المجلس التمريضي الأردني
Jordanian Nursing Council

Respiratory Care Nursing: Scope of Practice, Professional Standards, Competencies and Indicators

November 2023

The Jordanian Nursing Council

The Jordanian Nursing Council (JNC) is a national governmental regulatory institution for nursing and midwifery in Jordan. The JNC is governed by a board headed by Her Royal Highness Princess Muna Al Hussein as president of the council. The board, comprising of 14 key representatives of healthcare institutions in Jordan, regulates and governs the nursing profession in the areas of education, practice, and research.

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Acronyms

RCN	Respiratory care nurses
JNC	Jordanian Nursing Council

Introduction

This document presents the scope of practice, professional standards, and essential competencies for advanced respiratory care nursing practice in Jordan. This document was developed by the Jordanian Nursing Council (JNC) and partners as part of the JNC mission to promote the health status of patients as well as the community through a sound regulatory system to protect the public and the profession. JNC recognizes the importance of the role of respiratory care nurses (RCNs) and is committed to strengthening respiratory care nursing practice.

The primary purpose of the JNC Professional Standards is to promote, guide, and direct professional practice. Furthermore, it works as a framework for assessing competence of practice nurses, assessment of nurses educated abroad seeking to work in Jordan, and nurses returning to work after breaks in service. JNC considers the professional standards as legal guidance to protect the public by regulating nursing practice, provide guidance to nurses regarding their professional obligations, provides a framework to assess professional performance, and address incompetence among nurses. The JNC Professional Standards are used by educators, universities, registered nurses, and managers.

Methodology

Standards of RCN specialists were developed by reviewing the best evidence-based international models and frameworks of respiratory care standards through consultations with nurse leaders and experts, and feedback provided by advanced practice nurses in a variety of clinical settings.

Scope of Practice

The scope of practice for respiratory care nursing includes the dynamic interaction and collaboration between the patient, family, nurse, RCN and environment where respiratory care is being delivered to improve patient health status. The scope of practice for respiratory care nursing is the commitment to the vision of the holistic view of patients and their families, taking into consideration varied dimensions of care. These include patient assessment, diagnostic evaluation, disease management, patient education, rehabilitation, and care of patients with deficiencies and abnormalities of the

cardiopulmonary system.

