Identifying the Role of the Respiratory Therapist on the Multidisciplinary Team in the Intensive Care Recovery Clinic

Five million patients are admitted to ICUs in the United States annually. With the advances in medicine over the last several decades, millions of those patients will survive to discharge.[1] One of the main reasons more people survive is because they are cared for by multidisciplinary care teams, physicians, nurses, advanced-care practitioners, respiratory therapists (RTs), dieticians, physical therapists, case managers, and others all working together to provide optimal patient outcomes.[2] Many patients, however, will not recover to a level of health that they enjoyed prior to becoming critically ill. They may experience medical, physical, cognitive, and psychosocial problems long after their day of discharge from the hospital.[3] This is referred to as post intensive care syndrome (PICS). PICS is defined as new or worsening impairment in physical (ICU-acquired neuromuscular weakness), cognitive (thinking and judgment), or mental health status arising after critical illness and persisting beyond discharge from the acute care setting.[4,5] For years this syndrome went underrecognized and placed unseen burdens on patients, their families, and outpatient caregivers.[5] Prevention or reduction of PICS began with structured in-patient ICU bundles provided by multidisciplinary teams targeting risk factors by providing daily sedation vacations, ventilator weaning trials, increasing sleep hygiene bundles, and encouraging active mobilization.[6] ICU bundles help to reduce but not completely prevent PICS from developing in many ICU survivors.

More recently, the coronavirus disease 2019 (COVID-19) pandemic caused by the severe acute respiratory syndrome coronavirus 2 virus has resulted in massive overcrowding of hospitals around the world. Critically ill patients with COVID-19 develop ARDS requiring prolonged mechanical ventilation and secondary organ dysfunction resulting in prolonged ICU stays.[7] This has resulted in a new and growing population of survivors dealing with COVID-19-related PICS. Early evidence suggests critically ill hospitalized patients are at higher risk of developing unrelenting fatigue, dyspnea, cognitive, and physical symptoms equivalent to previous ARDS survivors.[8] The aftermath of PICS from COVID-19 is in its infancy and much is still to be learned. What is clear, however, is that out-patient care providers are often overworked and do not have time to address this group of patients' complex needs. A multidisciplinary out-patient care approach will be essential as we attempt to provide care to this post-COVID, PICS patient population.

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ICU recovery clinics (IRCs) are not a new concept. Although limited in scope and number, they have been in existence for over 20 years. Early IRCs were nurse driven, financially limited in their scope of practice, and mainly focused on quality of life (QOL) in patients with PICS.[9] With increasing needs in an ever-growing PICS patient population, health care organizations in the United States started to evaluate the benefits of a multifaceted and multispecialty care approach.[10] Early evidence showed that former ICU patients suffering from PICS valued IRC services and those without access often felt abandoned.[11] Unfortunately, the evidence for improved QOL outcomes with IRC compared to standard-of-care follow-up was lacking.[12] For this reason, the Society of Critical Care Medicine developed the THRIVE initiative to help improve patient and family support after critical illness. Seventeen institutions from around the globe participated in offering one or a combination of 6 general models of peer support.[13] There are a variety of institutional-specific IRC models, but conceptually most comprise an interdisciplinary team that includes a critical care physician, advanced-practice provider, psychiatrist, pharmacist, physical therapist, RT, and case manager.[14] Patients with PICS are evaluated for mental health, cognitive and physical impairments, as well as psychosocial issues that may contribute to difficulty with reintegration into society and the workplace following hospital discharge. Post-ICU assessments may include QOL with cognitive screening, physical and occupational functioning tools, and pulmonary function tests with 6-min walk and medication reconciliation.[15]

In this issue of RESPIRATORY CARE, Bellinghausen et al provide 2 separate institutional examples of RTs in the IRC setting.[16] It's clear RTs can serve an essential role in the

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IRC by providing diagnostic testing (eg, pulmonary function, cardiopulmonary exercise testing, 6-min-walk tests), medication administration and education, airway clearance, sleep therapy, smoking cessation, and dyspnea management.[16] Moreover, the authors described their communication feedback loop to providers in the ICU. The valuable lessons learned from the RT's experience on the IRC team contributed to the interprofessional conversation surrounding quality improvement for patients and families during their experience in the ICU.

