

Improving Quality and Safety with Transition-to-Practice Programs

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The evidence creates a compelling case for all newly licensed registered nurses (NLRNs) to have a transition to practice (TTP) program from the student to the professional role. Evidence has linked TTP programs to improved safety and quality patient outcomes as well as to the retention of new graduate RNs. As a result, NCSBN has developed a TTP model that incorporates the QSEN competencies. This chapter provides current evidence for implementing successful TTP programs in hospitals for NLRNs along with implications for nonhospital sites, and information for nurse educators who are preparing students for their nursing careers and practice organizations.

The following NLRN experiences illustrate the support that formal TTP programs provide, compared to the lack of support in facilities that don't have these programs. (These were qualitative data from the *Spector et al.* [2015a] multisite, TTP study of NLRNs. The comment from the control nurse was provided on the survey he/she completed, and the data from the three intervention NLRNs were obtained from focus groups that were held with the intervention NLRNs.)

These verbatim survey comments are from a nurse in the control group with no structured transition program:

Some nurses view new nurses as incompetent and are unwilling to help and answer questions. Recently an older nurse pointed to a phone and explained to me how to use it and what it was because I asked a question. My question never got answered.

Yet, a different picture of support is painted by the intervention group nurses who were in an evidence-based TTP program (verbatim focus group comments):

I think when people are nice and approachable, you can go to someone and you're not afraid and you have support ... even your coworkers. That makes a world of difference. That's how you learn.

Similarly, here are verbatim focus group comments from two new nurses in the TTP program who felt supported by their preceptors:

#1 It makes it a lot easier to have a preceptor kind of looking over your shoulder, because it's pretty much like taking the training wheels off. I've learned all this theory, but it's really nice

having somebody looking over my shoulder saying, wait, are you sure you want to do it that way? Are you sure there's not a better way? Should you have done that? Because you're learning this very specific skill set.

#2 "But you need somebody there to make it feel like it's fine. Like I had my preceptor's phone number and I would call her, and I was like, 'I can't believe that I'd do that.' And she was like, 'calm down and go to sleep.' You know, you need that, somebody that says, 'now go to sleep and we'll talk about it tomorrow, you'll be fine.' It can be really, really stressful.

Transition-to-Practice Programs: Definition and Extent

A TTP program is a formal program of active learning implemented across all settings for all newly licensed nurses (registered nurses and licensed practical/vocational nurses) designed to support their progression from education to practice (Spector *et al.*, 2015a). These are comprehensive, evidence-based programs that are integrated throughout the health system, thus being supported at all levels of the organization.

Questions have arisen about the difference between nurse residency programs and TTP programs. These terms are now being used synonymously. For example, recommendation number three from the IOM's Future of Nursing report, which advocates for nurse residency programs, states:

State boards of nursing, accrediting bodies, the federal government, and health care organizations should take actions to support nurses' completion of a transition-to-practice program (nurse residency) after they have completed a prelicensure or advanced practice degree program or when they are transitioning into new clinical practice areas (Institute of Medicine, 2011).

Orientation, on the other hand, is a separate process that is focused on the hiring institution, and not on transitioning the new nurses to their futures in nursing practice. The American Nurses Association (2010) defines orientation as the process of introducing staff to the philosophy, goals, policies, procedures, role expectations, and other factors needed to function in a specific work setting. Orientation takes place both for new employees and when changes in nurses' roles, responsibilities, and practice settings occur.

What is the extent of these comprehensive residency or TTP programs? One study (Budden, 2011), using the NCSBN definition of TTP programs and the ANA definition of orientation found that currently only 9–31% of all nursing employers, across all settings, reported offering a TTP program, and 1–8% of employers did not even offer an orientation program to their new graduates. Fewer than 50% of hospitals report having TTP programs. A survey of chief nurse officers and chief nurse executives who are members of the AONE reported that 36.9% of this sample offered nurse residencies in 2011 (Pittman *et al.*, 2013). They found that residencies were more common in urban (85%), midsized, not-for-profit hospitals located in the South, whereas the Northeast had a greater share of hospitals without residencies. Similarly, Barnett, Minnick, and Norman (2014) found that in hospitals with more than 250 beds, 48% had nurse residency programs.

In nonhospital sites, the situation is more concerning. A white paper written by the American Academy of Ambulatory Care Nursing (AAACN, 2014) stated that nurse residency programs are rare in that setting, and this severely limits effective patient care and succession planning. Likewise,

Pittman and colleagues (2015) report that, of their sample of the Visiting Nurse Associations of America, only 14.7% of home health agencies or hospices have transition programs for new graduates. Even though more programs are developing in long-term care (University of Wisconsin School of Nursing, 2015), a national survey conducted in 2006 found only 5.6% of RNs and 8.8% of LPNs had TTP programs in long-term care facilities.

TTP programs are not limited to NLRNs. Successful TTP programs for experienced nurses transitioning to new specialties and new roles have been reported in specialty areas such as critical care (Gohery and Meany, 2013), emergency departments (Bongiovanni and Laidlow, 2010) and for new nurse practitioners (Sargent and Olmeda, 2013). While the needs are broad, this chapter focuses on the evidence and implications for TTP program for NLRNs.

Although TTP programs are not available to a majority of new nurses, many professions such as medicine, pharmacy, pastoral care, physical therapy, and teaching require formalized transition to practice programs for their graduates. Many of these programs receive either federal or state assistance; nursing does not.

Evidence Linking Transition-to-Practice Programs to Quality and Safety

There is a growing evidence base, from research reviews and three large multisite studies, on how TTP programs promote quality and safety by improving new nurses' competence, safety, and retention. Data are presented on both hospital and nonhospital settings.