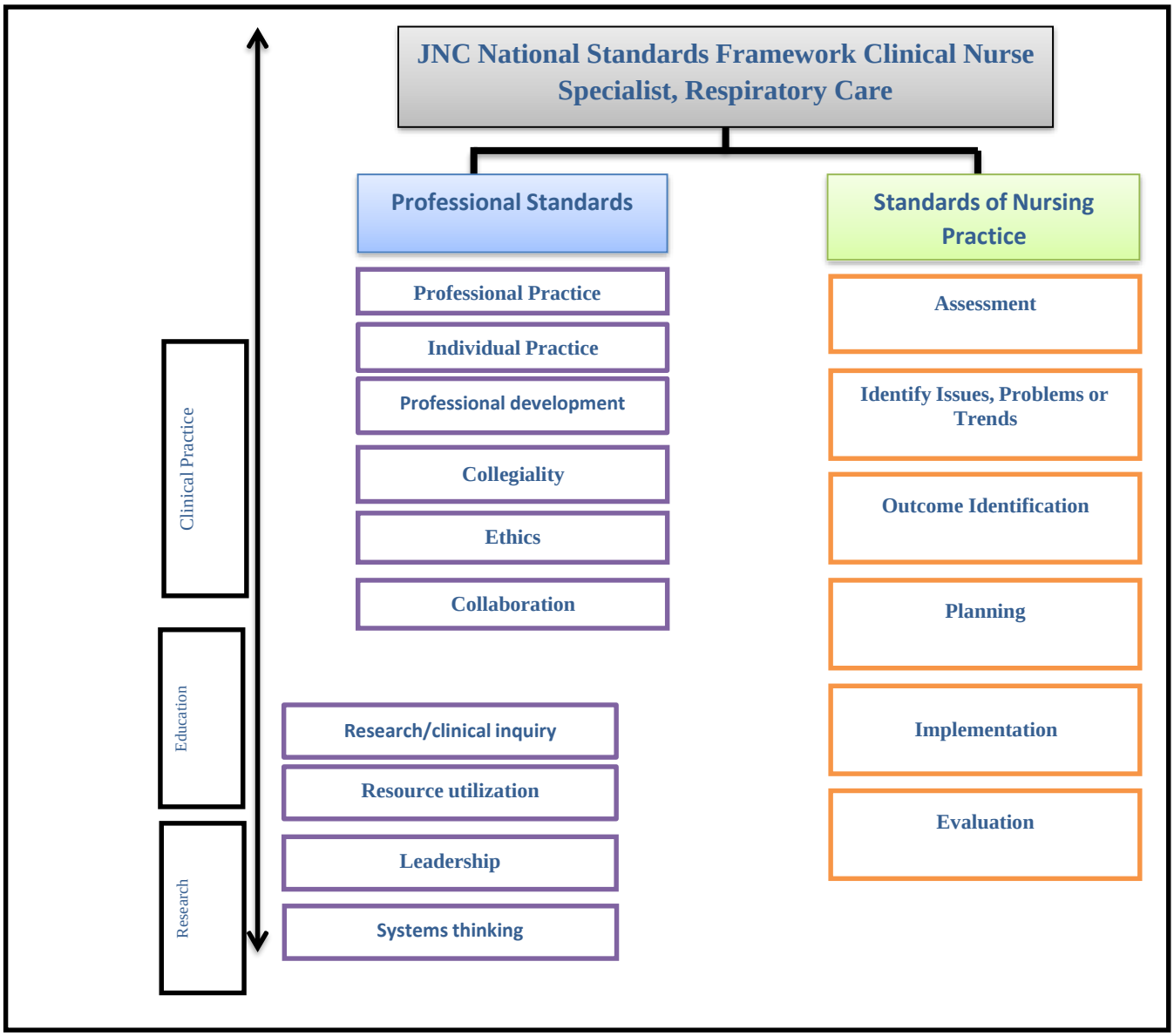
The scope of practice for the RCN requires cognitive, intellectual, and technical abilities within ethically and culturally safe acts, policies, procedures, and practice guidelines. RCNs need to use evidence-based practice in primary, secondary, and tertiary care settings in rural and urban communities. They must also have the ability to interpret, evaluate, and communicate research findings; test and apply the findings of research produced by others; and conduct independent research in order to improve nursing practice and subsequently quality of healthcare services.

Enhancing collaboration and interdisciplinary teamwork is a significant role of the RCN who must lead in developing, promoting, and maintaining interdisciplinary teamwork. RCNs should possess satisfactory knowledge and skills and have leadership and management capacities. Finally, RCNs should have the ability to assess, provide treatment, and evaluate all types of patients with respiratory disorders.

Qualifications:

- Registered with the Jordan Nurses and Midwives Council (JNMC) and licensed according to the provisions of the Public Health Law.
- Obtained, at minimum of 9 months of respiratory care in a JNC accredited center.
- Fulfilled specific standards to achieve JNC certification for this professional level.

JNC National Standards Framework for Respiratory Care Nurse Specialist



Section 1: JNC Professional Standards for the Respiratory Care Nurse Specialist

Standard 1: Professional Practice

The RCN develops criteria for and evaluates the quality, safety, and effectiveness of practice within the three spheres of influence: the patient/family, nursing/nursing practice, and organizations/systems.

Core Competency 1:

Develops and implements quality activities that ensure safe and effective respiratory care nursing practice.

