



The RN Work Project

A national study to track career changes among newly licensed registered nurses

INTRODUCTION

Anecdotal evidence suggested that first-time, newly licensed nurses had the highest job turnover rates in the profession. The RN Work Project, began in 2005 as a five-year project to learn when and why new nurses left their first jobs, collected solid survey data on the actual turnover rate to determine what factors caused nurses to leave their jobs within the first one to two years. The project was expanded to a 10-year longitudinal study in which the original cohort of nurses will be surveyed six times by the last survey in 2015. Two additional one-time survey cohorts and a substudy collected additional data on specific topics.

The Robert Wood Johnson Foundation (RWJF) allocated \$6,057,042 to the study, led by Christine Kovner, PhD, RN, FAAN, professor at the New York University College of Nursing, and Carol Brewer, PhD, RN, FAAN, associate dean for academic affairs and professor at the University at Buffalo School of Nursing.

The RN Work Project is part of RWJF's Human Capital portfolio. See [Appendix 1](#) for a list of individuals interviewed for this report.

WHAT IS THE STUDY ABOUT?

Newly licensed registered nurses (RNs)—those in the first 18 months following their first licensure—play an important role in health care and make up a large part of the hospital workforce. About 88 percent of all new nurses were likely to work in a hospital in 2003,¹ shortly before this study began, and the job turnover rate among new nurses during their first one to two years of work appeared to be high.

“There was a lot going on in the popular press about new nurses leaving nursing in their first year of work,” says Co-Director Kovner. “That did not jibe with what Carol [Brewer] and I, as nursing school faculty, knew about our students.” Diana J. Mason,

¹ Smith J and Crawford L. “Report of Findings from the Practice and Professional Issues Survey: Spring 2003.” Chicago: National Council of State Boards of Nursing. Reported in *NCSBN Research Brief*, vol. 15: 2004. Executive Summary available at www.ncsbn.org/RB15_S03PPI_ESforWeb.pdf.

PhD, RN, FAAN,² a member of the RN Work Project Advisory Committee, notes that “the literature on new graduates and their retention and the problems they face has been spotty. Rates reported for turnover varied from 15 percent to 78 percent.”

Leaders at RWJF were concerned about these estimates and also about projected shortages of nurses. “We were thinking about the shortage of nurses and that there are a lot of nurses who don’t stay in nursing,” says RWJF Senior Program Officer Nancy Fishman, MPH, who is the interim team director for the Human Capital Team. “We were thinking about the retention side as opposed to the supply side.” Nursing shortages periodically loom and abate in the health care field, and several previous RWJF initiatives had investigated expected shortfalls. The Foundation has addressed issues in nursing for many years. For more information, see [Appendix 2](#).

In 2005, RWJF asked Kovner and Brewer, who had worked on a national study of nurses’ work patterns funded by the federal Agency for Healthcare Research and Quality, to investigate why new nurses leave their jobs and where they go when they leave. The aim was to develop a national measure of new nurses’ job turnover that could inform workforce retention efforts.

After the Kovner/Brewer study (known as the RN Work Project) began, other considerations warranted continuing and then expanding the project. Patient safety and quality improvement emerged as key concerns of federal health care policy. The federal Centers for Medicare & Medicaid Services introduced policy changes that disallowed reimbursement for events such as hospital-occurring patient falls and ulcers, which they considered indicators of nursing quality, and required hospitals to report data on nursing care organized by quality indicators.

Health care reform also focused attention on nurses’ education and training levels. In 2008, the Institute of Medicine (IOM) began the two-year *Initiative on the Future of Nursing*, funded by RWJF, to help assess and improve the nursing profession to ensure that nurses would play a prominent and useful role in the rapidly evolving health care system. In 2010, the committee of experts convened by the IOM released *The Future of Nursing: Leading Change, Advancing Health*, a report that contained two messages related to nurses’ education:

- Nurses should practice to the full extent of their education and training.
- Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.

² Mason is director of the Center for Health, Media and Policy at Hunter College, City University of New York.

Even more specifically, the report recommended increasing the proportion of nurses with a baccalaureate degree from 50 percent to 80 percent and doubling the number of nurses with a doctorate by 2020.

With these many issues in mind, the RN Work Project became a way to learn not only about new nurses' job turnover and retention but also about what nurses know about quality improvement and whether they use it in their jobs, whether they seek more education after they graduate, and what motivates them to return to school—and other emerging topics of interest.

HOW DOES THE STUDY WORK?

The national study of new nurses has three components:

- A longitudinal panel survey³ given six times over 10 years to a main cohort of nurses—starting with more than 3,350 nurses and ending with approximately 1,500 nurses
- Cross-sectional surveys⁴ of two additional cohorts, each administered only once, to provide a comparison to the longitudinal dataset on specific topics
- A cross-sectional survey using a subsample randomly selected from the longitudinal panel to study nurses' exposure to quality improvement education and participation also given only once

Longitudinal Panel Study

The purpose of the panel survey is to describe newly licensed RNs' changes in work patterns and the factors associated with those changes over an extended period and to learn more about the educational trajectories of nurses. The study involves nurses who obtained their license in 2004 and 2005. It began with 3,370 nurses from 34 states and the District of Columbia, but over time, the sample decreased with attrition to about 1,500 nurses who continue to respond to each wave of the survey.