Bellinghausen et al[16] also performed a concise review of the literature as it pertains to the RT's role in the IRC model for PICS care. The authors found a scarcity of literature describing the role of the RT on the multidisciplinary IRC team. Accordingly, the authors turned to other multidisciplinary clinics (eg, cystic fibrosis and pulmonary transplant clinics) to explain comparable roles of RTs in non-IRC settings.[17,18] We would also add RTs play a vital role in other clinics including amyotrophic lateral sclerosis, asthma, and COPD transition clinics. RTs provide a variety of care in these clinics including the diagnosis, treatment, education, and overall management of patients. The essential roles of the RT in a variety of clinical environments provide a strong case for sustaining and expanding the role of the RT in an IRC.

The authors describe similarities between pulmonary rehabilitation (PR) and an IRC. Specifically, they describe the utility of PR for a variety of pulmonary syndromes other than COPD.[19,20] We agree with the authors on the clinical value of PR in the management of patients with respiratory-related symptoms in an IRC environment. The American College of Chest Physicians and American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) also agrees, as they issued a joint statement suggesting PR should be a standard of care for patients with other chronic lung diseases besides COPD.[21] The pillars of PR include exercise training, education, and self-management. Together, these PR treatment components improve dyspnea, exercise capacity, health-related quality of life, and hospital readmissions for patients with lung disease.[22,23] Recently, a landmark article showed that PR initiated within 90 days of discharge from the hospital lowers the risk of death by 37% within the first year.[24] It's conceivable that many components of PR with already established guidelines can be integrated into an IRC for treating patients with acute and chronic respiratory morbidities.

As previously mentioned, hospitals around the world are experiencing a surge in COVID-19-related PICS. Siddiq et al suggest that in order for facilities to improve the quality of PR services for the current surge of patients with COVID-19 the RT should be part of the professional rehabilitation team.[25] In addition to PR for the long-term sequalae associated to COVID-19, PR can serve as a useful treatment strategy for patients with a variety of disease-associated PICS in the IRC. A team of rehabilitation specialists will be needed to serve the assortment of respiratory comorbidities in an IRC. In turn, the expertise and skills of RTs will be needed. Further, as RT educators we should assure our advanced curriculum and training address the expanding roles of both PR and the RT as a PR specialist in a variety of settings. Then, as we move into the near future, RTs will be well positioned to serve as an advanced-level provider on the multidisciplinary rehabilitation team.

The RT profession is moving toward expanding the role of the RT across the continuum of care including prevention and health promotion, acute care, out-patient clinics, and physician offices. Clinical competency guidelines released from the AACVPR recommend the inclusion of an RT on the roster of providers who deliver comprehensive PR services.[26] As the physician workforce within the specialization of pulmonary and critical care medicine continues to decline, advanced-practice RTs (APRTs) can help fill a well-needed demand of specialized providers to care for patients with chronic pulmonary disease. The American Association for Respiratory Care released its broad overview of the APRT's role to help guide future job descriptions and state licensing agencies in the development of the APRT's scope of practice. The RT professions' accrediting body of education programs, Commission on Accreditation for Respiratory Care, published its standards for advanced-practice programs. Recently, The Ohio State University graduated the inaugural class of APRTs. Collectively, this movement is an indication of how the RT will help meet the future health care demands.

In a post-COVID-19 ARDS survivor era, we must anticipate increasing numbers of patients who will suffer with persistent exercise limitations and reduced physical quality of life.[27] Further research focusing on patient outcomes with PICS as well as IRC limitations including recruitment, sustainability, funding, and measures of success will need to continue. Additionally, RTs must produce more scholarly work focusing on the effectiveness of our role for helping improve morbidity and mortality of PICS patients in the IRC. As more IRCs develop, so will the role of the RT in the treatment of PICS. Accordingly, the future is bright for the evolution of the RT as a key member on the multidisciplinary team that provides comprehensive treatment strategies to pulmonary patients across the health care continuum.

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