Measurement criteria:

- Leads clinical inquiry through quality improvement activities.
- Obtains and maintains professional certification.
- Identifies and develops strategies to enhance quality care and promote healthy work environments.
- Synthesizes data and formulates evidence-based recommendations to improve quality care, practice, and healthcare outcomes within the three spheres.
- Uses appropriate coding and billing to reflect the level and type of service delivery in practice.
- Disseminates benefits of the advances in nursing services to the organization, system, and community through presentations, publications and/or involvement in professional organizations.
- Analyzes the whole healthcare system and its philosophy to align respiratory care accordingly, for e.g., the implication of JNC standards for respiratory care nursing practice.
- Reflects on the social, political, cultural, and economic developments within the context of the country's healthcare system while conforming to national and international standards of respiratory care nursing.

- Provides leadership in the design, implementation, and monitoring of quality improvement activities.
- Utilizes indicators and checklists to monitor quality and effectiveness of Respiratory care nursing practice based on contextual variables for e.g., infection rates, length ofstay, morbidity, mortality, adverse events.
- Implements, evaluates, and updates policies, procedures, and/or guidelines to improve the quality and effectiveness of the RCN practice.

Core Competency 2:

Improves nursing practice to facilitate the physical, psychological, cultural, and environmental measures that promote safety.

Measurement criteria:

- Adheres to nursing and respiratory national and international safety guidelines.
- Uses data and trends in decision-making to optimize patient safety.
- Intervenes to prevent and/or minimize complications resulting from disease or illness.
- Fosters an interprofessional approach of safety into practice.
- Evaluates patient care practices based on research and experiential knowledge, and integrates changes into practice to improve safety.
- Facilitates safe and effective transitions across levels of care.
- Reports incidents of unsafe healthcare and/or nursing practice.
- Performs meticulous respiratory/bronchial hygiene to avoid ventilator associated pneumonia (VAP).
- Orientates staff, including general assistants, on safety.

- Coordinates infection surveillance at intervals to identify nosocomial infections and resistant organisms in collaboration with the healthcare team especially the microbiologist.
- Traces chest infections with first signs of infection, e.g., change in the consistency and color of sputum.
- Applies the various patient respiratory care requirements, and legal implications.

Standard 2: Individual Practice Evaluation

The RCN is accountable for maintaining competence in clinical practice across all three spheres of influence: evaluation of the patient, nursing/nursing practice, and organization and system-oriented outcomes.

Core Competency:

Maintains accountability in the evaluation processes: credentials, privileges, and role performance according to respiratory care practice standards.

Measurement criteria:

- Engages in self-reflection, performance appraisal, and peer review to ensure competent professional practice.
- Complies with the credentialing and privileging process within the organization or system.
- Evaluates role performance according to professional practice standards, institutional guidelines, and relevant statutes and regulations.
- Reflects on self and staff competence and keeps her/him and staff up to date with current health issues and healthcare trends in the dynamic environment like respiratory care nursing.

Standard 3: Professional Development

The RCN is a lifelong learner who acquires and maintains current knowledge and competency in advanced nursing practice.

Core Competency:

Participates in ongoing professional development programs that improve professional performance.

Measurement criteria:

- Is accountable for self-engagement in educational activities related to professional practice and patient population across the three spheres of influence.
- Uses information gained in educational activities to improve professional performance
- Maintains competence in information and patient care technologies appropriate to role and patient population.
- Consciously seeks experiences and formal and independent learning activities to maintain and develop clinical and professional skills and knowledge as well as personal growth.

Standard 4: Collegiality

The RCN promotes a healthy work environment for thedevelopment of peers, colleagues, and other professionals.

Core Competency:

Collaborates with patients, nursing staff, and interdisciplinary healthcare team to provide comprehensive respiratory care.

Measurement criteria:

- Contributes to the advancement of the profession as a whole by disseminating outcomes of practice through presentations and publications.
- Promotes career development for students, nurses, and other healthcare providers.

- Promotes the role and scope of practice of the RCN (e.g., to legislators, regulators, other healthcare providers, and the public).
- Facilitates development of clinical judgment in healthcare team members through role modeling, teaching, coaching, and/or mentoring.
- Creates and utilizes learning opportunities for orientation and teaching of staff, patients, and families of patients with respiratory sickness.