The typical respondent was female (91%), white (80%), and 32 years old when the survey began. Most spoke English as their first language (90%) and had worked in health care before taking their first RN position (71%). Thirty-eight percent had a bachelor's degree, and 58 percent had an associate degree.

The panel survey collects data in four areas: individual characteristics, work setting, attitudes toward work and personal life, and perceptions about job opportunities in other organizations, both in the local geographic area and other areas. One advantage of the

³ Panel studies examine the same group of people over time. The data therefore can indicate changes either in the individuals being studied or in the environment itself.

⁴ Cross-sectional studies observe different sets of people at different times.

panel study design is that researchers can adapt the questionnaire for each wave, so the researchers added topics as special interests emerged and to follow up on patterns they observed in responses.

For example, when the researchers added the question, “Have you ever experienced verbal abuse?” Sixty-two percent of respondents replied affirmatively, making it the most frequently encountered injury at work. “We said, ‘Whoa, what is this about?’” recalls Brewer. “So we expanded the questions a little more with each survey to find out. Finally, we added a more detailed scale for what kind of experience people had with verbal abuse and how frequent it was.” Despite widespread interest in the published results, however, verbal abuse was not a direct predictor of job turnover or even job satisfaction for new nurses.

Kovner and Brewer also added questions about tuition and indebtedness—“thinking that maybe nurses were taking jobs they didn’t want because they had debt, and would leave when they had paid it off,” Brewer explains. Those data were not analyzed as of fall 2013. More recently, the researchers added a scale on “embeddedness”—one’s friendships and social ties to a community—to learn whether that might affect nurses’ decisions to keep or quit a job.

Cohort Comparison Studies

Researchers added two additional cohorts from 15 states in 2009 (1,765 nurses who graduated in 2007 and 2008) and 2012 (1,613 nurses who graduated in 2010 and 2011). Surveys were only given once to each of these cohorts. The purpose of adding the cohorts was to compare their educational backgrounds, work settings, and work satisfaction with those of the main cohort to see if environmental factors could be affecting job choices or quality improvement.

For example, when researchers compared nurses who earned their degrees in 2004 and 2005 with those who got their degrees in 2007 and 2008, they found the latter group reporting greater intent to stay with their employer and more organizational commitment, even though their level of job satisfaction was no higher. “Our interpretation of that was that the recession had an impact; people were making do” in jobs they would have preferred to leave because they were concerned about the economy, Brewer says. Nurses in the newest cohort of the study also were less likely than in the original cohort to work in hospitals right out of school. “We view this as an indication of the tightening of the job market,” Kovner says.

Quality Improvement Substudy

An early finding that 39 percent of the new nurses thought they were poorly or very poorly prepared for, or had never heard of, quality improvement prompted this substudy.

The additional survey was administered to a subset of 500 working nurses randomly selected from the 2004/2005 licensees in the cohort comparison survey in 2008 and the 2007/2008 licensees in the 2010 cohort comparison survey.⁵ It asked nurses questions about quality improvement and patient safety—how often they engaged in data collection, analysis, root cause analysis,⁶ and other quality improvement activities.

HOW IS THE STUDY PROGRESSING? WHAT ARE THE MOST SIGNIFICANT FINDINGS TO DATE?

The panel survey was administered in January 2006, 2007, 2009, 2011, and 2013, and the last wave will be administered in 2015. The two cohort comparison studies and the cross-sectional survey on quality improvement have been completed.

The study's three components have produced a wealth of data and findings, with more emerging as Kovner, Brewer, and a team of colleagues continue to mine their growing dataset. They have published numerous articles in the academic press and nursing journals. A project [website](#) disseminates information through a resource library with links to [published papers](#), [key findings](#), and [newsletters](#).⁷ Overall, the researchers agree that there are two especially important findings:

- **The turnover rate among nurses is much lower than originally thought.** About 17 percent leave their first job within the first year; 31 percent by the second year; and by four and a half years, the turnover rate is 49 percent. By six years after graduation, the rate is about 55 percent.
- **Most (92%) new nurses who leave their first jobs do not leave the profession; they take a nursing position in another organization.** This is reassuring because, as Kovner points out: “When nurses leave an organization it costs some money, but it’s not a big issue in the community. The nurse goes to another hospital and still knows a lot about nursing, so it’s not a bad thing. But if the nurse leaves after two years to become a teacher or lawyer or something else, and we lose that nurse to nursing [altogether], that’s much more worrisome.”

The study has also shed light on three issues that are of particular current interest in the nursing field: the work environment, the academic progression of nurses, and the effects of quality improvement efforts.