Competence

Employers report new graduates are not ready to practice. In the early 2000s, NCSBN studies found that fewer than 50% of employers reported "yes definitely" when asked if new graduates are ready to provide safe and effective care (NCSBN, 2002; 2004); these studies prompted NCSBN's TTP initiative. Similarly, Berkow and colleagues (2008), from the Nursing Executive Center, conducted a survey of more than 5,700 frontline nurse leaders, asking about employer perceptions of new graduates on 36 competencies. Improvement was needed across levels of education (associates degree in nursing [ADN] and BSN). For example, 53% of employers were satisfied with the top-rated competency (utilization of information technologies), while only 10% were satisfied with the last-rated competencies, such as delegation of tasks. Berkow and colleagues (2008) noted that the bottom-rated competencies would be better taught in an experiential environment, such as a TTP program. Berman *et al.* (2014) assessed the competence of NLRNs entering a TTP program using the QSEN practice tool. Of the 36 criteria, the lowest competence was found in the understanding of quality improvement methodologies, followed by the ability to anticipate risks related to assessment data; evaluation and system improvements based on clinical practice data; location, review, and application of scientific evidence and medical literature; and prioritization of actions related to patient needs and delegation of actions if appropriate.

Reviews of the research on TTP programs (Anderson, Hair, and Todero, 2012; Edwards *et al.*, 2015; Rush *et al.*, 2013) have found improvement in competency when these programs are implemented (Goode, Ponte & Havens, 2016). Similarly, Chappell and Richards (2015), in a systematic review evaluating clinical leadership skills in new graduates, found there was a positive impact of TTP programs on their clinical leadership skills. A summary of the competency evidence that was found in these research reviews is shown in Table 15.1. However, there is a critical need for more rigorous research

Table 15.1 Evidence on competency from research reviews of TTP programs.

Research Review	Number of Studies	Competency findings
Anderson, Hair, and Todero (2012)	20	Positive impact on new RN graduates' performance include critical thinking, control over practice, nursing skills, confidence, autonomy, behavioral performance, improved safe patient care.
Chappell and Richards (2015)	17	TTP programs at least 24 weeks long significantly increase clinical leadership skill in the new nurse.
Edwards <i>et al.</i> (2015)	30	Separate analysis of internship/residency, graduate nurse orientation, mentorship/preceptorship, and simulation programs found increased self-reported competence (general and clinical); perceived confidence; knowledge; and readiness to practice with a TTP program.
Goode <i>et al.</i> (2016)	23	Systematic review, rating evidence from level 2-6, finding TTP programs improve NLRN competency.
Rush <i>et al.</i> (2012)	47	Increased competency, regardless of rater, duration of program or type of program. Qualitatively, one study found students didn't feel independent until a year in practice; the TTP program acted as a shelter for them.
Theisen and Sandau (2013)	26	Improved communication, including delegation and when handling workplace conflict.

on TTP programs, particularly in nonhospital settings. The authors of these research reviews reported several major limitations with the studies of TTP programs, including the following:

- Lack of detail on the content of the TTP programs
- Lack of control groups
- Lack of valid and reliable measurement tools and an inconsistent use of research tools across the studies
- Using only new nurse self-reports
- Small samples
- Lack of multisite studies with diverse settings
- Lack of scientific rigor when conducting the studies

Three multisite national studies of TTP programs provide further insight into the effect of these programs on competency, as well. One of the studies used the University HealthSystem Consortium (UHC)/AACN residency program to compare start, mid-program, and completion competency measures (Goode *et al.*, 2013). Another compared outcomes after implementing the Versant program to a comparison group in each hospital from two years prior to implementing the residency program and compared residency outcomes by cohort, facility, and organization to the outcomes from the Versant National Database (Ulrich *et al.*, 2010). The third was a multistate TTP program, which randomly assigned new nurses to a control group (the organization's traditional onboarding program) or the NCSBN TTP program (Figure 15.1) (Spector *et al.*, 2015a). In the latter study, the researchers further divided the control group into those with established programs and limited programs, based on criteria cited in the TTP literature. The established programs were supported by the institution, had been in place for a while, and were comprehensive, evidence-based programs, whereas the limited programs were sparse and did not have many of the evidence-based elements of a TTP program.

Analyzing 10 years of data (approximately 31,000 nurses) from the UHC/AACN residency program and using a standardized measurement tool (Casey-Fink Graduate Nurse Experience Survey), Goode

