A vision for safe quality care has been acknowledged since the days of Florence Nightingale, who recognized the link between nursing practice and outcomes.¹ In 1998, nurses identified the significance of practice errors on poor patient outcomes, and the National Database of Nursing Quality Indicators² was established by the American Nurses Association to monitor how patient outcomes were related to unit-level nursing care.³ The Institute of Medicine report, To Err is Human, highlighted human error as causing nearly 98,000 deaths and over 1 million injuries in U.S. hospitals.² The report offered opportunities for improving healthcare through total system transformation. The Robert Wood Johnson Foundation answered the call with Quality and Safety Education for Nurses (QSEN) to develop minimum standards for safe nursing practice.³ Once standards were established, national nursing education credentialing bodies responded by requiring that QSEN competencies and systems thinking be integrated into program curricula.⁴,⁵
After over a decade of deliberate transformation attempts, system-related errors were still being identified as a primary cause of death in the United States, translating to over 400,000 preventable deaths. So, why haven’t QSEN and efforts to develop systems thinking resulted in improved safety outcomes? Anecdotal evidence suggests that QSEN competencies and systems thinking aren’t well integrated into practice settings. This article seeks to increase awareness of administrative and educator roles in empowering clinical nurses to understand the impact of their actions on patient and organizational outcomes using QSEN competencies and a systems thinking approach.

**Defining roles**

All nurses are leaders, educators, and care providers. Nursing position descriptions formalize nursing roles according to work settings. In this article, nurse leaders can be organizational directors or unit-level managers. Educators are defined by clinical instruction, often referred to as nursing professional development specialists. Clinical nurses are those who provide care within practice settings such as acute, long-term, home, or ambulatory care.

**What are the QSEN competencies?**

The six QSEN competencies—patient-centered care, teamwork and collaboration, evidence-based practice (EBP), quality improvement, safety, and informatics—have recommended, specific knowledge, skills, and attitudes that all nurses should exhibit for safe practice. Having these skills will assist nurses to continuously improve the quality and safety of the healthcare systems in which they work. Utilizing QSEN as a guide, nurses are able to redesign the content and context of how they deliver nursing care to ensure high-quality, safe care.

The competencies, developed at the prelicensure and graduate level, have been integrated into most nursing program curricula. However, more effort is needed to bridge these competencies to practice settings.

**What’s systems thinking?**

Systems thinking isn’t new to nursing. Most nursing theories contain systems thinking “where the whole is more than the sum of the parts.” A person’s interaction with his or her environment comprises a whole-person system, which is healthy based on a balance of inputs, throughputs, and outputs; nurses fit into the schema at the whole-person level. The dynamic state of the whole-person system can ultimately influence global health. (See Figure 1.) An analogy of a pebble dropping into a pool of water exemplifies how one nurse’s actions can influence the greater whole.

Nurses can use systems thinking to view how caregiving decisions and actions have an overall impact on organizational health outcomes. Systems thinking is a process of self-awareness in which the nurse knows boundaries specific to clinical reasoning, personal effort, reliance on authority, and awareness of interdependencies. Nurses can choose to mobilize change for the good of the whole system, based on experience and foresight. Nurses who display strong leadership behaviors can lead changes in practice and adherence to performance standards. Systems thinkers are those who have an acute awareness of the current system, an appreciation for behind-the-scenes patterns and structures, a willingness to
challenge systems and boundaries despite existing hierarchies, and an understanding of how system relationships are linked to system improvements.12

**Influence on practice**

QSEN is on the brink of adopting a new systems-based practice competency for which nurses need to have basic knowledge about the healthcare system to create optimum health benefits for patients/families, peers, and organizations.13 Systems thinking competencies reinforce nurses’ roles in safety and quality improvement. At minimum, nurses adopting systems thinking and systems-based practice should be able to understand interrelationships among nursing, the nursing work unit, and organizational goals. They’re encouraged to solve problems encountered at the point of care and appreciate their roles in identifying work unit inefficiencies and operational failures.14 Nurses must be able to take action to address potential or ongoing quality and safety concerns. They need to be active participants in monitoring, admitting to, reporting, investigating, and resolving near misses, errors, and systems breakdowns involving communication, supplies, medication, equipment, finances, and technology.