⁵ Kovner CT, Brewer CS, Yingrengreung S, and Fairchild S. “New Nurses’ Views of Quality Improvement Education.” *Joint Commission Journal on Quality and Patient Safety*. 36(1): 29–35, 2010. Available online at www.rnworkproject.org/wp-content/uploads/Kovner-J-C-J-Quali-Patient-Safety-2010.pdf.

⁶ Root cause analysis is a structured method to analyze serious adverse events. A key tenet is identification of underlying problems that increase the likelihood of errors while avoiding focus on individual mistakes.

⁷ See www.rnworkproject.org.

The Work Environment

From their research,⁸ the team identified five things that new nurses like best about being a nurse: providing holistic patient care, using diverse knowledge and skills to impact patient outcomes, having an autonomous and collaborative practice, receiving recognition, and having a job that is secure and stimulating. How often a nurse gets to experience those joys, however, may be influenced by his or her work environment. Sure enough, when the researchers looked deeper, they found several aspects of the work environment that can cause a nurse to leave or stay on the job. These include:

- **Opportunities for professional growth and promotion.** “New nurses are really interested in growth,” explains Maja Djukic, PhD, RN, an assistant professor at the NYU College of Nursing and a co-investigator on the RN Work Project.⁹ “If they’re not getting opportunities for growth, they’re either going back to school or looking for jobs that offer more variety or more learning opportunities.”¹⁰
- **Organizational support and constraints.** “A large percentage of nurses say that twice a week they don’t have all the supplies they need to do their job,” Kovner says. If they work three or four days a week (12-hour shifts) they may be going without adequate supplies 50 percent to 60 percent of the time. “That was an important finding.¹¹ I know that if I didn’t have a computer, I couldn’t do my job,” she says.
- **Perceptions of procedural justice and autonomy.** It is important for nurses to feel involved in the decision-making process and have autonomy to do their job, the researchers found. New nurses who reported more autonomy and promotional opportunities—as well as fewer other job opportunities—were more likely to intend to stay in their jobs.¹²
- **Nurse management.** More than a third of new nurses report poor management as their reason for leaving their first job. As Kovner points out, this isn’t surprising given that many nurse managers have only an associate’s degree in nursing and no management experience. Or they may have a baccalaureate, with maybe a one-

⁸ Djukic M, Pellico LH, Kovner CT, and Brewer CS. “Newly Licensed RNs Describe What They Like Best about Being a Nurse.” *Nursing Research and Practice*, vol. 2011 (Article ID 968191), 2011. Summary available online at www.rwjf.org/en/research-publications/find-rwjf-research/2009/09/the-rn-work-project/newly-licensed-rns-describe-what-they-like-best-about-being-a-nu.html.

⁹ The first quality study was funded only by RWJF. In 2010, the National Council of State Boards of Nursing awarded Djukic a two-year grant to study quality improvement education and experiences in a subsample of the nurses.

¹⁰ See Kovner et al., “New Nurses’ Views...,” page 5 of this report.

¹¹ Kovner CT, Brewer CS, Fairchild S, Poornima S, Kim H, and Djukic M. “Newly Licensed RNs’ Characteristics, Work Attitudes, and Intentions to Work.” *American Journal of Nursing*, 107(9): 58–70, 2007. Available online at http://journals.lww.com/ajnonline/Abstract/2007/09000/Newly_Licensed_RNs__Characteristics,_Work.33.aspx.

¹² Kovner CT, Brewer CS, Greene W, and Fairchild S. “Understanding New Registered Nurses’ Intent to Stay at Their Jobs.” *Nursing*, 27(2): 81–98, 2009. Abstract available online at www.ncbi.nlm.nih.gov/pubmed/19492772.

semester course that covers how to work with nursing assistants and get teams to work together. “Hospitals ask this person to manage the equivalent of a several-million-dollar small business,” Kovner observes. “It’s beyond me why you would expect someone who went to a four-year nursing program to be able to do that.”

The factors the study has identified do not just affect nurses’ job satisfaction, the researchers note. New nurses who work in settings with more opportunities for professional growth, more organizational supports with fewer organizational constraints, and a stronger perception of procedural justice also tend to believe that the patients in their hospital receive higher-quality care.

Academic Progression of Nurses

Given the recent focus on nurses’ academic credentials, Kovner and Brewer looked for factors that determine the academic progression of nurses. They found several barriers to getting a baccalaureate degree for newly licensed nurses in their sample, including cost, the demands of family and children, and lack of time.

The researchers also analyzed characteristics of nurses likely to earn a graduate nursing degree and found that positive predictors of new nurses progressing from an associate to baccalaureate degree and from a baccalaureate to a master’s degree included being Black, having non-nursing work experience, working the day shift, and having higher work motivation.¹³

“I live in Buffalo,” says Brewer, “where the inner city has a terrible time getting enough high school graduates and then getting them into college and then nursing school. The more we understand about who does go on to get a baccalaureate, the more we might be able to shape programs to help promote the goal of getting 80 percent [of nurses to have baccalaureate degrees],” she says.

