID-19 pandemic, the data suggests that union hospitals were generally better prepared than nonunion hospitals. Union hospitals had better nurse staffing levels, better retention rates for registered nurses, and lower vacancy rates for registered nurse positions. Union hospitals also had slightly more infection prevention and control staff, particularly in Cook County. Finally, union hospitals in Illinois had safer and healthier workplaces for health care professionals on the frontlines of the COVID-19 pandemic. Greater unionization of Illinois' health care workforce could be an effective tool for addressing the ongoing nursing shortage and ensuring that the state is better prepared for future public health crises.

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Introduction

Across the country, the novel coronavirus disease (COVID-19) pandemic has strained hospitals and health care systems. States and health care administrators have worked to add more hospital beds, obtain more personal protective equipment (PPE), and reassign staff in response to the virus. The pandemic has exposed weaknesses in the nation’s preparedness and ability to manage public health crises.

The COVID-19 pandemic occurred at the same time that the United States was facing a shortage of registered nurses (Fitzpatrick et al., 2020; Rosseter, 2019; Carnevale et al., 2015). Registered nurses, the backbone of the United States’ health care system, have been even more critical during the coronavirus outbreak, which has resulted in more than 125,000 American deaths as of June 29, 2020 (CDC, 2020a). Nurses have been vital in hospitals, nursing homes, and correctional facilities that have seen the largest spread of COVID-19 cases.

The same is true in Illinois, which has been disproportionately impacted by COVID-19. The first confirmed case of COVID-19 in Illinois was reported on March 14, 2020, although recent research has found that the virus was most likely spreading rapidly before testing became available and the first cases were known (IDPH, 2020a; Carey & Glanz, 2020). A little over three months since the first confirmed case of COVID-19 in Illinois, more than 142,000 people have tested positive for the virus across Illinois and more than 7,000 residents have died, including confirmed and probable deaths (IDPH, 2020a). More than 9,500 health care workers have tested positive and more than 60 health care workers have died, according to the Illinois Department of Public Health (Goldberg, 2020a). The initial lack of personal protective equipment (PPE) for frontline workers in Illinois’ health care facilities likely worsened the public health crisis (Walsh, 2020).

This Illinois Economic Policy Institute (ILEPI) report discusses the preparedness of Illinois’ hospitals prior to the COVID-19 pandemic in terms of staffing levels. The report analyzes differences in hospitals with unionized staff compared with nonunion hospitals to assess both preparedness and on-the-job risk for registered nurses. The report also explores federal CARES Act funding for Illinois hospitals. A concluding section recaps key findings.

COVID-19 Could Exacerbate the Shortage of Registered Nurses in Illinois

Prior to the COVID-19 outbreak, Illinois was already facing a shortage of about 20,000 registered nurses (Manzo et al., 2019; Bruno et al., 2019). Much of this shortage is attributable to the aging of the nursing workforce, with 50 percent of registered nurses in Illinois being 55 years old or older (ICN, 2017). Another driver of the shortage of registered nurses is the overall stress associated with the profession. Even prior to the pandemic, more than 75 percent of registered nurses reported that insufficient staffing levels adversely affects their job satisfaction (Rosseter, 2019). COVID-19 has the potential to exacerbate the nursing shortage if registered nurses feel even more overworked and stressed.

The data suggests that Illinois would have been better positioned to address the COVID-19 pandemic if the state had “safe patient limits.” Under a proposed bill to enact safe patient limits (also sometimes referred to as “safe-staffing ratios”) in Illinois, no nurse working in a hospital would be responsible for more than 4 patients at a time, with lower nurse-to-patient ratios for ICUs and emergency rooms (Vollmer, 2019). If the legislation had been fully implemented, Illinois would have had between 17,500 and 19,100

more registered nurses– which would have eliminated the shortage of registered nurses (Bruno et al., 2019; Manzo, 2019).

Safe patient limits have been found to improve patient health outcomes while having little to no impact on hospital bottom lines (Flanagan et al., 2016). Safe patient limits reduce the likelihood of in-hospital death within 30 days of admission and patient time spent in ICUs (Aiken et al., 2010; Kane et al., 2007). Moreover, safe patient limits have led to lower pneumonia readmission rates in hospitals– an important finding because people who get infected with COVID-19 can get severe pneumonia and require a ventilator (Flanagan et al., 2016; WebMD, 2020). At the same time, research has found that safe patient limits have no negative effect on the financial performance of hospitals. Adding registered nurses to the workforce limits hospital readmission rates, and decreases occupational injuries and reduces turnover rates, saving money for hospitals (Silver et al., 2016; Manzo, 2019; Everhart et al., 2013).