The RCN makes decisions and implements actions to ensure the delivery of safe, competent, and ethical care that is age-appropriate and congruent with patient and family needs and values.

Core Competency:

Identifies, articulates, and takes action on ethical concerns at the patient, family,

healthcare provider, and system, community, and public policy levels.

Measurement criteria:

- Fosters the establishment and maintenance of an ethical environment.
- Facilitates resolution of ethical conflicts and moral distresses using ethical principles to promote a healthy work environment.
- Implements interventions that consider the impact of scientific advances, cost, clinical effectiveness, patient values and preference, diversity, and other external influences on healthcare.
- Serves as a mentor and role model to others in developing moral agency by fostering professional accountability in self and others.

- Delivers care in a manner that preserves and protects the autonomy, dignity, rights, values, beliefs, and preferences of the healthcare user and family
- Engages in ethical and legal debates concerning some complex decisions and orders.
- Takes appropriate action in case of illegal, unethical, or inappropriate behavior that exposes the respiratory ill patient to risk and jeopardizes the best interest of the patient, e.g., reports and documents adverse events to relevant agents including the regulatory body.

Standard 6: Collaboration

The RCN effectively partners with interprofessional colleagues in the care of respiratory ill patients and patient populations to improve patient outcomes.

Core Competency:

Collaborates at an advanced level by committing to authentic engagement and constructive patient, family, system, and population-focused problem-solving to provide comprehensive nursing care.

Measurement criteria:

- Facilitates provision of clinically competent care through education, role modeling, team building, and quality monitoring.
- Fosters an interprofessional approach to safety, quality improvement, evidence-based practice, research, and translation of research into practice.
- Uses communication practices that minimizes risks associated with handoffs among providers and across transitions of care.

- Implements outcome-focused patient care programs.
- Mentors healthcare team members to understand and use the expertise of others.
- Establishes collaborative relationships within and across disciplines that promote patient safety, culturally competent care, and clinical excellence.
- Leads and participates in activities such as interprofessional rounds and community health-related activities.
- Uses skilled communication to foster true inter- and intra-professional collaboration in the interest of continuity of patient care and professional development

Standard 7: Research/Clinical Inquiry

The RCN identifies research priority in practice, participates in research, translates scientific evidence, and promotes evidence-based practice.

Core Competency:

The empirical work thorough systematic inquiry includes the search for, interpretation, and use of evidence in clinical practice and quality improvement, as well as active participation in conducting research.

Measurement criteria:

- Identifies clinical opportunities amenable to research.
- Conducts research to advance the science of nursing practice.
- Participates with other healthcare professionals in conducting and implementing research/clinical inquiry.
- Analyzes research findings and other evidence for application to clinical practice.
- Synthesizes and translates research findings to determine the need for changes in practice.
- Evaluates patient care practices based on research and experiential knowledge, and integrates changes into practice to improve safety, efficiency, reliability, and quality.

- Acts as a role model and mentors staff regarding the dissemination, implementation, and evaluation of research findings.
- Communicates research results and develops a process to incorporate research findings into practice.
- Evaluates and facilitates incorporation of new products, techniques, and technologies into practice.
- Contributes to nursing knowledge by conducting or synthesizing research and other evidence that discovers, examines, and evaluates current practice, knowledge, theories, criteria, and creative approaches to improve respiratory care practice.
- Promotes a climate of research and clinical inquiry in the respiratory therapy setting.
- Critically analyzes and discusses the findings of nursing research studies within the healthcare.
- Disseminates research findings through activities, such as, presentations, publications, consultations, and journal clubs for a variety of audiences but especially co-workers to improve the respiratory care nursing practice.

Standard 8: Resource Utilization

The RCN influences resource utilization in order to promote safe, quality, and cost-effective patient care.

Core Competency:

Manages human resources, facilities, and materials to ensure equitable decisions about the allocation of resources for safe, cost-effective, and efficient health practices.