Recognizing that a growing number of nursing schools offer programs for students who have a baccalaureate in another profession and want a second degree in nursing, the research team also compared data for these newly licensed nurses with those who had a baccalaureate in nursing but no other degree.¹⁴ Within their sample of 953 relevant survey respondents, they found that second-degree graduates had some interesting differences from traditional nursing graduates. Demographically, they were more likely

¹³ Kovner CT, Brewer C, Katigbak C, Djukic M, and Fatehi F. “Charting the Course for Nurses’ Achievement of Higher Education Levels.” *Journal of Professional Nursing*. 28(6): 333–343, 2012. Available online at www.professionalnursing.org/article/S8755-7223%2812%2900077-4/abstract.

¹⁴ Brewer CS, Kovner CT, Poornima S, Fairchild S, Hongsoo K, and Djukic M. “A Comparison of Second-Degree Baccalaureate and Traditional-Baccalaureate New Graduate RNs: Implications for the Workforce.” *Journal of Professional Nursing*. 25(1): 5–14, 2009. Summary and link to abstract available online at www.rwjf.org/en/research-publications/find-rwjf-research/2009/09/the-rn-work-project/a-comparison-of-second-degree-baccalaureate-and-traditional-bacc.html.

to be male, Asian, married, and have children living at home. They were less likely to plan to leave their job in a year and more likely to plan to stay longer in their first job.

Quality Improvement Efforts

Despite a growing trend toward quality improvement programs in the workplace, many of the new nurses surveyed about quality improvement reported having insufficient knowledge, concepts, and tools related to the subject. Moreover, employer-sponsored quality improvement education seems to have had limited effects on nurses' levels of preparedness to participate in quality improvement efforts, at least thus far.

Less than one-third of RNs reported being very prepared to participate in quality improvement activities such as the Plan-Do-Study-Act model or flow charting, for instance, and more than half (55%) reported no training in identifying good care based on scientific evidence. A majority (73%) said they had not been trained to assess gaps in current practice, and many (46%) said they had not been trained to work as a team to improve care.¹⁵

The findings underscore a concern that, although there is a strong focus on quality improvement in hospitals, new nurses often do not see the connection between quality improvement education in their nursing programs and successfully performing in their hospital jobs. In an article,¹⁶ the researchers suggested that one possible explanation is “these new nurses continue to focus on providing care to the patients for whom they are responsible and do not see themselves as having any responsibility for improving the care delivery systems at the unit or higher level that may help them provide higher-quality care in the future.”

“I don't think this issue is about nurses only; it's a function of where the country is in thinking about system-level improvement,” Djukic observes. “Curricular changes were not really introduced until 2007–2008, and it takes time for hospitals to make all the changes and shifts in culture to embrace what the role of a nurse is in system improvement.”

Nursing schools also bear some of the responsibility, says Kovner. “We tend to say to [nursing students], ‘You get to practice on Mrs. Smith, and she is the most important person to you today. You need to focus your efforts on doing what it takes to get her healthy so she can get out of here.’ We pound that into their heads. We do not say, ‘You need to focus on whether this system works well.’”

¹⁵ Djukic M, Kovner C, Brewer C, Fatehi F, and Seltzer. J. “A Multi-State Assessment of Employer-Sponsored Quality Improvement Education for Early Career Registered Nurses.” *Journal of Continuing Education in Nursing*. 44(1), 12–19, 2013. Available online at www.healio.com/nursing/journals/jcen/%7B4a825445-8254-4795-9169-b8fb59f44ba4%7D/a-multi-state-assessment-of-employer-sponsored-quality-improvement-education-for-early-career-registered-nurses.

¹⁶ See Kovner CT et al., “New Nurses’ Views...,” page 5 of this report.

With that patient focus in mind, a new nurse who encounters a workplace error—say, a medication mix-up—will often develop a “workaround” to correct the error but probably won’t stop to consider, “Is this happening to other nurses and patients? Does it tend to happen on weekends, or when an uncommon medicine gets prescribed—and can we figure out a system change to stop the pattern?”

Moreover, Kovner continues, when an error occurs in the workplace, managers tend to assign blame rather than talk about the process that caused the error and what could have been done differently. “Is that really the way we want to practice health care?” she asks.

Lori Melichar, PhD, MA, an RWJF senior program officer, manages RWJF’s [Interdisciplinary Nursing Quality Research Initiative](#)¹⁷ and is engaged in the Foundation’s efforts to evaluate quality improvement efforts. One of Melichar’s special interests is in identifying nurses who are particularly innovative at inventing and modifying devices and trying to figure out those which might be worth replicating. “I think that workarounds shouldn’t be hidden, they should be identified so you can understand them and think about them as pockets of innovation,” Melichar suggests. “When a workaround deals with a process it’s different from when it deals with a device that hasn’t been created before,” she adds.¹⁸

WHAT CHALLENGES IS THE STUDY FACING?