In the absence of a safe patient limits law in Illinois, policymakers considered other ways to increase the number of health care professionals and address the insufficient staffing levels at Illinois’ hospitals. Elected officials called on retired and out-of-state nurses to come and temporarily assist “hot spot” areas with too few health care professionals (Spetz, 2020). By mid-April, about 3,600 retired and out-of-state health care professionals had applied to join Illinois in the fight against COVID-19 (Miller, 2020). This increase in health care professionals– only some of whom are registered nurses– represented just a fraction of professional nursing workforce needed in Illinois.

Examining Overall Staffing Preparedness at Illinois’ Hospitals

During public health crises, hospital emergency preparedness– defined as “the ability to effectively maintain hospital operations, sustain a medically safe environment, and adequately address the increased and potentially unusual medical needs of the affected population”– is put to the test (Muchmore, 2017). Leading up to the COVID-19 pandemic, some Illinois hospitals were better prepared for a public health crisis than others. This section uses data from the *Illinois Hospital Report Card* compiled by the Illinois Department of Public Health to assess preparedness based on hospital beds, nurse turnover rates, nurse vacancy rates, and the number of infection prevention and control staff.

Figure 1: Hospitals in Illinois by Ownership (Excluding Federally-Operated) and Location, 2019

Type of Hospital	State of Illinois	Cook County	Rest of Illinois
All Hospitals	169	50	119
Not-for-profit	90	27	63
Not-for-profit, Church-operated	42	14	28
For-profit	12	5	7
Local government	24	3	21
State government	1	1	0

Source(s): Illinois Department of Public Health’s *Illinois Hospital Report Card* (IDPH, 2020b).

The *Illinois Hospital Report Card* data include information on 169 hospitals in Illinois, but excludes hospitals operated by the federal government (e.g., hospitals managed by the Veterans Health Administration). Most Illinois hospitals are not-for-profit (53 percent) or affiliated with religious organizations (25 percent). About 1-in-7 hospitals are locally-owned (14 percent) while 1-in-14 are for-

profit hospitals (7 percent) (Figure 1). About 3-in-10 hospitals are located in Cook County (30 percent) while 7-in-10 are located in the rest of Illinois (70 percent).

According to information provided by the Illinois Nurses Association and obtained from the Occupational Safety and Health Administration (OSHA) at the U.S. Department of Labor, 14 of Illinois’ 169 non-federal hospitals (8 percent) are unionized (Figure 2). Most of these union hospitals are located in Cook County. Of the 50 hospitals in Cook County, 10 have union representation for frontline nursing staff (20 percent) and 40 do not (80 percent).

Figure 2: Hospitals in Illinois by Union Representation Status and Location, 2019

Hospitals by Union Status	State of Illinois	Cook County	Rest of Illinois
All Hospitals	169	50	119
Union Hospitals	14	10	4
Nonunion Hospitals	155	40	115

Source(s): Illinois Department of Public Health’s Illinois Hospital Report Card (IDPH, 2020b), Illinois Nurses Association information (INA, 2020), and health and safety investigation data from the Occupational Safety and Health Administration (OSHA, 2020).

In part because they are more likely to be located in Cook County, union hospitals have 307 beds on average, 78 percent larger than the 173-bed average for nonunion hospitals (Figure 3). Union hospitals also have more intensive care unit (ICU) beds for patients requiring critical medical care. On average, union hospitals have 35 ICU beds compared with 18 ICU beds in nonunion hospitals. Overall, ICU beds account for 11 percent of all beds in union hospitals and 10 percent of all beds in nonunion hospitals in Illinois.

Figure 3: Number of Hospital Beds and ICU Beds by State Average, Union, and Nonunion Hospitals

Hospitals by Union Status	Hospital Beds	ICU Beds	ICU Share of All Beds
Average for All Hospitals	183.8	19.0	10.3%
Average for Union Hospitals	306.5	34.9	11.4%
Average for Nonunion Hospitals	172.7	17.8	10.3%

Source(s): Illinois Department of Public Health’s Illinois Hospital Report Card (IDPH, 2020b), Illinois Nurses Association information (INA, 2020), and health and safety investigation data from the Occupational Safety and Health Administration (OSHA, 2020).

