

# THE SYNERGY MODEL IN PRACTICE

## Applying the Synergy Model to Nursing Education

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The Synergy Model was adapted by the American Association of Critical-Care Nurses as a basis for nursing practice and for CCRN and CCNS certification examinations. In the latter examination, a variety of scenarios typify how the Synergy Model is the basis for practice for the clinical nurse specialist. The model describes 7 characteristics that patients will manifest during various phases of their illness (Table 1). The model also describes 8 nursing competencies that are essential for the delivery of quality patient care (Table 2). The Synergy Model links patient characteristics and nurse competencies to enhance optimal patient outcomes.

Since the implementation of the Synergy Model, numerous exemplars have been published illustrating its incorporation into clinical practice. These exemplars have centered around direct patient care situations. The Synergy Model also provides a basis for the multifaceted role of the nurse educator.

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**Table 1** Patient characteristics

Characteristic	Definition
Stability	Ability to maintain equilibrium
Complexity	Entanglement of 2 or more systems (body, family, therapies)
Predictability	Summative patient characteristics implying a certain illness trajectory
Resiliency	Restorative capacity via compensatory and coping mechanisms
Vulnerability	Susceptibility to actual or potential stressors adversely affecting outcomes
Participation in decision making and care	Patient and family engagement in decision making and care processes
Resource availability	Personal, psychological, social, technical, and fiscal resources the patient, family, or community bring to a care situation

Adapted from Curley MAQ. Patient-nurse synergy: optimizing patients' outcomes. *Am J Crit Care.* 1998;7:64-72.

### THE NURSE EDUCATOR'S ROLES

Under the supervision of a preceptor, an orientee assumes responsibility for the care of acutely or critically ill patients. This care includes conducting a complete, accurate initial assessment of the patient's condition; identifying current patient problems; and developing, implementing, and evaluating a plan of care. The nurse educator works to develop the psychomotor, critical-thinking, and clinical decision-making skills of the orientee. Enhancing the orientee's application of content learned in critical

care orientation classes and principles of anatomy, physiology, pathophysiology, and pharmacology is inherent in the role of the nurse educator and is essential for the promotion of optimal patient outcomes.

One of the exciting aspects of working in a critical care unit is the anticipation of using technology and equipment that encompass a large percentage of the patient's environment. New nurses have the tendency to initially focus on equipment. The initial perceived priority of the new critical care nurse is to master the technology. When competency

# THE SYNERGY MODEL IN PRACTICE

**Table 2** Nurse competencies

Competency	Definition
Clinical judgment	Use clinical reasoning including decision making, critical thinking, and global grasp of a situation, coupled with acquired formal and experimental knowledge and skill
Advocacy and moral agency	Work on another's behalf; represent the concerns of patients and their families; and assume a leadership role in addressing ethical and concerns
Caring practices	Create a compassionate and therapeutic environment driven by the unique needs of the patient-includes vigilance, engagement, and responsiveness
Facilitation of learning	Use of self to facilitate learning
Collaboration	Facilitate every person's contribution toward achieving optimal or realistic goals for the patient-involves intradisciplinary and interdisciplinary work with colleagues
Systems thinking	Recognize the holistic interrelationships that exist in and across the healthcare system in the context of the care environment
Response to diversity	Recognize differences and incorporate them into the provision of care
Clinical inquiry	Engage in the ongoing process of questioning and evaluating practice, providing evidence-based practice and innovating through research and experimental learning; use clinical knowledge to promote the best outcomes for patients

Adapted from Curley MAQ. Patient-nurse synergy: optimizing patients' outcomes. *Am J Crit Care.* 1998;7:64-72.

with equipment has been met, concentration will progress to incorporating scientific concepts into the patient's plan of care. Once these concepts can be applied to making clinical decisions, an appreciation develops of how utilization of these concepts is effective in moving the patient along the continuum of care toward optimal patient outcomes.

The competencies most significant for nurse educators are col-

laboration, facilitator of learning, caring practices, clinical judgment, clinical inquiry, and advocacy and moral agency. Planning and developing education programs as they relate to unit and departmental operations, staff competencies, staff development, and trends in healthcare require multidisciplinary collaboration. Working with other nurse experts, physicians, respiratory therapists, social workers, and pharmacists

is often essential to develop programs that are based on identified needs of a target audience. The goal of these programs is to help ensure the delivery of quality care that is centered on the needs of patients, families, and significant others.

