

Editorial Note

From Community Movement to Precision Respiratory Care: Prevention, Value, and Rehabilitation Across The Respiratory Continuum

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Abstract

Background:

Respiratory medicine is often organized according to diseases, procedures, and anatomical boundaries. Patients, however, experience respiratory illness as a continuum that includes prevention, acute deterioration, treatment, functional recovery, and reintegration into society. This editorial highlights how the articles in this issue of the *Persahabatan Respirology Journal* reflect a broader and more integrated approach to respiratory care.

Discussion:

The evolution of *Senam Asma Indonesia* from a hospital-based asthma club into a nationwide community movement demonstrates the importance of translating scientific knowledge into culturally acceptable, accessible, and sustainable rehabilitation programs. The reviews on pulmonary rehabilitation for pathological air-filled spaces and tuberculosis vaccines emphasize individualized risk assessment, prevention, health-system readiness, and equitable implementation. Original studies addressing obstructive sleep apnea risk among emergency department healthcare workers and the cost-effectiveness of hemoptysis treatment expand respiratory care into occupational safety and value-based clinical decision-making. Meanwhile, the case reports on generalized myasthenia gravis and critical illness illustrate the complexity of cardiorespiratory rehabilitation in patients with neuromuscular weakness, obesity, postoperative deconditioning, respiratory failure, sepsis, and prolonged functional impairment. Collectively, these articles show that respiratory outcomes are influenced not only by pulmonary pathology, but also by community participation, sleep health, economic considerations, muscle function, interdisciplinary collaboration, and access to rehabilitation.

Conclusion:

Comprehensive respiratory care must extend beyond diagnosis, hospitalization, and survival. It should include prevention, individualized treatment, rehabilitation, efficient resource allocation, and restoration of meaningful participation. This issue reinforces the strategic role of Persahabatan Hospital and the *Persahabatan Respirology Journal* in connecting clinical innovation, public health, health economics, and rehabilitation across the respiratory-care continuum.

Keywords: respiratory medicine; pulmonary rehabilitation; prevention; tuberculosis vaccine; occupational health; health economics; patient-centered care

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INTRODUCTION

Respiratory medicine is often defined by diseases, procedures, and anatomical boundaries. Patients, however, experience respiratory illness as a continuum—from susceptibility and prevention to acute deterioration, treatment, functional recovery, and reintegration into society. The articles presented in this issue of the *Persahabatan Respiri Journal* reflect this broader continuum. Together, they demonstrate that meaningful respiratory care must extend beyond the lungs, beyond hospitalization, and beyond survival.

The issue begins with a distinctly Indonesian story: **“The Historical Development of Senam Asma Indonesia and the Contribution of Persahabatan Hospital (1985-Present).”** What began with the establishment of the Asthma Club at Persahabatan Hospital in 1985 subsequently contributed to the development of Senam Asma Indonesia (SAI), a structured exercise program formally created by a multidisciplinary team in 1994. SAI incorporates breathing control, thoracic mobility, relaxation, aerobic exercise, and physical conditioning adapted to individuals with asthma.[1]

The importance of this history lies not only in its longevity. SAI represents the transformation of a hospital-based initiative into a community movement. It reminds us that rehabilitation succeeds when scientific knowledge is translated into an intervention that is understandable, culturally acceptable, reproducible, and accessible. Its evolution also illustrates Persahabatan Hospital’s contribution not merely as a referral center, but as an institution capable of connecting clinical innovation with public participation.

A second review, **“Pulmonary Rehabilitation Strategies for Pathological Air-Filled Spaces: From Blebs to Pneumothorax,”** addresses an area

in which clinicians frequently face uncertainty. Patients with bullae, blebs, cystic air spaces, or previous pneumothorax may become unnecessarily restricted because of concern about recurrence or barotrauma. Conversely, exercise without adequate assessment may expose selected patients to avoidable risks.

The challenge is therefore not to choose between unrestricted activity and complete avoidance. The more appropriate approach is individualized risk stratification. Clinical stability, underlying pulmonary pathology, imaging findings, previous interventions, oxygenation, symptoms, respiratory mechanics, and the demands of the proposed activity should collectively guide rehabilitation. Carefully prescribed exercise, breathing retraining, airway-clearance strategies when indicated, education regarding warning symptoms, and appropriate monitoring can help prevent fear from becoming a second disability.

The review **“Tuberculosis Vaccines in Indonesia: Importance and Future Directions”** shifts the discussion from rehabilitation to prevention. Indonesia remains one of the countries contributing the largest proportion of the global tuberculosis burden. In 2024, Indonesia accounted for an estimated 10% of new tuberculosis cases worldwide.[2] Although Bacille Calmette–Guérin vaccination protects infants and young children from severe forms of tuberculosis, its protection against pulmonary tuberculosis in adolescents and adults remains limited.