Challenges in the survey or analysis process include:

- **Obtaining the sample of newly licensed RNs.** When the study began in 2005, not all states had computerized lists of licensed nurses, or they couldn’t identify which were newly licensed. To draw the sample in Maine, for instance, Brewer had to write to all 6,000 licensees in the geographic area in the state and ask those who were new nurses to write back. For the second phase of the study, the researchers limited their sample to the 15 states that had computerized registries and could sort out the new licensees.
- **Information overload.** The sheer amount of data being produced makes analytical modeling very complicated and time consuming; as of fall 2013, the research team has not yet been able to analyze a good amount of the data.

¹⁷ See the RWJF Special Report, *Measuring the Contributions of Nurses to High-Value Health Care*, which includes descriptions of several projects from the *Interdisciplinary Nursing Quality Research Initiative*. Available online at www.rwjf.org/en/researchpublications/find-rwjf-research/2011/05/measuring-the-contributions-of-nurses-to-high-value-health-care.html.

¹⁸ RWJF has recently funded MakerNurse with the Little Devices Lab at Massachusetts Institute of Technology to collect stories from nurses who self-identify as “maker nurses” to better understand what drives them to use what’s around them to fix problems and improve the patient experience, and how best to nurture the creative potential of the American nurse. For more information, read the September 21, 2013, press release online at www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2013/09/MakerNurse-initiative.html.

- **Keeping the response rate up over a decade-long study.** Getting respondents to complete the full survey in every wave is a challenge. Following standard methods, the researchers send reminders and multiple copies of the survey to respondents to increase the response rate. The team also publishes a newsletter that feeds findings back to respondents to keep them interested and motivated to complete the survey.
- **Getting information out and getting people to use it.** It takes months to analyze data, write up findings, and get papers published. Even then, the odds of reaching the right person—a nurse manager or hospital administrator, for instance—are low, Kovner worries.

Advisory group members try to help. Though not a member of the advisory group, Cathryne Welch, EdD, RN, is deputy director (and former executive director) of the Foundation of New York State Nurses and co-leader of the New York State Regional Action Coalition,¹⁹ which works to implement the IOM’s *Future of Nursing* recommendations. Welch has promoted the data to the organizations with which her foundation partners, such as the New York Organization of Nurse Executives, and she calls the findings to the attention of decision-makers throughout her profession.

IS RWJF DOING ANYTHING DIFFERENT AS A RESULT?

Data from the study have helped RWJF promote the importance of more nurses obtaining a Bachelor of Science in Nursing (BSN) degree, says RWJF senior adviser for nursing Susan Hassmiller, PhD, RN, FAAN, who is responsible for RWJF’s efforts to help implement the IOM *Future of Nursing* recommendations. For example, the RN Work Project survey revealed that nurses with a BSN were more likely than nurses with an associate degree to stay in positions providing bedside care, use evidence-based practice, stay longer in their jobs, and feel better prepared in terms of providing quality of care.

“They really helped us build the case for why the baccalaureate degree is so important,” Hassmiller says.

Advisory committee member Kevin Kenward, PhD,²⁰ observes “the results have become so ingrained in the research community that they are frequently used without being credited.” The National Council of State Boards of Nursing, for example, where Kenward was the former director of research, used information from the RN Work Project to design a study of programs to help nurses transition from training into practice.

As Hassmiller, Kenward, and others look to the future, they see several implications of the RN Work Project for nursing practice and education.

¹⁹ Kovner and Brewer also serve or have served on the Action Coalition’s steering committee.

²⁰ Kenward is currently (2013) director of research at the Health Research and Educational Trust.

Implications for Nursing Practice

Finding ways to apply the study's findings to hospital work environments is important since most new nurses start their careers in hospitals. "This is the first time ever that we have had data on nursing turnover that could be helpful for employers, who are the ones likely to suffer the most if nurses are leaving [their] organizations," notes researcher Djukic. "And work environment factors are amenable to change."

For example, given the strong interest in professional growth that new nurses reported, the research team suggests that hospitals might find ways to offer more varied work and more learning opportunities to new nurses.²¹ Other important changes they recommend, some of which echo the IOM recommendations, include:

- Redesigning workflow patterns to allow new nurses more time in direct patient care
- Instituting team training
- Involving nurses in organizational decision-making
- Making sure nurses have supplies and resources needed to do their jobs well
- Investing in residency programs for new nurses, similar to those provided to new physicians, to help them make the transition from training to practice. (Less than a quarter of the nurses in Kovner and Brewer's sample participated in a formal internship or residency program.)

There are good reasons for hospitals to change the work environment. For one thing, it may be one of the more cost-effective and accessible strategies for nurse retention that a hospital can take. The research team examined the responses of nurses who worked in Magnet²² hospitals and found that those who scored their work environment more favorably were more likely to perceive that patients received higher-quality care than those who were dissatisfied with their work environment—even though the two groups were alike in all other respects, as were their hospitals.²³

In other words, nurses' perception of their work environment was a stronger predictor of patient care quality than was working in a Magnet hospital. "Our message to organizations is," says Djukic, "if you can work on getting a Magnet designation, go ahead, but there are other things you can do to address your work environment:

²¹ See Djukic M et al., "Newly Licensed RNs Describe..." page 6 of this report.