Inherent in the role of nurse educator is teamwork. Teamwork, in collaboration with all personnel, is pivotal to promoting a safe and harmonious working environment. By collaborating with nursing leadership, the nurse educator makes recommendations and develops educational interventions for staff training, changes in unit processes, standards of care, and policies and procedures to meet unit needs.

Delivering education through training programs, lectures, workshops, guided self-directed learning, and one-on-one instruction accounts for a significant percentage of a nurse educator's time. Through course delivery and instruction and by contributing to ongoing unit development and identifying trends and processes that impact unit operations, the nurse educator is a facilitator of learning.

Staff assessment and development entail providing initial and ongoing assessment of an individual's skills, knowledge, behaviors, and ability to provide patient care. This aspect of the role encompasses several nursing competencies: caring practices, clinical judgment, facilitator of learning, collaboration, clinical inquiry, and perhaps advocacy

and moral agency. Ongoing assessment of staff requires collaboration with the nurse manager, advanced practice nurse, and senior nursing staff. The development of staff can occur with mentoring, leading, or facilitating staff, or any combination of these processes. While working one on one with a new nurse or a nurse in need of competency development, the nurse educator is afforded the opportunity to demonstrate caring practices and clinical judgment.

Patients in the intensive care unit (ICU) have complex, multi-system problems. Sound clinical judgment is essential to rapidly identify and treat frequently changing problems and to appreciate the positive and negative effects that an intervention may have on body systems. By implementing evidence-based interventions to promote optimal outcomes, the competency of clinical inquiry is exhibited. Showing compassion to the patient and family while delivering care demonstrates caring practices. While in the mentoring role, providing rationale for all interventions and demonstrating other nurse competencies, the nurse educator is also a facilitator of learning.

The acuity and rapidly changing condition of the patient in the ICU often requires evaluation of moral and ethical issues, including a multidisciplinary discussion with the family regarding do-not-resuscitate status or withholding or withdrawal of medical support.

If the primary nurse is familiar with the wishes of the patient and family, it is important to communicate these wishes to other members of the healthcare team. The nurse educator is in a key position to mentor staff who are less comfortable in managing such difficult issues. By assisting staff to support the family, ethical issues may reach resolutions that are consistent with the wishes of patients and family members.

The research responsibilities of a nurse educator may include incorporating research findings and evaluating clinical practice to improve patient outcomes. Research activities may also include collaborating with multidisciplinary staff and supporting research initiatives of the unit or institution. These activities illustrate the nurse's competency of clinical inquiry. When standards of care and policies and procedures are developed on the basis of current research findings, clinical inquiry is similarly manifested.

The following is an exemplar of a patient who was cared for by a nurse who recently completed critical care orientation. This exemplar illustrates how the Synergy Model can provide a basis for the multifaceted role of a nurse educator.

## CASE EXEMPLAR

F.R., a 45-year-old man, had acute promyelocytic leukemia. He underwent treatment with all-transretinoic acid. During the course of his treatment, F.R. developed disseminated intravas-

cular coagulation (DIC), a common sequela to his type of leukemia. F.R. initially presented with oozing from venipuncture sites and petechiae on his upper extremities. The bleeding became more pronounced, with pulmonary bleeding and hematuria, and he was transferred to the ICU for respiratory management.

Shortly after admission, F.R. was intubated to protect his airway and he was sedated to promote comfort. Despite repletion with blood and blood products, F.R.'s acute bleeding persisted. He eventually required inotropic and vasopressor support to combat his refractory vigorous fluid resuscitation hypotension. A pulmonary artery catheter was inserted to help assess and manage his fluid and hemodynamic status.

By hospital day 3, F.R. developed renal insufficiency, thought to be due to sustained hypotension. His bleeding and hemodynamic instability persisted. He had continuous oozing of blood from his nose and mouth.

Since his admission, F.R.'s wife had stayed at his bedside throughout the day and into the evening. She was a willing participant in his care. She performed passive range-of-motion exercises and was taught how to provide mouth care. She also gently wiped F.R.'s face and side as blood oozed. It was an endless job, but she needed to help him any way she could.

On the fourth day after admission to the ICU, F.R.'s wife disclosed to the primary nurse that

# THE SYNERGY MODEL IN PRACTICE

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F.R. did not want to be kept alive with extraordinary or heroic measures if he was not going to be cured. The nurse, not sure of how to proceed with this new information, spoke with the nurse manager and nurse educator. It was agreed that the best approach was for the nurse to coordinate a family meeting with the primary service, the critical care intensivist, the wife, and the nurse. The manager and educator discussed strategies for the nurse to use at the meeting.