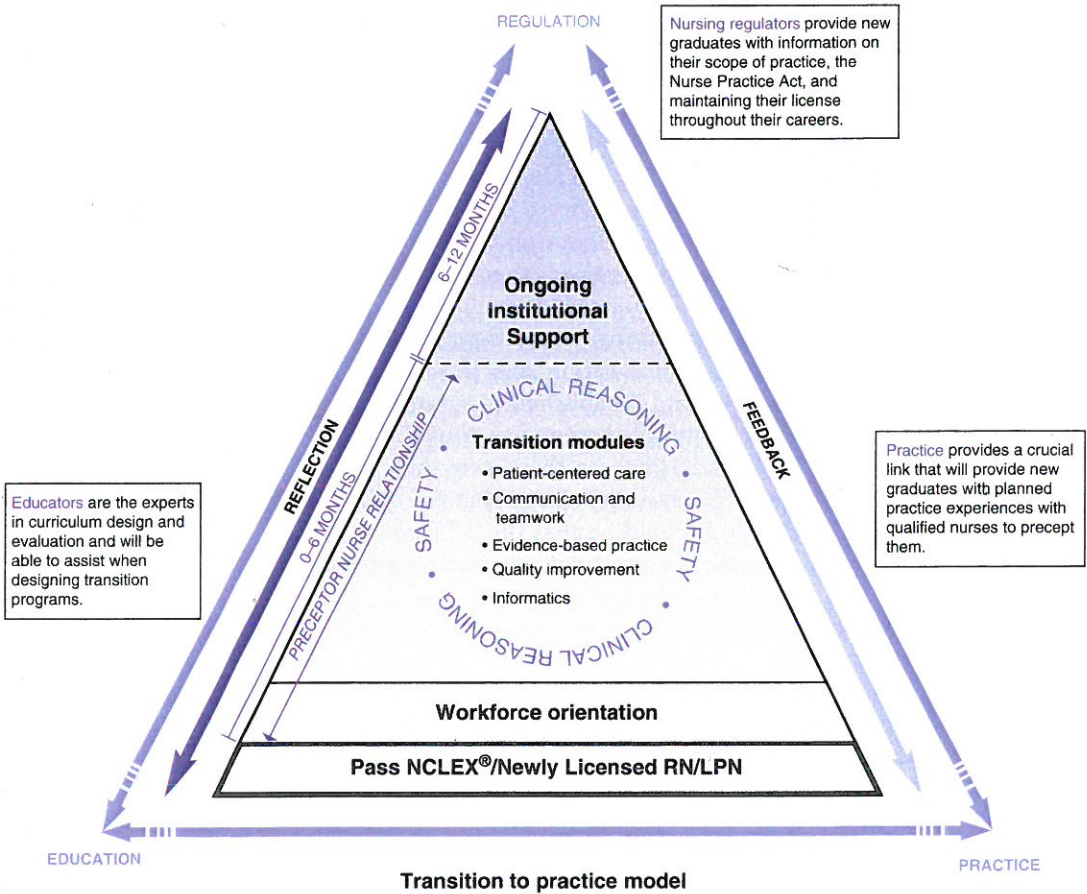


Figure 15.1 NCSBN's TTP model. Source: Spector 2015. Reproduced with permission of the National Council of State Boards of Nursing.

et al. (2013) found that new nurses' perceptions of their overall confidence and competence, ability to organize and prioritize their work, and ability to communicate and provide leadership significantly increased over the one-year residency program.

Ulrich *et al.* (2010) analyzed 10 years of resident data (more than 6000 residents) from the Versant program, using a number of previously validated instruments to measure outcomes such as competence, confidence, satisfaction, organizational commitment, leader empowering behavior, conditions for work effectiveness, etc. In a random sample of the residents and the comparison group, trained observers measured their competence, and these were compared. The residents rated themselves higher than the trained observers in week 2 and at the end of the residency. The trained observers found significant improvement in new nurse competency from the beginning to the end of the RN residency.

Spector *et al.* (2015a) studied 1088 new nurses over a one-year period. These researchers used two competency scales (Overall Competency and Specific Competency), which were modified from previously published scales, and piloted by the researchers before conducting the study. The ratings were completed by the new nurses and their preceptors (or managers in the control group, if they had

no preceptors). There were no differences in the ratings between the new nurses and the preceptors, except the preceptors consistently rated the new nurses higher than the new nurses rated themselves, and this was statistically significant for the Overall Competency Scale. This was consistent with NCSBN's National Simulation Study, where the managers rated the NLRNs higher than they rated themselves in their first six months of practice (Hayden *et al.*, 2014). However, it was not consistent with Ulrich and colleague's (2013) findings cited above, where the NLRNs rated themselves higher than their preceptors did.

Although the nurses in the NCSBN TTP program and in the control group significantly improved in overall competence over the year-long period, there was no significant difference in overall competence among the groups. However, related to specific competencies, the NCSBN TTP group scored significantly higher over the year-long period, compared to the control group, for patient-centered care, use of technology, communication, and teamwork. When the researchers divided the control group into the Limited and Established programs, they found that the Established group scored significantly higher in overall competence, the NCSBN TTP group was in the middle, and the Limited group lagged behind. However, there were then little differences among the three groups in the specific competency measures, except that the NCSBN TTP group scored higher on the use of technology domain. It could be that the TTP group scored significantly higher in the specific competencies because the modules they had completed incorporated the QSEN competencies.

Simulation is a common strategy in TTP programs to improve competency (Beyea, Slattery, and von Reyn, 2010; Everett-Thomas *et al.*, 2015). Beyea *et al.* (2010) studied an experiential transition program using simulation and measuring confidence, competence, and readiness to practice, all of which significantly increased after their program. This program uses simulation vignettes that highlight high-risk and low-frequency events (such as cardiac arrests), as well as commonly occurring clinical situations. According to this study, a transition program incorporating active learning is a highly effective way of developing competency and confidence in new graduates. Everett-Thomas *et al.* (2015) similarly found that in a 10-week simulation program, the new nurses had significant improvement in both applied knowledge in clinical skills and in overall clinical performance.

Safety

Research links new nurses to patient safety issues, such as near misses, adverse events, and practice errors. Bjørk and Kirkevold (1999), in a classic study, found that patient safety can be compromised when there are no effective TTP programs in place. They conducted a prospective, longitudinal study in Norway, videotaping nursing practice and interviewing nurses and patients. Even though the nurses reported they had become more efficient and rated themselves as better nurses over time, the analysis of their practice revealed that they made the same practice errors (such as contaminating wounds and unsafely removing wound drains) at the end of the study as they made at the beginning. The authors reported that because there were limited opportunities for feedback and reflection, the new nurses did not learn from their mistakes. However, they did not compare these findings to institutions where TTP programs were in place.

Likewise, Ebright and colleagues (2004) have cited near misses as a problem for new graduates. They interviewed new nurses and found that of 12 recruited new nurse participants, seven reported at least one near-miss event, while one new nurse described two near-miss events. Themes identified related to near misses/adverse events, for example, included difficulty with first-time experiences, handing off patients, and novices assisting novices, among others. Similar

to the Bjørk and Kirkevold (1999) study, without supportive TTP programs, new graduates did not learn from their near misses.