Measurement criteria:

- Leads clinical inquiry through quality improvement activities.
- Considers fiscal and budgetary implications in decision-making regarding practice and system modifications.

- Assists staff in developing innovative and cost-effective programs or protocols of care.
- Conducts cost-benefit and cost-avoidance analysis of programs, processes, and technologies.
- Evaluates impact of introduction or withdrawal of products, services, and technologies.
- Facilitates access for patients to appropriate healthcare services.
- Facilitates safe and effective transitions across levels of care, including acute, community-based, and long-term.
- Utilizes resources and programs to promote functional, physical, and mental wellness for patient population.
- Interprets and facilitates integration of organizational mission, goals, and systems into patient care practices.
- Acts as a role model and mentors innovative systems thinking and resource use among the healthcare team.
- Develops strategies to facilitate transition of patients through the healthcare system.
- Assesses, facilitates, and advocates the impact of social, political, regulatory, and economic forces on delivery of care.
- Ensures constant availability of adequate, operational, cost-effective, safe, and efficient equipment and technology for the care of respiratory ill patients on a daily basis.
- Designs evaluation strategies to demonstrate cost-effectiveness, cost-benefit, and efficiency (fitness for purpose) factors associated with RCN practice.
- Evaluates the use of products and services for appropriateness and cost-benefit in meeting respiratory care needs.

- Conducts cost-benefit analysis of new clinical technology.
- Evaluates the impact of introducing or withdrawal of products, services, and technologies.

Standard 9: Leadership

The RCN manages change and leads others to influence practice and political processes within and across systems.

Core Competency:

Exhibits ability to manage change and empower others to influence clinical practice and political processes both within and across systems.

Measurement criteria:

- Leads micro and macro system-level change.
- Masters and employs skilled communication.
- Uses leadership, team building, negotiation, and conflict resolution skills to promote a healthy work environment.
- Develops a culture where hostile work environments are not tolerated.
- Provides leadership in implementing innovation.
- Facilitates creation of a common vision for care within the healthcare team and system.
- Acts as a role model for professional leadership and accountability for nursing role within the healthcare team and community.
- Participates in professional organizations to address issues of concern in meeting patients' needs and improving nursing practice and system effectiveness.
- Advocates for legislation and policies that promote health and improve care delivery.

- Ensures adequate coverage of all shifts with appropriately qualified staff and skills mix in accordance with the organizational policies, guidelines, and norms.
- Assigns aspects of care based on a careful assessment of the needs and conditions of the patient, the potential risks or harm, availability, and competence of the healthcare providers and applicable policies, norms, and legal framework, like the Scope of Practice.

Standard 10: Systems Thinking

The RCN participates in organizational systems and processes to promote optimal outcomes.

Core Competency:

Manages existing environmental and system resources for the patient, family, and staff within or across healthcare and non-healthcare systems.

Measurement criteria:

- Applies knowledge of organizational theories and systems to provide safe, patient-centered, high-quality, and cost-effective care.
- Performs system-level assessments to identify variables that influence nursing practices and outcomes.
- Determines nursing practice and system interventions that promote patient, family, and community safety.
- Designs and develops care paths and initiatives across the continuum of respiratory care services.
- Anticipates unintended consequences with the introduction of new technology.
- Participates in the design of clinical decision support systems.
- Advocates for equity in health and healthcare for patient populations of diverse cultural, ethnic, and spiritual backgrounds across their lifespan.
- Evaluates the ongoing integration of evidence and practice standards into systems of healthcare delivery.

- Identifies, participates in, and assists with developing institutional and organizational system responses to natural and man-made disasters.
- Integrates knowledge of governmental and regulatory opportunities and constraints to impact patient transitions across the continuum of care.
- Participates in designing systems that support effective teamwork and positive outcomes.

Section II: The JNC National Practice Standards for the Respiratory Care Nurse Specialist

Standard 11: Provision of Patient-Centered Care

11.1. Assessment:

The RCN provides comprehensive, systematic and prioritized nursing assessment to collect data pertinent to the issue, situation, or trend.