²² The American Nurses Credentialing Center's Magnet Recognition Program® recognizes health care organizations for high-quality patient care, nursing excellence, and innovations in professional nursing practice.

²³ Djukic M, Kovner CT, Brewer CS, Fatehi FK, and Cline DD. "Work Environment Factors Other Than Staffing Associated with Nurses' Ratings of Patient Care Quality." *Journal of Nursing Administration*, 42(10 Suppl.): S17–S26, 2012. Abstract available online at www.unboundmedicine.com/medline/citation/22976890/Work_environment_factors_other_than_staffing_associated_with_nurses'_ratings_of_patient_care_quality_.

instituting team training, doing a better job of involving nurses in organizational decision making, etc. It doesn't have to be an expensive thing to do.”

Furthermore, the cost of not attending to nurse turnover is expensive. According to Kovner, studies have suggested that one new nurse's turnover costs about a year and a half's salary—perhaps \$70,000 to \$100,000 total for the institution—and it is organizationally disruptive. In an article in the *Journal of Advanced Nursing*,²⁴ Kovner, Brewer, and colleagues estimated the organizational cost to the U.S. health care system to be \$1.4 billion to \$2.1 billion, at 2006 salary figures, using their large study's turnover rate of new nurses within three years of securing a first job.

Nonetheless, this is a tough sell. “It's a challenge to get the attention of hospitals to think about how to provide the best work environment for nurses so they stay and provide the best quality of care,” observes RWJF's Fishman.

Right now “hospitals can be very choosy because we don't have a nursing shortage as a result of the recession,” notes advisory committee member Mason. “They can hire the cream of the crop without changing a thing.” But when the job market picks up and nurses start to move around again, Mason continues, the hospitals with the most stable workforce will be those that “make sure they're creating a lifelong learner, someone who's committed to growing with the organization over the years.”

A first step would be to translate the research findings into actions hospitals can take to change work environments, and perhaps to test some of the changes. Fishman says these activities lie outside the scope of the current study.

Implications for Nursing Education

The deficiency of the quality improvement education nurses receive in their training programs needs to be addressed—possibly through a dedicated course, researchers suggest. And the connection between that education and the nurses' participation in quality improvement efforts in the workplace needs strengthening. “Given that nurses compose the largest segment of the [health care] workforce and deliver the most care in hospitals,” says Djukic, “the bottom line is that increasing their knowledge of system improvement and engaging them more in improving systems of care are critical actions for seeing improvements in nurse quality indicators.”

In addition, the study found that new nurses are not very mobile geographically. Most (79%) attend their first nursing degree program in the same state where they attended

²⁴ Brewer CS, Kovner CT, Greene W, Tukov-Shuser M and Djukic M. “Predictors of Actual Turnover in a National Sample of Newly Licensed Registered Nurses Employed in Hospitals.” *Journal of Advanced Nursing*. 68(3): 521–538, 2012. Summary available online at www.rwjf.org/en/research-publications/find-rwjf-research/2009/09/the-rn-work-project/predictors-of-actual-turnover-in-a-national-sample-of-newly-lice.html.

high school and even more (88%) take their first job in the same state, making them “second only to teachers in their lack of mobility,” according to Kovner. That finding “reinforces that nurses’ labor markets are very local issues,” she says. Combined with the focus on more nurses obtaining baccalaureate degrees, the nonmobility finding suggests that nursing education programs may need to rethink their delivery systems for nursing education.

Brewer is involved in New York State’s effort to implement the IOM report, which calls for more seamless transitions to higher degree programs for nurses. “Everybody’s thinking of the issue of articulation²⁵ and how you avoid having students get to the baccalaureate degree and then have to redo everything because of an arcane mismatch of subjects,” Brewer says. “We [University at Buffalo School of Nursing] just restarted our RN Bachelor of Science program, and it’s all online. I think the online education piece is going to be huge, because... geographic mobility is pretty low among nurses. So you have to provide education where they are, and not expect them to pick up their families and kids and move to the nearest city where they can get a baccalaureate degree.”²⁶

WHAT DOES THE FUTURE HOLD?

The longitudinal survey will be administered one more time, in 2015, after which the researchers will begin looking across the six waves of data for patterns in new nurses’ career decision-making. The academic progression of nurses will be a primary topic for analysis, especially since the IOM has recommended that 80 percent of nurses have their baccalaureate degree by 2020.

The researchers see other ways to continue to mine their rich dataset with additional analyses well into the future. Now, six years into the study, for instance, the nurses in the original cohort are no longer new graduates. “We could look at whether turnover for new nurses looks different than it does for seasoned, experienced nurses later in their career,” Brewer suggests. They also plan to look at the experiences and characteristics of nurses who switch jobs within the same organization.