Inexperienced nurses who lack on the job support may also adversely affect patient safety because of missed nursing care. When nursing care is omitted, patient outcomes can be negatively affected, thus promoting falls, failure to rescue, pressure ulcers, or other adverse events. Using focus groups, Kalisch (2006) identified seven themes for why care is missed; some of these included the poor use of existing staff resources and ineffective delegation. Further, subthemes included inadequate orientations for new nurses and inconsistent assignments. Without consistent patient assignments and opportunities for follow-through, novice nurses don't have the opportunity to get to know their patients well enough to recognize changes. Similarly, Benner *et al.*, (2010) cited student nurses' lack of opportunities for patient follow-up as one reason for implementing TTP programs in nursing.

New nurses have significant job stress (Elfering, Semmer, and Grebner, 2006 ; Goode *et al.*, 2013; Spector *et al.*, 2015a), and this stress has been linked to patient errors (Elfering *et al.*, 2006; Nielson *et al.*, 2013; Park and Kim, 2013; Spector *et al.*, 2015a). In an observational study using multilevel modeling, Elfering *et al.* (2006) studied 23 "young" nurses for two weeks in 19 hospitals in Switzerland and found that patient safety events (such as wrong dose of medication, patient falls, etc.) were significantly related to job stressors in nurses, as measured by trained observers. Similarly, using a descriptive correlation design, Park and Kim (2013) studied 279 nurses who had worked for at least six months in five hospitals in Korea and found that job stress was a significant predictor of patient safety incidents. In another study of workplace stress, Nielson *et al.* (2013) conducted in the ED of a Danish regional hospital, researchers found a significant association between stress and adverse events.

Spector *et al.* (2015a) also reported a link between increased job stress in new nurses and adverse events. In all three groups (Limited, Established, and NCSBN's TTP program), the NLRN reports of work stress increased at six months of practice but decreased at 9 to 12 months. Similarly at six months, their reports of errors increased and their satisfaction decreased, but improved at 9 to 12 months. Goode *et al.* (2013) found a similar trend with satisfaction, though not with stress; they did not measure errors or safe practices.

NLRN reports of their job satisfaction are linked to other outcomes of interest in TTP programs. Studies have found that there is a moderately strong relationship between job satisfaction and intent to leave (Hairr *et al.*, 2014) and a moderate relationship between satisfaction and job performance (Judge *et al.*, 2001). For NLRNs in a TTP program, Ulrich *et al.* (2010) reported significant correlations between job satisfaction and turnover intent and, further, that turnover intent was a meaningful predictor ($p < 0.0001$) of actual turnover. In a population of 63,034 RNs in acute hospitals, Choi and Boyle (2014) found that lower job satisfaction was significantly related to increased patient falls. This was one of the first studies to link job satisfaction to patient safety outcomes. More studies exploring the relationship between job satisfaction and patient safety should be conducted.

Until recently, no study reported on errors and near misses when new nurses were in a comprehensive TTP program versus when they were not. In a systematic review (Edwards *et al.*, 2015) and in critical reviews (Anderson, Hair, and Toderò, 2012; Rush *et al.*, 2013; Theisen and Sandau, 2013) of the research on TTP programs, the authors highlighted key findings of studies, but there were no data reported on patient safety. However, Spector *et al.* (2015a) did investigate patient safety outcomes in new nurses. The researchers found significantly lower reports of errors and near misses and the use of negative safety practices (such as not using universal precautions) when new nurses were in an Established TTP program with evidence-based components, compared to those in a Limited program. Additional research on patient safety and TTP programs is needed.

Retention/Turnover

For this chapter, retention is defined as the percentage of new graduates remaining at their organization after one year, and turnover is the percentage of new graduates leaving an organization after the same time period. Some articles report retention, while others report turnover.

NLRNs who do not participate in comprehensive TTP programs have a higher turnover rate than those who do (Spector, 2015a). In this year-long, multisite study of NLRNs hired in hospitals, the researchers prospectively tracked turnover rates. They found that when a hospital had a limited TTP program that did not include many of the evidence-based components, the voluntary, year-long turnover rate was 25.0%. However, when the new nurses participated in an established evidence-based program that was integrated into the institution, the turnover rate was 12.0%. When NCSBN's TTP program was introduced to the institution and implemented over a year, the turnover rate was slightly higher at 14.7%. Both the Established and NCSBN TTP programs had statistically higher turnover rates than the limited programs. A possible explanation for the higher turnover rate in NCSBN's program could be that the program had not been in place long enough to be incorporated into the hospital's system. Ulrich *et al.* (2010) found that as a TTP program becomes assimilated into the system, the turnover rate drops even further. Turnover from the Versant program was 7.1% in the first year of the program, but it dropped to 4.3% after five cohorts had been through the program. Pre-Versant turnover rates averaged 27.0% among all sites. Similarly, Goode *et al.* (2013), in their multisite study of the UHC/AACN residency program, reported turnover rates of 12% in the first annual evaluation, though, once integrated into the system, the turnover rate decreased to 5.4%.

Of related research reviews, Edwards *et al.* (2015) reported retention rates in internship/residency programs varied from 73 to 94% in four studies, and turnover rates ranged from 8.0 to 16.5% in five studies. The review did not report the retention or turnover rates before the programs were in place. Edwards *et al.* (2015) reported on one study of NLRNs (Newhouse *et al.*, 2007) where the retention was significantly improved after the first year of practice when compared to a comparison group. However, the significant improvement did not hold for 18 and 24 months in practice, possibly indicating that extending the program into the second year would be important. Similarly, Rush *et al.* (2013) reviewed publications on retention and turnover rates in TTP programs. Of those studies reporting on retention rates, the average was 90.1%, while those reporting on turnover had an average rate of 10.5%. When studies examined pre- and post-program rates, every program had improved retention or turnover rates, though Rush *et al.* (2013) did not indicate if these improvements were statistically significant. While Goss (2015) focused on the effect of implementing preceptorships on retention rates, she presented few details on the actual retention/turnover rates when implementing preceptorships as compared to either pre-preceptorship or comparison group data.