Core Competency:

Uses relevant evidence-based assessment framework to collect data on all health domains of the patient/groups and ensures accurate documentation.

Measurement criteria:

- Collects comprehensive data from the patient, family, and other healthcare providers, to develop a holistic plan for the patient according to his/her needs.
- Prioritizes data collection according to patient condition related to the immediate predicted needs.
- Uses valid evidence-based assessment techniques, instruments, and tools to evaluate patient condition according to his/her age and health status.
- Obtains the essential and crucial data to formulate differential diagnoses.
- Assesses pharmacological and non-pharmacological interventions, diagnostic measures, medical equipment, procedures, and treatment as identified in plan of care.
- Communicates with healthcare providers to determine the use of best strategies to meet patient needs.
- Documents relevant data in patient file in clear and systematic manner.
- Maintains documentation within the legal and ethical framework.

- Develops an epidemiological profile concerning the incidence, prevalence, morbidity, and mortality of life-threatening conditions in order to practice evidence-based assessments.
- Integrates the biomedical and social sciences, such as anatomy, physiology, pathophysiology, and clinical pharmacology with the educational, psycho-socio-cultural, ethical, legal, and economical context of disease to assess patients.
- Organizes, synthesizes, analyses, and interprets the assessment data of the respiratory patient from various data sources to derive nursing diagnoses.
- Formulates nursing diagnoses based on accurate analysis and interpretation of the assessment data obtained from a critical evaluation of patients.

11.2 : Diagnosis

The RCN uses the assessed data to analyze and formulate nursing diagnoses.

Core Competency:

Analyzes and interprets the assessment data and identifies actual and potential health problems accurately.

Measurement criteria:

- Develops nursing diagnoses or related conditions based on nursing assessment.
- Uses the collected data in clinical decision-making to improve patient safety.
- Validates diagnoses with patient, family, and other healthcare providers.
- Documents relevant data in patient file in clear and systematic manner.
- Formulates nursing diagnoses based on accurate analysis and interpretation of the assessment data obtained from a critical evaluation of the patients.

- Establishes priorities concerning the respiratory ill patients' problems according to severity as determined by the complexity and multiplicity of problems, including those life-threatening, that impinge on the patient's quality of life.

Standard 11.3: Outcome Identification

The RCN recognizes the expected outcomes for the patient based on assessment data and evidence base in relation to ethical considerations, patient preferences, cost, resources, and risk-benefit ratio in collaboration with other health team members.

Core Competency:

Identifies expected outcomes for the individualized plan.

Measurement criteria:

- Recognizes the outcomes from assessments and diagnoses.
- Respects patient and family perspectives and values in formulating culturally appropriate outcomes in collaboration with the patient and family, and with the interprofessional team.
- Considers associated risks, benefits, current evidence, clinical expertise, and cost when formulating expected outcomes.
- Modifies expected outcomes based on changes in patient condition or situation.
- Documents outcomes as measurable goals in patient file in clear and systematic manner.

Standard 11.4: Planning

The RCN develops and facilitates the plan that prescribes interventions to attain expected outcomes within the three spheres of influence: the patient/family, nursing/nursing practice, and organizations/systems.

Core Competency:

Plans patient-centered care interventions in collaboration with other healthcare team members to achieve the expected outcomes.

Measurement criteria:

- Determines when evidence-based guidelines, policies, procedures, and plans of care need to be tailored to the patient and family.
- Designs evidence-based strategies to meet the multifaceted needs of complex patients/populations (e.g. safety, quality, and cost).
- Communicates directly with nursing staff to determine which strategies would best meet a patient's needs.
- Develops age- and population-specific clinical standards, algorithms, policies, procedures, protocols, and guidelines.
- Coordinates education within the three spheres to improve healthcare outcomes.
- Develops, implements, and modifies plans of care or system initiatives within the spheres of influence.
- Applies critical thinking and clinical judgment underpinned by scientific, biomedical, and technological knowledge in the respiratory care field to deduce a plan of care for the respiratory ill patient.
- Develops a complex, comprehensive, individualized, and evidence-based plan of care according to determined healthcare priorities and care management tools in collaboration with the relevant multidisciplinary team.
- Formulates collaboratively and frequently a critical analysis of the plan of care based on the respiratory ill patient progress and as directed by the care management tools (e.g., protocols, algorithms, and guidelines) and laboratory findings.
- Reviews and revises the respiratory ill patient's plan of care collaboratively according to the compromise/deterioration or progress of the respiratory ill patient as illustrated/confirmed in the patient status, advanced technological parameters,and laboratory findings.

