Nurse Competencies and Optimization of Patient Outcomes: The Synergy Model

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ABSTRACT

Problem: An ideal nurse-patient assignment framework is non-existent. There is no formal system in place to match nurse competencies with patient clinical severity indicators. **Purpose**: The purpose of this literature review was to identify acuity rating models that could be used to match patient care characteristics with nurse competencies. **Method**: A review of the literature was conducted using the EBSCOhost health search engine, which included databases from Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, and ProQuest. **Results**: The Synergy Model supported the use of an acuity rating system that considers the complexity of the patient, the patient needs, and the nurse's ability to meet those needs. The outcomes were positive for patient outcomes, patient, staff, and healthcare provider satisfaction.

INTRODUCTION

Patients currently placed on medical-surgical units are "vulnerable-as a result of large nurse caseloads, a high percentage of new nurses on staff, and higher levels of patient acuity" (Jones, 2013, p. 38). The Synergy Model was developed by the AACN, which conveys the interaction between the patient's needs and nursing care that thrives when they work together. The models are used as a framework for critical care certification and nurses to demonstrate the contribution nursing makes in improved "quality of care, containment of costs, and patient outcomes" (Curley, 1998, Abstract). The Synergy Model emphasizes patient care by matching patient care characteristics that are nurse dependent with nurse competencies that are significant to patient care and by using these principles to augment relational care and optimize patient outcomes. The American Nurses Association (ANA) currently supports legislation that requires unit specific staffing plans that are aimed at creating safe care to patients. The Registered Nurse Staffing Act is a federally mandated regulation that requires all hospitals that receive Medicare reimbursement to ensure nurse staffing needs are "appropriate to patients' needs" (ANA, 2016, para 3). The purpose of this literature review was to identify models that could be used to match patient care characteristics with nurse competencies.

THE LITERATURE REVIEW

A review of the literature was conducted using the EBSCOhost health search engine, which included databases from CINAHL, Google Scholar, and ProQuest with the keywords and phrase combinations for "*acuity tool and medical-surgical unit," "failure to rescue and nurse competencies," "competencies for nurses and evidence-based practice,"* and "*synergy model."*

Of the acuity tools found in the research, many were complex and were not aligned with the purpose of the project. Additional articles were included based on references from articles selected, journal subscription articles, and position statements about patient safety, acuity tools, and safe nurse staffing. Based on the literature review, the Synergy Model was used in critical care, progressive care, medical-surgical, and pediatric units. Some comments from the nurses' experience of using the model are displayed in the diagram (see Figure 1).
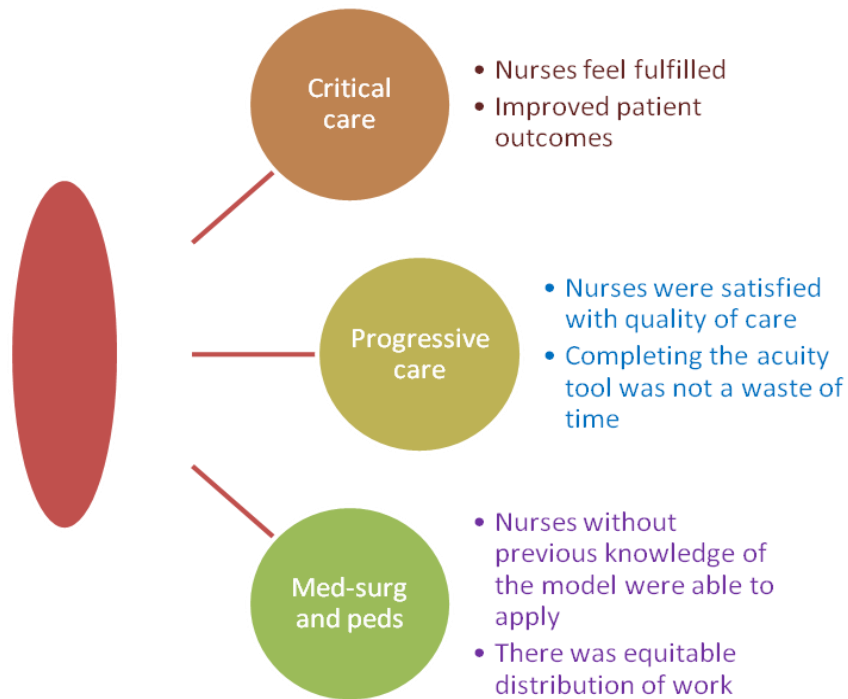
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Figure 1. The Outcome of Using the Synergy Model in Multiple Nursing Units