This first-year turnover may adversely affect patient quality and safety, though the research is not conclusive on this. Replacing new nurses who leave the agency with temporary staff may be associated with adverse events and decreased quality of care. Mazurenko, Liu, and Perna (2015) conducted a systematic review of studies investigating the effect of temporary nurses on the quality of care. Some of the 25 studies met their research criteria and reported adverse effects with temporary nurses, others did not. It is likely a complex association, where the quality of the work environment has an effect as well. That is, it could be that hospitals with poorer work environments are unable to recruit or retain nurses and therefore the adverse effects are from the poor work environment, rather than the turnover. Indeed, Aiken *et al.* (2013) looked at whether temporary nurses lead to higher mortality or failure to rescue. They used 2006 primary survey data from 40,356 registered nurses in 665 hospitals in four states, linked with American Hospital Association and inpatient mortality data from state agencies for approximately 1.3 million patients. Before controlling for

hospital environment, they found that a higher proportion of agency nurses in hospitals was significantly associated with a higher mortality. However, once they controlled for hospital environment, this association was rendered insignificant. Future studies on the use of temporary nurses should address the hospital environment.

Mazurenko *et al.* (2015) suggest that the differences in study findings may also relate to how the researchers define quality of care outcomes. Aiken *et al.* (2013) used mortality and failure to rescue and found no significant differences. However, other studies found that the use of temporary nurses had an adverse effect on care when measuring nurse-sensitive patient outcomes or when quality of care was measured as the nursing process (Bae, Mark, and Fried, 2010; Hass, Coyer, and Theobald, 2006; Hurst and Smith, 2011; Wu and Lee, 2006).

Another issue with using temporary staff is continuity of care. Duffield *et al.* (2009) examined staff consistency on 40 wards. They used the word “churn” to describe the constant movement of staff, thus creating changes to skill mix and challenges in scheduling, performance management, and supervision. They illustrate how the impact on one ward, with a high degree of “churn,” had a higher rate of adverse outcomes than the majority of wards in the study. Even though the literature is mixed on whether turnover adversely affects quality and safety, coordination of care is affected, as well as management and economic issues for the hospital.

Bae *et al.* (2010) have developed a formula that hospitals may consider. They studied the relationship between temporary nurses and patient safety outcomes (patient falls and medication errors) and found that when nurses worked on units with high levels of temporary nurses (15% or more), there were greater numbers of patient falls. Interestingly, when there were moderate levels of temporary nurses (5 to 15%) there were fewer medication errors. This, Bae *et al.* (2010) suggest, is likely because the temporary nurses relieve a shortage, though using high proportions of temporary nurses can harm patients.

Quality and Safety in Nonhospital Sites

Most of the evidence linking retention, quality, and safety has been done in hospitals. Since 18% of new nurses are employed in nonhospital sites (NCSBN, 2014), more research on new nurses should be conducted in these settings. In articles describing model programs for transitioning new nurses into home care delivery (Carignan *et al.*, 2007; Meadows, 2009), higher retention rates were reported when organizations used their models. Carignan *et al.* (2007) reported on preliminary findings from three self-report scales (satisfaction, control over practice, and new graduate experience), though statistical differences were not reported. Although there are no published data about competence and retention in ambulatory care, anecdotal data indicate that many new nurses leave in the first year, though when these employers develop TTP programs, they report improved retention rates (AAACN, 2014).

Similarly, in long-term care, there is a paucity of published data on whether transition programs improved safety and quality. Researchers in Wisconsin (Nolet *et al.*, 2015) report on their experiences with providing a nurse internship program for junior and senior nursing students, finding challenges in creating interest in new nurses for working in long-term care. Additionally, Wisconsin and New Jersey are developing nurse residency programs for new graduates who work in long-term care (Cadmus, Salmond, Hassler, Black & Bohnarczyk, 2016; University of Wisconsin School of Nursing, 2015). While these programs have been successful, at this point, they are only able to reach a small proportion of nurses in these environments often limiting them to settings with the most resources.

In the NCSBN study of transition programs in nonhospital sites, 17 nursing homes hired new nurses (Spector *et al.*, 2015b). Although the numbers of new nurses hired were too low (16 LPNs and 21 RNs) for statistical analysis, the data provided were illustrative. As with the hospital part of this study, the new nurses in nursing homes self-reported their errors or near misses and use of safety

practices. The use of safety practices was similar to those reported by the new nurses in hospitals, however, the new nurses' reports of errors were much higher in nursing homes than those reported in hospitals. The 12-month retention data in the nursing home sites were tracked, though with dismal results. Overall, 35% of the new nurses were still employed in nursing homes after one year in practice. When comparing the groups, 29% of the control group nurses remained, and 40% of those participating in the NCSBN TTP program remained. Of the nurses who left, a much greater percentage left involuntarily than those in the hospital sites. The qualitative reports of the new nurses hired in nursing homes, along with their preceptors and the site coordinators, provided some insight into the challenges of implementing a transition program in nursing homes. There was little support from their employers and no time for the new nurses to complete the program. Likewise, the preceptors, while interested in participating in the program, were too busy to provide work with the new nurses and received little administrative support. A priority for the nursing community should be to strategize on how to better support new graduates in long-term care.

Standardized TTP Programs

Research reviews and large datasets, as described above, provide evidence that formal TTP programs improve outcomes in new nurses. This section outlines the evidence that supports the TTP program elements and describes the design of three standardized national programs. Additionally, the standards of two national residency accreditation programs will be outlined.