For researchers like Djukic, the challenge now is to “translate this evidence to nurse leaders, managers, educators, and practitioners so that it ultimately affects patients.” She continues: “I hope these data will inspire people to do more to educate nurses about quality and safety and to involve them more in quality and safety. It’s sort of a wake-up

²⁵ Articulation refers to the process whereby one institution matches its requirements to coursework received at another institution so that courses do not need to be repeated.

²⁶ RWJF’s Partnerships for Training program, which operated between 1995 and 2009, recognized this fact by developing eight regional educational systems that used distance education to help educate nurse practitioner, certified nurse-midwife, and physician assistant students in medically underserved areas of the country. For more information, read the Program Results Report at www.rwjf.org/content/dam/farm/reports/program_results_reports/2007/rwjf70060.

call....There are islands of excellence. But how do we spread the good work of the few to all? We have a problem, and we need to continue to work on it.”

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APPENDIX 1

Progress Report Interviewees

(Positions as of the time of interviews, summer 2013)

Carol S. Brewer, PhD, RN, FAAN

Professor and Associate Dean for Academic Affairs
University at Buffalo School of Nursing
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Nancy Fishman, MPH

Senior Program Officer
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Maja Djukic, PhD, RN

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Susan Hassmiller, PhD, RN, FAAN

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Kevin Kenward, PhD

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Christine Kovner, PhD, RN, FAAN

Professor
New York University College of Nursing
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Diana J. Mason, PhD, RN, FAAN

Director
Center for Health, Media, and Policy
Rudin Professor
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APPENDIX 2

RWJF Investments in Nursing

In 1992, RWJF expanded nationally a program initiated in New York City, *Ladders in Nursing Careers*, to help more low-income and minority, entry- and mid-level, hospital and nursing home employees advance into licensed practical nurse (LPN) and registered nurse (RN) positions. For more information, read the [Program Results Report](#).

Between 1994 and 2004, RWJF's *Colleagues in Caring: Regional Collaboratives for Nursing Work Force Development* national program worked to streamline the nursing education system and recruit and retain more nurses. Read the [Program Results Report](#).

Over time, the Foundation’s investments in nursing reflected a growing emphasis on quality improvement:

- *Transforming Care at the Bedside (TCAB)* (2003–2008), led first by the Institute for Healthcare Improvement and now by the American Organization of Nurse Executives, was designed to improve the hospital work environment in ways that would improve the quality of care provided by nurses at the bedside. Read the [Program Results Report](#).
- The [Quality and Safety Education for Nurses \(QSEN\)](#) project (2005–2014)²⁷ addressed the challenge of preparing future nurses with the knowledge, skills, and attitudes needed to continuously improve the quality and safety of health care systems by identifying a set of core competencies; integrating them into nursing schools’ curricula and textbooks, licensing, accreditation, and certification standards; and promoting innovations in teaching the competencies.

Fueled by the recommendations of the IOM’s *Future of Nursing* report, RWJF infused its nursing initiatives with a focus on the academic progression of nurses from lower to higher degrees. This became the topic of the Foundation’s two-year [Academic Progression in Nursing](#) initiative, launched in 2012, which funds nine state Action Coalitions working on strategies to implement the academic progression and employment recommendations for nurses contained in the IOM report.

In addition, RWJF’s program *New Careers in Nursing* funds scholarships for accelerated bachelor's and master's degrees in nursing, with preference given to schools that increase the number of students in these programs or increase enrollment and retention of disadvantaged or minority students. Read the [Progress Report](#) for more information.

²⁷ Grant ID#s 55228, 59182, 60127, and 69146 to the University of North Carolina at Chapel Hill to develop the QSEN curriculum and grant ID#s 64540 and 69374 to the American Association of Colleges of Nursing to teach nursing school faculty how to use the QSEN curriculum.

BIBLIOGRAPHY

(Provided by the project directors; not verified by RWJF)

Articles

Bae SH, Brewer CS and Kovner CT. “State Mandatory Overtime Regulations and Newly Licensed Nurses’ Mandatory and Voluntary Overtime and Total Work Hours.” *Nursing Outlook*, 60(2): 60–71, 2012.

Brewer CS. “Stop the Revolving Door.” *Nursing Standard*, 27(10): 61, 2012.

Brewer CS and Kovner C. “Intersection of Migration and Turnover Theories—What Can We Learn?” *Nursing Outlook*. In press. Abstract available [online](#).

Brewer CS, Kovner CT, Greene W, Tukov-Shuser M and Djukic M. “Predictors of Actual Turnover in a National Sample of Newly Licensed Registered Nurses Employed in Hospitals.” *Journal of Advanced Nursing*, 68(3): 521–538, 2012. Summary available [online](#).

Brewer C S, Kovner C T, Obeidat RF and Budin W. “Positive Work Environments of Early Career RNs and the Correlation with Physician Verbal Abuse.” *Nursing Outlook*. In Press Corrected Proof. Abstract available [online](#).

Brewer CS, Kovner CT, Poornima S, Fairchild S, Kim H and Djukic M. “A Comparison of Second-Degree Baccalaureate and Traditional-Baccalaureate New Graduate RNs: Implications for the Workforce.” *Journal of Professional Nursing*, 25(1): 5–14, 2009. Summary and link to abstract [online](#).