11. 5: Implementation

The RCN implements interventions within the three spheres of influence: the patient/family, nursing/nursing practice, and organizations/systems.

Core Competency:

Provides comprehensive, safe, and effective evidence-based and patient-centered care to achieve identified health outcomes.

Measurement criteria:

- Provides direct care to selected patients based on the needs of patients and specialized knowledge and skills.
- Implements pharmacologic and nonpharmacological interventions, diagnostic measures, durable medical equipment, procedures, and treatments as identified in the plan of care.
- Coordinates implementation of an individualized plan of care collaboratively with patients and the healthcare team.
- Uses behavioral, communication, and environmental modification strategies with patients who have cognitive and/or psychiatric impairments.
- Documents consultations, assessments, recommendations, interventions, and evaluations in the patient's record.
- Initiates appropriate referrals and performs consultations.
- Implements evidence-based clinical guidelines, care paths, policies and procedures, and tailors them to specific populations.
- Coordinates services to optimize transitions of care.
- Intervenes to prevent and/or minimize iatrogenesis and ensure patient safety.
- Implements strategies using documents and online guidelines to identify and/or manage age-related syndromes.
- Facilitates learning among patients, staff, other disciplines, and organizational leaders.

- Implements technology and treatments in an appropriate and ethical manner.
- Leads system change to promote health outcomes, system efficiency, and a healthy work environment through evidence-based practice.
- Implements individualized, comprehensive, and evidence-based care based on the findings of the scientific, biomedical, and technological assessment of the respiratory ill patient within the relevant contextual variables/factors and multidisciplinary collaboration.
- Appropriately prepares for, initiates under supervision, monitors, and administers appropriate care to respiratory ill patients on technological support.

11.6: Evaluation

The RCN evaluates and communicates progress toward attainment of expected outcomes within the three spheres of influence: the patient/family, nursing/nursing practice, and organizations/systems.

Core Competency:

Determines progress of patient and groups towards planned outcomes.

Measurement criteria:

- Revises diagnoses, expected outcomes, and interventions based on information gained in the evaluation process.
- Bases the evaluation process on advanced knowledge, evidence, expertise, quality indicators, benchmarking, and research.
- Evaluates evidence-based algorithms, clinical guidelines, protocols, and care paths for appropriateness to patient population.
- Evaluates all three spheres to ensure care is patient-centered, safe, timely, effective, efficient, and equitable.
- Evaluates the clinical practice of healthcare team members (e.g., nursing staff, medical staff, and other healthcare providers).

- Evaluates impact of interventions and nursing practice changes on systems of care using nurse-sensitive outcomes.
- Evaluates effect of practice on healthcare outcomes within the three spheres.
- Evaluates impact of legislative and regulatory polices as they apply to nursing practice and patient or population outcomes.
- Monitors and critically evaluates on a regular basis the progress of the patient with respiratory conditions against the collaboratively predetermined and revised outcomes of the respiratory ill patient.
- Utilizes evaluation data to modify the plan of respiratory care of the patient with respiratory condition in accordance with protocols and algorithms and in collaboration with the multidisciplinary team.