Systematic and other research reviews are valuable for identifying key components of transition programs (see Table 15.2). One review focused on preceptor support (Goss, 2015); another on outcomes of program types, such as residency, simulation, etc. (Edwards *et al.*, 2015); two identified specific elements of TTP programs (Anderson *et al.*, 2012; Theisen and Sandau, 2013); and two reported on the best practices of TTP programs (Goode *et al.*, 2016, Rush *et al.*, 2012). There were many recurring themes among all of these reviews, such as the importance of implementing preceptorships and preceptor training. Indeed, the focus of Goss's systematic review was solely on the preceptor role affecting retention. Although Goss concluded that implementing preceptorships has a positive effect on retention, few specifics were provided of actual differences in retention rates based on provision of preceptorships or not. Other common components cited in these reviews included content and experience in patient safety, evidence-based practice, communication and teamwork, critical thinking, leadership, time management/organization skills, and access to specialty content educational experiences. Administrative support for a TTP program was also seen as an important aspect across these reviews. Related to length of program time, implementing a one-year TTP program and a three- to six-month preceptorship was supported by the research. However, it is important to point out that many of the studies reviewed had significant limitations, as identified earlier. More rigorous research on TTP programs should be conducted.

Although many health care organizations have well-planned, homegrown TTP programs, as demonstrated in the multisite study by Spector *et al.* (2015a), three national programs will be described. Each has been studied extensively (Goode *et al.*, 2013; Spector *et al.*, 2015a; Ulrich *et al.*, 2010), and while specific results were described previously, the major results will be outlined.

NCSBN TTP Program

After reviewing national studies (NCSBN, 2002; 2004) where more than 50% of the employers reported that newly licensed nurses were not prepared to provide safe and effective care, NCSBN's membership saw the lack of TTP programs to be a safety issue. Therefore, NCSBN's board of

Table 15.2 Elements of TTP programs from research reviews of TTP studies.

Research Review	Number of Studies	Elements of TTP Programs
Anderson, Hair, and Todero (2012)	20	<ul style="list-style-type: none"> ● Communication ● Teamwork and collaboration ● Patient safety ● Evidence-based practice ● Time management ● Critical thinking ● Delegation ● Patient outcomes ● Leadership and professional development ● One-year in length ● Preceptorship
Edwards <i>et al.</i> (2015)	30	<p>Four support strategies:</p> <ul style="list-style-type: none"> ● Internship/residency ● Graduate nurse orientation ● Mentorship/preceptorship ● Simulation
Goode <i>et al.</i> (2016)	23	<ul style="list-style-type: none"> ● Evidence-based and structured program, national accreditation, 6-12 months in length.
Goss (2015)	20	<p>Focus on a preceptor support system:</p> <ul style="list-style-type: none"> ● Support and recognize the preceptor ● Foster communication ● Provide educational opportunities ● Provide preceptor training programs ● Model caring behaviors ● Apply 3 to 6 month preceptorship ● Provide administrative support ● Use preceptor programs to positively impact new nurse retention
Rush <i>et al.</i> (2012)	47	<ul style="list-style-type: none"> ● Defined resource person ● Mentorship ● Peer support opportunities ● Strong prelicensure nursing programs ● Formal education during the TTP program ● Paired with a trained preceptor ● Specialty content and skills ● Workplace environment
Theisen and Sandau (2013)	26	<ul style="list-style-type: none"> ● Communication ● Leadership skills ● Conflict resolution ● Prioritization, organization, and time management skills ● Critical thinking and clinical reasoning ● Stress management ● One-year in length ● Preceptorship

directors convened a committee to develop a TTP program. A committee of NCSBN's membership, with representatives from AONE, spent a year reviewing the evidence to develop a standardized TTP model. The model was designed to be flexible so that any program (independently developed or in partnership with other institutions) that meets the requirements of this model could be used. It was developed to be robust; that is, it could be used across all settings and with all levels of education, from practical nursing to master's entry nursing. Additionally, the NCSBN TTP program was planned as a "no-blame" model. The NCSBN TTP model assumes that education programs are adequately preparing our nurses for practice and that practice settings are not unfairly expecting new nurses to move immediately into skilled practice. Instead, there was a missing piece in nursing: no standardized TTP program.

NCSBN's TTP model was collaboratively planned, with input from a variety of nursing and health care organizations, and many changes were made based on their insight. For example, the original model was re-categorized to highlight the QSEN competencies so that it would be in line with national nursing initiatives (Cronenwett *et al.*, 2007; Sherwood and Barnsteiner, 2012).

The elements of NCSBN's TTP evidence-based program include the following features (see Figure 15.1):

- **An institutional-based orientation program.** Orientation is defined as the process of introducing staff to the philosophy, goals, policies, procedures, role expectations, and other factors needed to function in a specific work setting. Orientation takes place both for new employees and when changes in nurses' roles, responsibilities, and practice settings occur (ANA, 2010).
- **Trained preceptors.** A key to the TTP model is that a *trained* preceptor is assigned to the new nurse for the first six months, ideally to work with and train the new nurse. The preceptors complete training before working with the NLRN.
- **Learning modules.** In the first six months of the program, the new nurse completes five modules. However, because this program was designed to be flexible, this content could be presented using a number of teaching strategies. Indeed, a hybrid model (face-to-face and online strategies) would be an excellent methodology to consider. Because this program was studied (Spector *et al.*, 2015a), online modules were designed for the study to control for the teaching methodology.
 - *Communication and teamwork* with major subcategories such as transitioning from student to an accountable nurse (role socialization); communicating to ensure safe and quality care (TeamSTEPPS, 2014); delegating and decision-making; experiencing work environment and conflicts; growing as a professional nurse.
 - *Patient-centered care* with major subcategories such as content specialty (work with preceptor); multiple dimensions of patients; prioritizing and organizing; just culture; moral/ethical concerns; health care systems; professional boundaries.
 - *Evidence-based practice* with major subcategories such as defining evidence-based practice with scenarios; using databases; critically appraising the literature; using clinical practice guidelines; using evidence-based practice models; implementing evidence-based practice in practice settings.
 - *Quality improvement* with major subcategories such as an overview of quality improvement; identifying improvement gap opportunities; quality improvement tools; measuring and monitoring the data; using quality improvement in practice (case study); keys to successful improvement.
 - *Informatics* with major subcategories such as informatics as the foundation of nursing; computer and information literacy skills; information management skills with cases; informatics; and the nurse's role in delivering safe patient care.