Union hospitals in Illinois were generally better prepared for the COVID-19 pandemic than nonunion hospitals (Figure 4). Hospitals with union representation were more likely to have adequate staffing levels for registered nurses. In 2019, Illinois Department of Public Health reports indicate that the total number of hours worked by registered nurses divided by the total number of patients per day equaled 16.4 hours in the ICU units of union hospitals and 15.0 hours in the ICU units of nonunion hospitals. Similarly, in medical-surgical units, total registered nurse hours per patient per day averaged 11.1 hours in union hospitals compared with 6.7 hours in nonunion hospitals. These results suggest that staffing levels in union hospitals allow for between 1.3 and 4.4 extra hours of care by registered nurses per patient than nonunion hospitals. Higher nurse-to-patient ratios have been found to improve patient care and reduce hospital readmission rates (Laschinger et al., 2006; Hughes, 2008; Aiken et al., 2007; Neuraz et al., 2015). In fact, one study found that mortality rates of patients in hospitals with above-average nurse staffing levels are 17 percent lower than those with below-average nurse staffing levels (Silber et al., 2016). With better staffing levels, union hospitals may have been better prepared to handle the COVID-19 outbreak in Illinois.

Union hospitals also had lower annual turnover rates for registered nurses and fewer nurse vacancies (Figure 4). The turnover rates for registered nurses in nonunion hospitals were 20.4 percent in critical care

units and 21.8 percent in medical-surgical units. By contrast, the turnover rates for registered nurses in union hospitals averaged 19.0 percent in critical care units and 18.8 percent in medical-surgical units. Nurse turnover is thus between 6 percent and 14 percent lower in union hospitals than in nonunion hospitals.¹ Previous research has found that about 1,000 registered nurses are retained in Illinois’ hospitals for every 1 percentage-point reduction in the turnover rate (Bruno et al., 2019). Because union hospitals were better at retaining their RN workforce, they had 1 percent fewer RN vacancies in critical care units and 46 percent fewer vacancies in medical-surgical units.² High turnover rates and high vacancies can impose additional occupational hazards for nurses and undermine the quality of care, especially during a surge of patients requiring care.

Illinois licensing requirements direct hospitals to have infection prevention and control programs. These infection prevention programs are essential in reducing the spread of infections during hospital stays, with staff providing expertise in disease transmission and prevention (IDPH, 2020b). On average, union hospitals have 0.79 infection prevention and control staff per 100 beds while nonunion hospitals have 0.77 infection prevention and control staff per 100 beds, a minor difference (Figure 4).

Figure 4: Metrics on Staffing Preparedness for COVID-19 at Illinois Hospitals by Union Status, 2019

All Hospitals in Illinois	Union	Nonunion	Union Difference
<u>Critical Care Units</u>			
Total RN Nursing Hours Per Patient Per Day	16.4	15.0	+1.3
RN Turnover Rate	19.0%	20.4%	-1.3%
RN Vacancy Rate	7.3%	7.4%	-0.1%
<u>Medical-Surgical Units</u>			
Total RN Nursing Hours Per Patient Per Day	11.1	6.7	+4.4
RN Turnover Rate	18.8%	21.8%	-3.0%
RN Vacancy Rate	4.8%	8.7%	-4.0%
<u>Infection Specialists</u>			
Infection Prevention and Control Staff Per 100 Beds	0.79	0.77	+0.02
<u>Sample Size</u>			
Number of Hospitals	14	155	(8.3% of total)

Source(s): Illinois Department of Public Health’s Illinois Hospital Report Card (IDPH, 2020b), Illinois Nurses Association information (INA, 2020), and health and safety investigation data from the Occupational Safety and Health Administration (OSHA, 2020).

Cook County— which contains the City of Chicago— has been disproportionately impacted by the COVID-19 pandemic. As of June 29, 2020, fully 63 percent of all confirmed cases of the virus in the state and 66 percent of the COVID-19-related deaths were in Cook County (IDPH, 2020a). Limiting the hospital analysis specifically to Cook County reveals that union hospitals have significantly more infection prevention and control staff. There were 0.81 infection prevention and control staff per 100 beds in union hospitals in Cook County compared with just 0.60 staff per 100 beds in the county’s nonunion hospitals prior to the pandemic (Figure 5).

¹ In critical care units, the 1.3 percentage-point difference divided by the 20.4 percent nonunion baseline equals 6.4 percent lower turnover in union hospitals. In medical-surgical unions, the 3.0 percentage-point difference divided by the 21.8 percent nonunion baseline equals 13.8 percent lower turnover in union hospitals.

² In critical care units, the 0.1 percentage-point difference divided by the 7.4 percent nonunion baseline equals 1.4 percent fewer vacancies in union hospitals. In medical-surgical unions, the 4.0 percentage-point difference divided by the 8.7 percent nonunion baseline equals 46.0 percent fewer vacancies in union hospitals.