**Strategies to increase awareness**

How can nurse leaders and educators empower clinical nurses to understand the impact of their actions on patient and organizational outcomes using QSEN competencies and systems thinking? More important, how can clinical nurses envision the ripples or waves they make across the healthcare system as being influential in positive patient outcomes? The following evidence-based strategies envision an improved practice reality and expand on published ideas recommended for nursing professional development and leadership.15

**Patient-centered care**

Nurse leaders working at the unit or system level can use a variety of strategies to increase awareness of QSEN competencies and systems thinking among clinical nurses. These strategies include promoting relationship-based care by providing caring, healing environments; removing barriers that inhibit clinical nurses’ abilities to be healthy, alert, and present with their patients; and promoting inclusion of patient involvement in health and treatment plan discussions.16-18 Nurse leaders can utilize managerial expertise to allocate human, financial, and clinical resources based on unit needs and in alignment with the organization’s mission and vision.19,20 We need to promote and sustain patient-centered models of collaborative practice, such as interdisciplinary rounds, huddles, and/or primary nursing models. These structures provide nurses with complete autonomy in managing patient care and modifying practice to accommodate patient needs.19

To influence patient-centered care, nurse educators can encourage self-health principles, champion patient-centered models, and instruct on ways to alleviate pain and suffering during staff education programs.21 Nurse educators can teach staff members how to individualize patient care plans and empower patients to participate in treatment modalities.22 Also, they can incorporate QSEN competencies into orientation assessments and evaluation tools.23,24

**Teamwork and collaboration**

Closed-loop communication, identified leadership (at the senior and clinical level), and trust among team members have been identified as being essential to effective teamwork.25 In today’s healthcare system, patient care teams are challenged by expectations of specialized skill sets, value-based demands on performance, and complex environments with challenging workloads. Such challenges may impact team functioning and relationships. Incivility among team members in these situations has also been documented.25 Nurse leaders can address these challenges through role modeling teamwork and collaboration, and by fostering open communication, mutual respect, and shared decision making.20 Our support of teamwork building tools, such as TeamSTEPPS or I-PASS, may provide guidance to teams. TeamSTEPPS is used to minimize risks associated with handoffs among providers and across the care continuum, promote interdisciplinary communication of safety concerns, and build collaborative relationships.26,27 I-PASS, a refined mnemonic for illness severity, patient summary, action list, situation awareness and contingency plans, and synthesis by receiver, is used to standardize handoffs and prevent errors.26

At the organizational level, nurse leaders can establish collaborative relationships with
Using systems thinking

public health, academic partners, and professional organizations. We can advance the establishment of dedicated education units, in which the partnership between academic institutions and healthcare organizations provides an enhanced learning and clinical environment for nursing students. This model offers educational support through a preceptor model experience; students can apply theory to practice while being immersed in the clinical environment and partnered with RNs.

To promote effective teamwork and collaboration, nurse educators can support the need for interprofessional immersion in clinical education. Interprofessional education is a growing expectation of many professional organizations. Educators can design interprofessional continuing-education programs that incorporate tools, such as TeamSTEPPS, with high-fidelity, interdisciplinary clinical simulations. They can promote an interdisciplinary patient-centered culture by using educational programs to reinforce the role of team members in delivering safe and effective care. Educators can also partner with leaders to establish interprofessional dedicated education units as part of the inpatient infrastructure.

EBP
EBP is the current driving force behind high-quality care delivery. Current evidence is integrated with individualized patient care needs and clinical expertise to design practice. However, practice changes can lead to change fatigue, and nurse leaders and educators may struggle with addressing this side effect of EBP. Promoting change from the bottom up helps address change fatigue. Clinical nurses do better with change when they’re the ones initiating it. Putting processes in place and educating nurses on EBP will facilitate their active participation in practice changes.

Nurse leaders can integrate EBP by building an organizational culture that supports best practice and provides opportunities to enhance clinical nurses’ EBP competencies. In that process, nurse leaders share unit goals and organizational outcomes aimed at delivering EBP. We can role model EBP by fostering a healthy work environment and minimizing change fatigue.