Competencies

- Responding to Code Blue and emergency situations and able to perform basic life support maneuvers efficaciously, such as maintenance of a patent anatomical airway, external cardiac compression, and artificial ventilation by bag-and-mask and related ventilatory techniques.
- Performing respiratory assessment of the patient and reassessment for response to treatment (assessing vital signs, analyzing chest x-rays, identifying breath sounds, recognizing abnormal breath sounds, recognizing abnormal arterial blood gases, identifying amount and character of secretions, determining need for supplemental oxygen/suction).
- Maintaining knowledge of the various methods of oxygen delivery, including the necessary equipment and safety regulations, and assessing possible side effects of oxygen delivery.
- Setting up/maintaining Low Flow and High Flow oxygen administration systems and the care of patient using them.
- Setting up/maintaining high flow nasal cannula equipment and identifying the indication, mechanism of action, contra indications and weaning procedures.
- Administering specialty medical gases (Heliox) and being familiar with its indication.
- Applying knowledge, understanding, and troubleshooting skills to aerosol systems (Small Volume Nebulizer (SVN), Metered Dose Inhalers (MDI), Dry powder Inhalers (DPI) MiniHEART nebulizer, Mesh nebulizer (Aerogen)).
- Being competent in aerosol pharmacology terminology, physiologic action, adverse effects, and doses.
- Performing arterial punctures to obtain arterial blood samples and understanding the possible complications and contraindications associated with the procedure.
- Correctly maintaining, operating, calibrating, and troubleshooting blood gas analyzers, describing critical value and its importance on clinical practice.
- Administering chest physiotherapy (CPT): lung expansion therapy (incentive spirometer, breathing exercises, PAP and CPAP) and airway clearance therapy (percussion, vibration, postural drainage, breathing).

- Performing sputum induction.
- Assisting in the intubation of a patient electively and during cardiopulmonary resuscitation.
- Setting up, monitoring, managing, and weaning mechanical ventilators and carrying out associated critical care duties required for such treatment.
- Demonstrating assessment of proper tube placement: - Measurement at lip, Bilateral Auscultation, Cuff inflation, secure the tube.
- Being familiar with different types of advanced airways (endotracheal tube, tracheostomy).
- Doing suction using proper techniques/devices efficiently.
- Knowing and describing various modes of mechanical ventilation, understanding, and adjusting the settings, values & troubleshooting of ventilation modes.
- Knowing the significance of cuff pressure and setting normal range using a manometer or any other alternative device.
- Setting alarms and verbalizing appropriate response to alarm sequence.
- Interpreting ventilator waveforms.
- Assessing need for and initiating special techniques for ventilated patients (pressure/volume tool recruitment maneuver).
- Demonstrating and interpreting CO2 detector devices.
- Performing apnea testing for the determination of brain death.
- Knowing and identifying the indication for weaning and fulfilling weaning protocol.
- Assisting and/or carrying out extubation procedure.
- Assisting in transportation of highly risk patients using portable ventilator/ambubag.
- Setting, operating, weaning, and caring for patient with Noninvasive BIPAP and choosing suitable interfaces and fits them to patient.
- Setting, operating, weaning, and caring of patient with HFOV.
- Disassembling, cleaning, and sterilizing equipment and ventilator machines.
- Being knowledgeable in the care of patient with respiratory disease (COPD, Asthma, Respiratory Distress Syndrome, Respiratory Failure, Pulmonary Embolism, Pulmonary Edema, Pneumonia, Obstructive Sleep Apnea, etc.).
- Interpreting lab results (Arterial Blood Gases, Blood tests, Chest X-ray).

- Assisting with a bronchoscopy procedure and bed-side tracheostomy.
- Performing sputum collection procedures (respiratory panel, trap culture).
- Delivering education/teaching for patients and families who need to use special oxygen delivery and ventilation devices at home.
- Setting up and operating equipment in sleep laboratories (Polysomnography) helping diagnose sleep apnea.
- Performing and interpreting pulmonary functions tests (PFT).
- Assisting with pulmonary rehabilitation.
- Educating patients on smoking cessation.
- Assisting with care of patient on ECMO (extracorporeal membrane oxygenation).
- Administering specialty medical gases and being familiar with their indication, contraindications, and complications.