- **Safety and clinical reasoning.** This is threaded throughout the modules.
- **Institutional support.** Support is provided during the second six months of the program when the new nurse participates in system activities, such as committees, unit projects, grand rounds, and other learning opportunities offered by the institution.
- **Feedback and reflection.** This is threaded throughout the entire year.

Major Study Findings

As compared to a limited transition program, when a formalized evidence-based TTP program is integrated into the hospital and has administrative support, it is associated significantly with the following results (Spector *et al.*, 2015a):

- 1) Decreased self-reported errors and use of negative safety practices
- 2) Increased overall competency (preceptor and new nurse ratings)
- 3) Decreased self-reported work stress
- 4) Increased self-reported job satisfaction
- 5) Increased retention

Additional findings follow:

- 1) There was a positive return on investment when NCSBN's TTP hospital program was compared to a Limited program (not comprehensive and without many evidence-based criteria) (Silvestre, Ulrich, Johnson, Spector & Blegen, in press)
- 2) There are significantly better outcomes when hospital preceptorships are supported by the institution so that preceptors have few preceptees and time for the dyad to work together, and they share shifts and assignments (Blegen *et al.*, 2015).
- 3) More work needs to be done with nonhospital settings, particularly long-term care, to find resources to implement and study transition programs.

UHC/AACN Residency Program

In 2002, six hospitals and their partner school piloted the UHC/AACN Nurse Residency Program. As of August 2012, 31,000 nurses and 86 organizations representing 100 hospitals have participated in the UHC/AACN residency program (Goode *et al.*, 2013). This year-long program considers orientation and specialty content (e.g., telemetry or emergency nursing) as the responsibility of the hospital and not the residency program, similar to the NCSBN TTP program.

The UHC/AACN TTP program content includes the following:

- Leadership, with a focus on patient-centered care and interprofessional collaboration
- Quality and safety and related nurse sensitive outcomes
- Professional role, which includes professional issues and managing changing patient conditions
- An evidence-based practice project, which positively impacts their units
- Face-to-face seminar sessions and facilitated peer discussions

Major study findings over the one-year period of the program follow (Goode *et al.*, 2013):

- The perception of overall competence, confidence, ability to organize and prioritize, and ability to communicate and provide leadership significantly improved.
- Satisfaction significantly decreased at six months and then stabilized.

- Scores on organizing, prioritizing, communication, and leadership were significant predictors of commitment to current position and to nursing.
- The top three skills residents were uncomfortable with included code/emergency response, and chest tube and ventilator care.
- The evidence-based projects were highly rated by the organizations and had an impact on improving nursing practice.

Versant

The Versant program was instituted in 1999, and their researchers have reported the first 10 years of program outcome data (N = 6000 new graduates) (Ulrich *et al.*, 2010).

The program began in children's hospitals with didactic courses and guided clinical experience with a one-on-one preceptor. In 2004, the residency was expanded to general acute care hospitals with successful results, using didactic courses and 18 weeks of clinical immersion. In 2013, the residency period was extended to one year, which included ongoing structured mentoring and debriefing beyond the immersion period, and recently the immersion period (with the one-on-one preceptor) was condensed to 420 hours with 100% of competencies validated (L. Africa, personal communication, November 12, 2015). The Versant program includes the following:

- A structured immersion program with a preceptor for each resident
- Knowledge assessment and validation, with education available as needed
- Case studies
- Self-care sessions
- Rotations to related departments
- Detailed competency validation
- A structured mentoring model, where the new graduates have structured meetings and mentoring sessions

This program acknowledges the importance of active participation of everyone throughout the organization, which is facilitated by an RN residency architecture that delineates roles and systems for implementation and management of the residency.

Major study findings include the following:

- Turnover of the NLRNs in the program was improved significantly when compared to pre-Versant turnover.
- Competency (self-assessed and of a random sample of residents observed by trained observers) improved significantly from the beginning to the end of the residency.
- Total satisfaction increased in a stepwise fashion from the end of the residency to months 12 and 24.
- Self-confidence grew across time.
- Higher satisfaction correlated significantly with lower intent to leave.

Commission on Collegiate Nursing Education (CCNE) Accreditation Standards

In 2008, the CCNE began approving post-baccalaureate nurse residency programs, and in 2015, the focus changed from just post-baccalaureate programs to entry-to-practice programs, regardless of education (CCNE, 2015). CCNE accredits two types of entry into practice residency programs:

- 1) Employee-based programs that hire newly licensed nurses
- 2) Federally funded traineeship residency programs that engage newly licensed nurses for the residency program, but make no commitment for ongoing employment

CCNE defines a residency program as a series of learning experiences that occur continuously over a minimum of 12 months through a partnership between a health care organization and an academic nursing program. As of this writing, 25 residency programs have been accredited by CCNE. Key curricular elements include the following:

- *Management and delivery of quality patient care* – quality and safety, patient and family centered care, management of patient care delivery, management of the changing patient condition, communication and conflict measurement and informatics and technology
- *Professional role and leadership* – Performance improvement and evidence-based practice, professional development, ethical decision-making, stress management, business of healthcare

The accreditation requirements stress appropriate education and experience for the program educators/faculty. Further, they require that preceptors are oriented to their roles and responsibilities. The requirements call for evidence of administration support, from the top down, and a systematic process for determining program effectiveness.

ANCC Accreditation Standards

In 2014, the American Nurses Credentialing Center (ANCC) instituted the Practice Transition Accreditation Program (PTAP), which accredits three types of transition programs (ANCC, 2015):

- 1) RN Residency, which is a planned, comprehensive program for newly licensed nurses with less than 12 months of experience. The program must be at least six months in length.
- 2) RN Fellowship, which is a planned, comprehensive program for currently licensed nurses with 12 or more months of experience. This program is generally for those nurses who change specialties.
- 3) APRN Fellowship, which is a planned comprehensive program for licensed APRNs.