To integrate EBP, nurse educators can infuse the Alliance for Continuing Education in Health Professions National Learning Competency Area 1, which is the “use of evidenced-based adult and organizational learning principles to improve employee performance into continuing education programming.” Nurse educators can advocate for the adoption of EBP throughout the nursing unit and organization by educating nurses on EBP skills, such as critical appraisal and translation of research findings into practice. If nurse educators serve as experts at the national level in formulating practice guidelines, they can incorporate best evidence with clinical expertise and patient/family preferences in the delivery of optimum care.

Quality improvement
To enhance quality improvement, nurse leaders can employ error prevention strategies by continually monitoring outcomes and completing root cause analysis when errors occur, including clinical nurse input. During rounding and/or in staff meetings, nurse leaders can share error prevention data to improve patient outcomes and promote an interprofessional approach to quality improvement and system processes.

Nurse educators can use data to evaluate and impact the effectiveness of continuing-education activities and programs. They can educate nursing staff on various quality/process improvement models in the utilization of outcomes data to improve care delivery. Educators can provide clinical nurses and students with opportunities to share EBP projects on the unit. They can also share unit-based EBP and quality improvement projects in staff meetings and during continuing-education programs, and/or by creating meaningful dashboards.

Safety
Nurse leaders can adopt high-reliability goals, such as standardized processes; safety checks; empowered decision making (authority migration); open, transparent communication; and collaborative, interprofessional teamwork. We can also address the potential for errors by discouraging and putting policies/processes in place that minimize disruptions during high-risk situations, such as blood transfusions, surgical or invasive procedures, needle use, and medication administration/reconciliation, and by advocating for the use of technologies.
that monitor and control for errors, such as two-identifier systems for bar coding, I.V. medication pumps, and wander alarms. Nurse leaders can implement 15-minute safety (adverse event) huddles as a way to reduce errors. If errors occur, lead root cause analyses using the “Five Why’s” strategy to determine causes and mitigating factors of errors. They can facilitate the implementation of interprofessional education regarding open disclosures, collaborative review, and error and near-miss management. Educators can also help clinical nurses by promoting self-reflection and peer review of clinical practice.

Informatics
Nurse leaders can advocate for the incorporation of evidence-based technologies and informatics. Enriched technologies may include electronically accessible clinical decision-making algorithms, clinical practice guidelines, and access to web-based resources. Nurse educators can provide continuing education on modern technologies that sustain safe patient care and clinical judgments. They can also support the roll-out of these technologies, serving as experts or liaisons between technology specialists and clinical staff.

Systems thinking
To implement systems thinking, nurse leaders can promote professional configurations, such as interprofessional collaborations, academic-clinical practice partnerships, and shared governance. We can champion organizational structures of empowerment in which nurses have the opportunity, resources, and information to provide high-quality care; serve as a liaison or be a voice between the organization and clinical staff; promote staff understanding of local actions that impact organizational goals; and demonstrate how organizational goals drive local actions, impacting system-wide accountability for efficient, safe, quality care. Lastly, nurse leaders can advance systems thinking through infrastructure redesign by integrating QSEN concepts into orientation, job descriptions, evaluations, or promotion criteria.

Nurse educators can implement evidence-based interventions that produce expected results for nurses and the organization, such as incorporating interprofessional education and education on hospital-acquired infection guidelines. They can educate staff on how to approach quality care delivery as the first step toward positive patient and organizational outcomes. Educators can emphasize the nurse’s role in utilizing available organizational resources and processes to provide safe, efficient patient-centered care. They can approach...
the practice of continuing education from a systems thinking perspective, recognizing that the healthcare team is part of a complex system, and incorporate individual, group, and governance leadership competencies into onboarding and continuing education programs.36,63,64

A primary role
Providing high-quality, evidence-based, patient-centered care is a primary role of clinical nurses. Both nurse leaders and educators serve as facilitators to clinical nurses as they collaborate to improve care. This article provides a variety of evidence-based strategies for all nurses, at all levels, to consider when using QSEN competencies and systems thinking to improve outcomes.  

REFERENCES