Brewer CS, Kovner CT, Yingrengreung S and Djukic M. “New Nurses: Has the Recession Increased Their Commitment to Their Jobs?” *American Journal of Nursing*, 112(3): 34–44, 2012. Available [online](#).

Budin W, Brewer CS, Chao YY and Kovner CT. “Verbal Abuse from Nurse Colleagues and Work Environment of Early Career Registered Nurses. *Journal of Nursing Scholarship*, 45(3): 308–316, 2013. Abstract available [online](#).

Cline DD, Rosenberg M-C, Kovner CT and Brewer C. “Early Career RNs’ Perceptions of Quality Care in the Hospital Setting.” *Qualitative Health Research*, 21(5): 673–682, 2011. Abstract available [online](#).

Djukic M, Kovner C, Brewer C, Fatehi F and Bernstein I. “Early-Career Registered Nurses’ Participation in Hospital Quality Improvement Activities.” *Journal of Nursing Care Quality*, 28(3): 198–207, 2013.

Djukic M, Kovner CT, Brewer CS, Fatehi FK, Bernstein I and Aidarus N. “Improvements in Educational Preparedness for Quality and Safety.” *Journal of Nursing Regulation*, 4(2): 15–21, 2013. Abstract available [online](#).

Djukic M, Kovner CT, Brewer CS, Fatehi FK and Cline DD. “Work Environment Factors Other than Staffing Associated with Nurses’ Ratings of Patient Care Quality.” *Journal of Nursing Administration*, 42(10 Suppl.): S17–S26, 2012. Abstract available [online](#).

Djukic M, Kovner C, Brewer C, Fatehi F and Seltzer. J. “A Multi-State Assessment of Employer-Sponsored Quality Improvement Education for Early Career Registered Nurses.” *Journal of Continuing Education in Nursing*, 44(1): 12–19, 2013. Available [online](#).

Djukic M, Pellico LD, Kovner CT and Brewer CS. “Newly Licensed RNs Describe What They Like Best About Being a Nurse.” *Nursing Research and Practice*, vol. 2011, Article ID 968181, 8 pages, 2011. Summary available [online](#).

Keepnews DM, Brewer CS, Kovner CT and Hyun Shin J. “Generational Differences Among Newly Licensed Registered Nurses.” *Nursing Outlook*, 58(3): 155–163, 2010.

Kovner CT. “New RNs Graduating Six Years Apart.” *American Journal of Nursing*. In press.

Kovner C and Brewer CS. “Changing Trends Between New RN Cohorts. *American Journal of Nursing*. In press.

Kovner CT, Brewer CS, Fairchild S, Poornima S, Kim H and Djukic M. “Newly Licensed RNs’ Characteristics, Work Attitudes and Intentions to Work.” *American Journal of Nursing*, 107(9): 58–70, 2007. Abstract available [online](#).

Kovner CT, Brewer CS, Greene W and Fairchild S. “Understanding New Registered Nurses’ Intent to Stay at Their Jobs.” *Nursing Economics*, 27(2): 81–98, 2009. Abstract available [online](#).

Kovner CT, Brewer C, Katigbak C, Djukic M and Fatehi F. “Charting the Course for Nurses’ Achievement of Higher Education Levels.” *Journal of Professional Nursing*, 28(6): 333–343, 2012. Abstract available [online](#).

Kovner CT, Brewer CS, Yingrengreung S and Fairchild S. “New Nurses Views of Quality Improvement Education.” *Joint Commission Journal on Quality and Patient Safety*, 36(1): 29–35, 2010. Available [online](#).

Kovner CT, Corcoran SP and Brewer CS. “The Relative Geographic Immobility of New Registered Nurses Calls for New Strategies to Augment that Workforce.” *Health Affairs*, 30(12): 2293–2300, 2011. Abstract available [online](#).

Pellico LH, Brewer CS and Kovner CT. “What Newly Licensed Registered Nurses Have to Say About Their First Experiences.” *Nursing Outlook*, 57(4): 194–203, 2009. Abstract available [online](#).

Pellico LH, Djukic M, Kovner CT and Brewer CS. “Moving On, Up, or Out: Changing Work Needs of New RNs at Different Stages of Their Beginning Nursing Practice.” *Online Journal of Issues in Nursing*, 15(1): 2010. Available [online](#).

Rosenberg MC, Corcoran SP, Kovner C and Brewer C. “Commuting to Work: RN Travel Time to Employment in Rural and Urban Areas.” *Policy, Politics, & Nursing Practice*, 12(1): 46–54, 2011. Abstract available [online](#).

Books

Brewer CS and Kovner CT. “Work Satisfaction Among Staff Nurses in Acute Care Hospitals.” In *Nursing Policy Research: Turning Evidence-based Research into Health Policy*, Dickson GL and Flynn LR (eds.). New York: Springer Publishing, 2008.