Similarly, prior to the COVID-19 pandemic, union hospitals in Cook County had higher staffing levels and lower turnover rates for registered nurses than their nonunion counterparts (Figure 5). Registered nurses devoted between 1.0 more hours and 5.6 more hours per patient per day in union hospitals than in nonunion hospitals. Registered nurse turnover was between 12 and 14 percent lower in Cook County’s union hospitals.³ With better workforce retention, union hospitals had between 12 and 26 percent fewer registered nurse vacancies in Cook County.⁴ Ultimately, the shortage of registered nurses was less acute at union hospitals than at nonunion hospitals, both in Cook County and in the rest of Illinois.

Figure 5: Metrics on Staffing Preparedness for COVID-19 at Cook County Hospitals by Union Status, 2019

All Cook County Hospitals	Union	Nonunion	Union Difference
<u>Critical Care Units</u>			
Total RN Nursing Hours Per Patient Per Day	16.7	15.7	+1.0
RN Turnover Rate	20.2%	23.4%	-3.2%
RN Vacancy Rate	8.2%	9.3%	-1.1%
<u>Medical-Surgical Units</u>			
Total RN Nursing Hours Per Patient Per Day	12.0	6.5	+5.6
RN Turnover Rate	19.9%	22.6%	-2.7%
RN Vacancy Rate	5.2%	7.0%	-1.8%
<u>Infection Specialists</u>			
Infection Prevention and Control Staff Per 100 Beds	0.81	0.60	+0.21
<u>Sample Size</u>			
Number of Hospitals	10	40	(20.0% of total)

Source(s): Illinois Department of Public Health’s Illinois Hospital Report Card (IDPH, 2020b), Illinois Nurses Association information (INA, 2020), and health and safety investigation data from the Occupational Safety and Health Administration (OSHA, 2020).

The working conditions of Illinois’ frontline health care employees are also noticeably better in union hospitals than in nonunion hospitals. Figure 6 presents data for all workplace investigations conducted by the Occupational Safety and Health Administration (OSHA) at Illinois’ hospitals from January 1, 2011 through December 31, 2019. The OSHA data does include hospitals operated by the federal government but excludes psychiatric and substance abuse hospitals. Over the 9-year period, there were 94 total investigations at Illinois hospitals— including 41 at union hospitals and 53 at nonunion hospitals (Figure 6).

Union hospitals tend to be safer, healthier workplaces for registered nurses in Illinois (Figure 6). During the 41 visits to union hospitals, OSHA investigators found at least one workplace safety violation on 14 occasions and reported 40 total violations, including 16 “serious violations.” By contrast, the 53 investigations at nonunion hospitals generated OSHA violations on 24 occasions and 61 total violations, of which 29 were deemed “serious violations.” Union hospitals averaged 1.0 total violations and 0.4 serious violations per OSHA investigation compared with 1.2 total violations and 0.5 serious violations per OSHA investigation for nonunion hospitals. Accordingly, union hospitals had 15 percent fewer OSHA violations and 29 percent fewer serious violations than nonunion hospitals in Illinois.

³ In critical care units, the 3.2 percentage-point difference divided by the 23.4 percent nonunion baseline equals 13.7 percent lower turnover in union hospitals. In medical-surgical unions, the 2.7 percentage-point difference divided by the 22.6 percent nonunion baseline equals 11.8 percent lower turnover in union hospitals.

⁴ In critical care units, the 1.1 percentage-point difference divided by the 9.3 percent nonunion baseline equals 11.8 percent fewer vacancies in union hospitals. In medical-surgical unions, the 1.8 percentage-point difference divided by the 7.0 percent nonunion baseline equals 25.7 percent fewer vacancies in union hospitals.

Figure 6: OSHA Investigations and Violations Rates at Illinois Hospitals, By Union Status, 2011-2019

Illinois Hospitals (Excluding Psychiatric & Substance Abuse)	Union	Nonunion	Union Difference
<u>OSHA Investigations, 2011-2019</u>			
Number of Investigations	41	53	(43.6% of total)
Investigations with at Least One Violation	14	24	(36.8% of total)
Total Number of Violations	40	61	(39.6% of total)
Total Number of Serious Violations	16	29	(35.6% of total)
Average Number of Violations Per Investigation	0.98	1.15	-15.2%
Average Number of Serious Violations Per Investigation	0.39	0.55	-28.7%
Share of Investigations with at Least One Violation	34.1%	45.3%	-11.1%

Source(s): Illinois Nurses Association information (INA, 2020) and health and safety investigation data from the Occupational Safety and Health Administration (OSHA, 2020).