At the meeting, F.R.'s medical management was discussed. His primary physician from the leukemia service conveyed that F.R.'s leukemia did not respond to conventional therapy. Treatment with an arsenic infusion was discussed as a potential option. With the nurse's support, F.R.'s wife discussed her reluctance to initiate a new therapy because of F.R.'s poor clinical condition and his previously expressed wishes. The meeting concluded with an agreement to provide comfort measures, but no additional increases in therapy. F.R. died 2 days later, with his wife at his bedside.

F.R. was a challenging patient for the nurse to care for. She came from a surgical oncology background, and had not cared for a patient with DIC in the past. Therefore, the nurse educator worked with the nurse to review the pathophysiologic processes that occur with DIC and the rationale for signs and symptoms and treatment that were taught in crit-

ical care orientation. With prompting, the nurse was able to explain the rationale for arterial blood gas values, coagulation studies, and other pertinent laboratory data, as well as F.R.'s hemodynamic and respiratory profiles. She was able to prioritize F.R.'s care and demonstrated a basic understanding of the relationships between organs and the sources of their dysfunction. The nurse also demonstrated an appreciation of the value of family visitation, a subject that has been the focus of several research studies. Despite being new in the ICU, the presence of F.R.'s wife was not intimidating for the nurse. Instead, she taught F.R.'s wife how to safely participate in F.R.'s care. At the end, the nurse was supportive and acknowledged the impact of F.R.'s imminent death on his wife.

## PATIENT CHARACTERISTICS

F.R. was minimally stable. He had multiple organ dysfunction and was unable to maintain steady state equilibrium. His clinical situation led to complexity as the therapeutic interventions being done were not consistent with his wishes. Although this was resolved once his wife communicated F.R.'s wishes, the situation was emotionally complex. In addition, before being intubated and sedated, it can be assumed that admission to the ICU compounded a cancer diagnosis. The overt bleeding must have been frightening for F.R. and his wife.

F.R. was minimally predictable. The antineoplastic therapy was not effective. The sequela to his acute event was moderately predictable. He was unable to compensate for his complex medical problems. He was extremely vulnerable because of the physical stressors adversely affecting his outcome. F.R. was unable to be an active participant in his care; however, his wife was a significant contributor.

## NURSE COMPETENCIES

The nurse's clinical judgment was moderate. She had minimal medical oncology experience. Much of her critical care knowledge was newly acquired in orientation classes with the nurse educator. The nurse educator's clinical judgment was high. This is attributed to more than 15 years of critical care oncology experience, postgraduate education, and specialty certification. This preparation enabled the nurse educator to mentor the nurse to care for F.R.

A high degree of advocacy and moral agency were required to care for F.R. Working with the nurse educator helped the nurse to participate in discussions of the patient's medical management. When F.R.'s wishes were learned, the nurse was then able to coordinate a meeting, facilitate having those wishes communicated, and advocated for the resolution of the issue.

The nurse and the nurse educator provided caring practices

for F.R. Multiple aggressive therapies were implemented for the first few days. F.R.'s responses to these therapies were monitored on a continuous basis. Some of the interventions resulted in serious side effects and complications. By monitoring behavioral cues, it was agreed that F.R.'s comfort level was acceptable.

The role of the nurse educator was vital in this situation. A review of the pathophysiologic changes and rationales for therapies enhanced the nurse's ability to monitor F.R. and to anticipate and treat actual and potential problems. The nurse was also then able to provide explanations to F.R.'s wife.

As a result of the mentorship and learning, the nurse was able to participate in the decisions about F.R.'s management. She accurately communicated the patient's condition to other members of the healthcare team.

Response to diversity was not a challenge while caring for F.R. The nursing staff, intensivist, and primary physician all respected F.R.'s wife, as she represented F.R.'s wishes. No cultural diversity issues were apparent.

With the help of the nurse educator, the nurse was able to supply care on evidence-based standards and policies and procedures in the ICU. She provided the nurse educator with rationales for the therapies implemented and was able to evaluate the efficacy of care provided.

## **OUTCOMES**

Upon admission to the ICU, the expected outcome was that F.R.'s DIC would be placed under control and that he would attain respiratory and hemodynamic stability. His comfort level was satisfactorily maintained throughout his admission. When F.R.'s clinical condition deteriorated and his wife made his wishes known, a peaceful, comfortable death became the desired outcome. The medical and nursing teams and F.R.'s wife believe that the outcome was met.

## **CONCLUSION**

The Synergy Model links patient characteristics and nurse competencies to enhance optimal patient outcomes. In this case exemplar, the competencies of the nurse and nurse educator helped facilitate the desired outcome. †