2.1 Use in Critical Care Units

Mainly used in critical care units, Pope (2002) was the first to offer a variety of ways the Synergy Model could be utilized to create alignment between the "institution's mission, vision, and values…[and a] healthcare system driven by patient and family needs" (p. 41). Suggested uses include implementation as an acuity tool in medical-surgical nursing units and "rating nursing hours on the level of individual patient's characteristics" (p. 39). As nursing hours required (workload indicators) decrease, the patient-to-nurse ratio increases. The Synergy Model supported the use of an acuity rating system that considers the complexity of the patient, the patient needs, and the nurse's ability to meet those needs. The premise of aligning patient needs with nurse competencies drives improved outcomes. Patients receive care from the appropriate staff with experience and skills for the needs of the patient. Nurses feel fulfilled with the care they deliver and meet the patient needs.

Kohr, Hickey, and Curley (2012) studied the use of the Synergy Model in developing a model for nurse productivity. The study had two phases which took place in three different intensive care units. The first phase was the identification of the operational definitions of each of the eight dimensions of the patient described by the Synergy Model characteristics. The second phase of the study was the development of a data collection system for nursing productivity.

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These surveys were subjective in nature, with charge nurses describing one patient cared for each day in terms of easy, usual, or hard (Kohr et al., 2012). With regards to nursing productivity, they were met with the usual challenge of quantifying the multidimensional work of nursing.

2.2 Use in Progressive Care Units

Of the tools available, no synergistic model considered the clinical indicators and complexity of the patient balanced with the competencies of the nurse and ability of the units to respond to the change in trajectory when the patient has physiological deterioration. Kidd et al.'s (2014) research demonstrated the need to incorporate the synergy framework when "creating ideal nurse-patient assignments" (p. 3).

Kidd et al.'s (2014) research on the progressive care unit found that "nurse sensitive indicators" are determined by the skill level of the nurse providing care (p. 1). They developed their own acuity tool that examined five acuity criteria categories. These included "complicated procedures, education, psychosocial or therapeutic interventions, oral medications, and complicated I.V. drugs and other medications" (p. 2).

The researchers used inter-rater reliability amongst staff members on the same patients during the same and different shifts that yielded an acceptable level of 85%. The acuity scoring system they developed was on a 1-4 scale. This study measured nurse satisfaction and was completed at months 1, 6 and 12.

They also tracked perception of workload and perceived quality of care. The final item examined was the quality indicators based on nurse workload indicators. The charge nurses developed patient assignments based on "acuity scores of 0-60 for each patient," balancing workload among the nurses according to geographical location and level of nurses' experience level and patient needs.

The study found that nurses had improved satisfaction with the quality of care they were able to provide. The nurses also reported that they felt "completing the acuity tool was not a waste of time" (p. 3). The study did not discuss the nurse sensitive indicators (Kidd et al., 2014).

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2.3 Use in Adult Medical-Surgical and Pediatric Units

Brewer et al. (2007) tested the Synergy Model in a cross population of pediatric and adult patients using a case report form to establish reliability and validity of patient characteristics. They used a self-evaluation proficiency scale to assess nursing competencies. The findings were applicable in regards to patient characteristics and were reliable and valid regardless of the age of the population and severity of illness, and that "nurses without previous knowledge of the AACN Synergy Model were able to apply the model during routine patient care" (Brewer et al., 2007).

Carter and Burnett (2011) demonstrated the use of the Synergy Model on a medical-surgical unit that had both adult and pediatric populations. They developed and implemented a staffing grid. The grid scored the elements of "stability, predictability, and complexity" of the patient acuity, overlaid with the competencies of the registered nursing staff (p. 250). An evaluation process determined nurse competency. The assessment of the skills process consisted of the nurse's self-evaluation on a skills survey, the evaluation of performance by a peer, and evaluation by the unit manager. The scores from these items defined the nurse as "independent, competent, or expert" (p. 250). The scores from patient acuity and the nurse competencies were then "superimposed on the Synergy Grid to determine patient assignments for each nurse" (p. 253). The outcomes were positive for patient outcomes, patient, staff, and healthcare provider satisfaction. After implementation, the unit also improved its safety benchmarks and surpassed "national comparative information for small teaching hospitals" (p. 254).