This limitation makes the emerging tuberculosis-vaccine pipeline particularly relevant. As of August 2025, 18 vaccine candidates were in clinical development, including six in phase III trials.[3] These candidates target different stages of the tuberculosis pathway, including prevention of infection, prevention of disease, and improvement of treatment outcomes.

For Indonesia, the arrival of a new vaccine would involve much more than regulatory approval. The country must prepare its clinical-trial capacity, surveillance systems, manufacturing and supply strategies, prioritization frameworks, public communication, financing, and equitable distribution. A scientifically successful vaccine will achieve limited population benefit unless it is affordable, trusted, and delivered to the people who need it most.

From Risk Recognition to Value-Based Care

The original research articles bring the issue closer to daily clinical practice. **“The Association Between Obstructive Sleep Apnea Risk Assessed by STOP-Bang and Reaction Time Among Emergency Department Healthcare Workers at Persahabatan Hospital”** examines an often-overlooked occupational concern. Emergency department personnel work in an environment where rapid judgment, vigilance, and accurate responses are essential. Sleep-disordered breathing and impaired alertness therefore represent more than individual health problems; they may also become workforce-performance and patient-safety concerns.

The value of screening tools such as STOP-Bang lies in their practicality. They do not replace definitive sleep assessment, but they can identify workers requiring further evaluation. By connecting obstructive sleep apnea risk with reaction time, this study encourages hospitals to view sleep health as part of occupational safety rather than as a purely personal matter.

The study **“Cost-Effectiveness Analysis of Hemoptysis Therapies Among Hospitalized Patients at Persahabatan Hospital”** addresses another dimension of contemporary respiratory care: value. Hemoptysis ranges from self-limited bleeding to a life-threatening emergency, and its management may require medication, bronchoscopy, bronchial-

artery embolization, surgery, intensive monitoring, or combinations of these approaches.

In a national respiratory referral center, therapeutic decisions must account for clinical effectiveness, recurrence, complications, length of hospitalization, resource utilization, and affordability. Cost-effectiveness analysis does not mean selecting the least expensive treatment. It means determining which strategy produces the greatest meaningful clinical benefit for the resources invested. Locally generated evidence is particularly important because costs, referral pathways, disease severity, and access to advanced procedures may differ considerably from those reported in other health systems.

Rehabilitation When Clinical Complexity Is the Rule

The case reports in this issue reinforce the importance of individualized rehabilitation in complex patients. **“Cardiorespiratory Rehabilitation in Generalized Myasthenia Gravis After Thymectomy and Radiotherapy in a Patient with Class II Obesity”** presents overlapping contributors to functional limitation: neuromuscular respiratory weakness, postoperative deconditioning, obesity-related ventilatory burden, fatigue, and the effects of oncological treatment.

In such patients, rehabilitation cannot rely on conventional exercise progression alone. Respiratory-muscle performance, swallowing safety, fatigue variability, oxygenation, autonomic responses, functional mobility, and recovery between sessions must all be considered. The case illustrates how rehabilitation may serve as a bridge between disease-directed treatment and restoration of participation.

Finally, **“Early Rehabilitation in adult and paediatric critically ill patients with respiratory failure, sepsis, and pneumonia: Case series”** brings rehabilitation into one of the most demanding clinical environments. Critical illness rapidly affects respiratory muscles, peripheral muscle mass, cognition, mobility, and independence. Survival from respiratory failure is therefore not necessarily equivalent to recovery.

Early rehabilitation in critically ill patients must be clinically reasoned rather than protocol-driven. The appropriate intervention may range from positioning, secretion management, passive movement, and respiratory-muscle facilitation to sitting, standing, ambulation, and progressive functional training. The correct dose is determined not by ambition alone, but by physiological stability, treatment burden, patient response, and continuous interdisciplinary communication.

A Respiratory Journal Without Artificial Boundaries

Although the articles in this issue differ in design and subject matter, they share one message: respiratory outcomes are shaped by more than pathology. They are influenced by community engagement, prevention, sleep health, economic decisions, muscle function, professional collaboration, and access to rehabilitation.

Persahabatan Hospital occupies a strategic position within this continuum—as a national referral center, research institution, training environment, and source of community-oriented respiratory innovation. The presence of ***Persahabatan Respiri*** should similarly remain a platform where biological discovery, clinical evidence, health economics, rehabilitation, and implementation science can meet.

CONCLUSION

The future of respiratory medicine will not be defined solely by whether we can diagnose disease earlier or treat it more aggressively. It will also be defined by whether we can prevent illness, allocate resources wisely, preserve function, and return patients to meaningful lives. This issue moves that vision forward—from an asthma club that became a movement to critical-care rehabilitation that begins before disability becomes permanent.

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