As of this writing, ANCC has accredited four sites. Key curriculum elements include communication, critical thinking/clinical reasoning, ethics, evidence-based practice, informatics, interprofessional collaboration, patient-centered care, quality improvement, role transition, safety, stress management, and time management.

The programs must demonstrate administrative support, and program faculty must have appropriate preparation. Additionally, practice-based learning takes place under the guidance of preceptors (or other experienced health professionals), who also must be prepared to work with residents.

Summary

In summary, the evidence supports TTP programs of 9 to 12 months in length. Administrative support, from the top down, is essential for promoting the program and for providing adequate resources. Program content supported by the literature, and structured, includes the QSEN competencies and their related KSAs (<http://qsen.org/competencies/pre-licensure-ksas/>), clinical reasoning, stress management, and specialty content. Preceptors who are trained for the role provide expertise in experiential learning and are key to the program.

Implications for Educators and Practice Partners

Transition to practice should be a seamless journey, from education to competent practice, for NLRNs. This section provides ideas for both educators and their practice partners for accomplishing this.

Educators

Partnerships between clinical practice organizations and schools of nursing are critical links to successful new graduate transition (Spector, 2015). Educators are an integral part of transitioning new nurses to practice, both in preparing their students for practice, but also in collaborating with clinical practice organizations as they plan and implement transition programs.

What specifically can educators do to facilitate transition to practice? The evidence from TTP studies suggests that integrating the QSEN competencies into prelicensure nursing curricula, along with their accompanying KSAs, will assist with TTP. Additionally, robust clinical immersion courses during the last semester of the academic program, using trained preceptors, are strongly recommended because of the experiential learning they provide. Participating in dedicated education units is a strategy that some nursing programs have used to collaborate with clinical practice partners. In this model, nurse executives, faculty, and staff nurses partner to transform patient care units into supportive environments for nursing students and staff nurses, while continuing to provide quality care to patients. This partnership between education and clinical sites is mutually beneficial and enhances the collaboration between academe and practice (Murray and James, 2012).

Educators are strongly encouraged to work with clinical practice organizations to design clinical and simulation experiences that will foster a more seamless transition to practice. Educators can use their expertise in teaching-learning strategies to design effective, evidence-based TTP programs and preceptorships. Since many educators also are experienced researchers, they can assist the clinical practice organizations to study the outcomes of their TTP programs, thus providing more evidence on effective programs.

Practice

As can be seen from the collective research findings on TTP programs (see Table 15.1, Goode *et al.*, 2013; Spector *et al.*, 2015a; Ulrich *et al.*, 2010), comprehensive, evidence-based TTP programs provide significantly higher retention rates, improved new nurse competencies, higher satisfaction, less stress, and increased confidence. One study (Spector *et al.*, 2015a) found significantly fewer reports of patient errors and increased use of safety practices when new nurses participated in an established, evidence-based TTP program, versus those who were in a limited program. Therefore, it is incumbent upon practice settings to provide TTP programs to their new graduates.

It is essential that the TTP program be enculturated into the system and supported from the top down. There must be adequate and timely channels of communication among the preceptor, resident, charge nurses, and the resident's frontline nurse manager so that meaningful assignments can be made for the NLRN. These communication channels are important to ensure that experiences are maximized and that competency validations and development needs are known. The content of the TTP program should provide the elements supported in the research, and partnering with nursing programs can facilitate planning evidence-based programs.

The evidence supports pairing trained preceptors with new nurses to provide experiential learning. Haggerty, Holloway, and Wilson (2013) conducted a longitudinal evaluation of preceptor support for NLRNs and reported a quality preceptorship benefits the development of competence and confidence of NLRNs. The key components of successful preceptor support were access to preceptors, how preceptors met NLRN learning needs, the importance of the preceptor-preceptee relationship, preceptor preparation for the role, and an overall culture of support. Preceptors play many roles: teacher/coach, leader/influencer, facilitator, evaluator, socialization agent, protector, and role model (Ulrich, 2012), and therefore, a structured preceptor training and support program is a necessary component of a TTP program (Blegen *et al.*, 2015; Bradley *et al.*, 2012; Bratt, 2009; Goode *et al.*, 2013;

Spector, 2015a; Ulrich *et al.*, 2010). One analysis found that new nurse outcomes were significantly improved when preceptors had few preceptees, worked one-on-one with the preceptees, and shared shifts and assignments (Blegen *et al.*, 2015). Additional studies on preceptorship needs are important to understand how to promote the best outcomes.

Oftentimes, practice settings cite cost as a reason for not implementing TTP programs, yet there is evidence to support the return on investment of TTP programs. Ulrich *et al.* (2010) reported that Versant Residency hospitals experienced significant savings for their systems as turnover decreased. For example, in one hospital the 12-month turnover rate of new nurses improved from 35.00% to 5.36%, which translated to an estimated savings of \$2,706,000 to \$2,904,000 for the hospital. In a study of 15 hospitals, Trepanier and colleagues (2012) found major cost savings in decreased turnover and decreased contract labor usage as the result of implementing a TTP program. Silvestre and colleagues (in press) analyzed return on investment (ROI) of the multistate NCSBN multisite TTP study and found a positive ROI, largely due to decreased turnover—even when smaller organizations only hire low numbers of nurses. Decreased nurse-related litigation costs have also been reported as an outcome of a TTP program in an ED (Bongiovanni and Laidlow, 2010).

Conclusion

There have been national calls for nursing to implement TTP programs in nursing (Benner *et al.*, 2010; The Joint Commission on Accreditation of Healthcare Organizations, 2005; IOM, 2003, 2011). This chapter has presented the evidence supporting TTP programs for all NLRNs to improve quality and safety of patient care. Evidence-based TTP program elements are presented, encouraging practice/education partnerships to design the programs and study the outcomes.

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