The acuity tool assigns points based on "clinical severity and nurse workload indicators" (Chiulli et al., 2014, p. 12). The indicators were based on documented data entry points in the electronic health record. Scoring was based on clinical severity and nurse intensive activities to help distribute the care provided to patients on medical-surgical units.

The patient rating from the Chiulli, Thompson, & Reguin-Hartman Acuity Tool balanced the workload on medical-surgical units, matching patient characteristics that are of interest to nursing with nurse competencies that are vital to patient care. Quantifiable measures of the complexity of the care needed for the patient supported equitable distribution of work. The synergy of matching patient characteristics with nurse competencies improved advocacy and

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caring practices among nurses and care team members to decrease the number of resuscitation events.

DISCUSSION

Although not stated, elements of the AACN Synergy Model were used conceptually to support the Chiulli, Thompson, & Reguin-Hartman Acuity Tool to ensure that the patient's clinical needs were aligned with the appropriate level of care for both the nurse and unit characteristics. The acuity rating system worked to make patient assignments more equitable and match nurse expertise and experience with appropriate levels of patient acuity (Chiulli et al., 2014; Kidd et al., 2014). As an intervention, the acuity tool provides an objective measure of clinical severity and nurse workload.

Although designed for implementation in critical care units, the Synergy Model has theoretical elements that are adaptable to medical-surgical units in the hospital (Pope, 2002). The model has seven patient characteristics and eight nurse competencies. The aspects of the Synergy Model that were focused on in relationship to the acuity tool are the patient characteristics of stability, complexity, predictability, and vulnerability. The nurse competencies are advocacy/moral agency and caring practices (Curley, 1998).

Nurses with a workload that is within their skill level are better at meeting their patients and their needs (Cathro, 2013). Based on the Synergy Model, Kohr et al. (2012) said that "when needs and characteristics of the patient and the patient's family are matched to a nurse's competence, … better outcomes for the patients can be expected" (pp. 421-422). Nurses can provide safer care within their level of competence, advocate for patients' needs, and effectively collaborate with unit staff and care providers to meet their patient needs.

There is no formal system in place to match nurse competencies with patient clinical severity indicators. This reinforces the archaic thinking of the past 60 years that consideration for nursing competencies and skill levels varies among nurses (Gelinas, 2016). Besides having a valid nursing license, holding current basic life support and advanced cardiac life support certification, and meeting the basic competencies outlined in the skills checklist, there is a lack of alignment of nurses' "training, education, and skills [to match] with the needs of a particular patient" (O'Keeffe, 2016, p. 33). Pope (2002) has also suggested that this model would be useful in recruitment and retention of staff by developing clinical skills through the

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use of a promotion and progression ladder and decreases in healthcare costs and can be instrumental in adding experiential learning for nursing staff.

The ANA is promoting the Safe Patient Care Act. This legislation is designed to set ratios for the number of patients a nurse can be assigned to care for during their shift. Hospital systems would also need to abide by limits that reduce the amount of mandatory overtime nursing staff is required to work. The final tenet requires that hospital systems report actual nurse to patient ratios (MNA, 2017). While the ANA is seeking to improve patient safety through the use of ratios, Cathro (2013) highlighted the need to consider patient acuity as part of the equation. An acuity tool addresses these needs separate from the proposed required mandated staffing ratios or mandatory overtime to cover staffing needs.

CONCLUSION

Based on the literature review, it is evident that there is no formal system in place to match nurse competencies with patient clinical severity indicators. There is a limited amount of research pertaining to nursing acuity tools. Some acuity tools are geared toward intensive care units rather than in an acute care setting. The AACN Synergy Model shows promise as a conceptual framework for nursing productivity system. This can be used to translate patient acuity scores to patient assignments. This model describes eight patient and family dimensions. Dimensions considered are patients' stability, resiliency, predictability, vulnerability, complexity, patient and family participation in decision-making, patient and family participation in care, and resource availability.

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