Hospital Finances and Nurse Unionization During COVID-19

While Illinois’ hospitals have lost significant revenue during the COVID-19 pandemic due to an estimated 50 percent to 70 percent decrease in elective surgeries and outpatient revenues, these losses have been partially offset by federal funding (Goldberg, 2020b). As part of the effort to stabilize industries during the pandemic, the federal government allocated \$175 billion in relief funds to hospitals and other health care providers through the Coronavirus Aid, Relief, and Economic Security (CARES) Act and the Paycheck Protection Program and Health Care Enhancement Act. In particular, Illinois hospitals received at least \$1.1 billion in direct funding from the CARES Act, according to data from the Centers for Disease Control and Prevention (CDC, 2020c). Among the 100 non-federal hospitals in Illinois with at least 100 hospital beds, union hospitals received \$107 million in CARES Act funding (\$26,148 per bed) and nonunion hospitals received \$737 million (\$30,336 per bed). Small hospitals with fewer than 100 beds, which are primarily located in rural Illinois, received \$302 million in CARES Act funding (Figure 7).⁵

Figure 7: Federal CARES Act Funding (2020) to Illinois Hospitals by Ownership and Size (2019)

Type of Hospital (Excluding Federally-Owned)	Number of Hospitals	Hospital Beds	CARES Act Funding	CARES Act Funding Per Bed
All Hospitals	169	31,058	\$1,145,307,189	\$36,876
Union hospitals with 100+ beds	11	4,092	\$106,999,382	\$26,148
Nonunion hospitals with 100+ beds	89	2,4280	\$736,565,772	\$30,336
Small hospitals with under 100 beds	69	2,686	\$301,742,035	\$112,339

Source(s): Centers for Disease Control and Prevention’s “HHS Provider Relief Fund” (CDC, 2020c) and Illinois Department of Public Health’s Illinois Hospital Report Card (IDPH, 2020b).

With hospitals receiving over \$1 billion in federal subsidies and union hospitals being better positioned to deal with the pandemic, interest in union organizing is reportedly high in Illinois (Goldberg, 2020a). Nurses’ unions are the most highly-regarded type of union, with 28 percent more Americans supporting nurse’s unions than opposing them— including positive net favorability ratings among both Republicans

⁵ According to recent reports, some Chicago-area hospitals have decided to reduce the salaries of their CEOs and senior executives. For example, Trinity Health has implemented a three-month 25 percent base pay reduction and leaders at Edward-Elmhurst Health are taking pay cuts of between 15 percent and 25 percent through the end of June 2020 (Goldberg, 2020b). Chicago-area hospital CEOs, however, experienced an average annual raise of 37 percent as recently as 2017, so the average hospital executive still earns significantly more in 2020 than they did just a few years ago (Goldberg, 2019).

and Democrats (Wang & Gould, 2019). During COVID-19, nurses' unions in Illinois have advocated for personal protective equipment and winning both hazard pay and paid sick leave (Goldberg, 2020a). Recent research by economists at the University of Massachusetts Amherst, the University of Wisconsin-Milwaukee, and University of Maryland, College Park has found that union hospitals outperform nonunion hospitals in 12 out of 13 nurse-sensitive patient outcomes, including hospital-acquired pneumonia and in-hospital deaths (Dube et al., 2016). Nurses' unions enhance staffing levels, improve working conditions, boost nurse retention rates, and produce better patient health outcomes.

Conclusion

The COVID-19 pandemic has exposed weaknesses in Illinois' hospitals and health care systems. While about 3,600 retired and out-of-state health care professionals have volunteered to help Illinois during the outbreak, the state needed nearly 20,000 more registered nurses to provide the maximum level of patient care prior to the first confirmed case of COVID-19 in Illinois. With an aging workforce, the strain of the COVID-19 pandemic has the potential to further exacerbate the shortage of registered nurses in Illinois.

Further research is needed to assess the performance of Illinois' hospitals *during* the COVID-19 pandemic. This includes whether unionized hospitals had better outcomes than nonunion hospitals, particularly in Cook County which was hit hardest by the virus. However, *prior* to the pandemic, the data suggests that unionized hospitals were generally better prepared for the public health crisis than nonunion hospitals.

Union hospitals had better nurse staffing levels, better retention rates for registered nurses, and lower vacancy rates for registered nurse positions. Union hospitals also had slightly more infection prevention and control staff, particularly in Cook County. Finally, union hospitals in Illinois had significantly lower rates of OSHA violations, ensuring safer and healthier workplaces for health care professionals on the frontlines of the COVID-19 pandemic. One way ensure Illinois is better prepared for future pandemics is to encourage unionization at more hospitals in Illinois.

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