

Special Edition  
"Recent Advances in Pulmonary  
Rehabilitation"

## Editorial

### \*Corresponding author

**Masahiro Kohzuki, MD, PhD**  
Professor and Chairman  
Department of Internal Medicine and  
Rehabilitation Science  
Disability Science  
Tohoku University Graduate School of  
Medicine  
1-1, Seiry-cho, Aoba-ku  
Sendai 980-8574, Japan  
Tel. +81-22-717-7353  
Fax: +81-22-717-7355  
E-mail: [kohzuki@med.tohoku.ac.jp](mailto:kohzuki@med.tohoku.ac.jp)

### Special Edition 2

Article Ref. #: 1000PRRMOJSE2e001

### Article History

Received: October 9<sup>th</sup>, 2017

Accepted: October 9<sup>th</sup>, 2017

Published: October 9<sup>th</sup>, 2017

### Citation

Kohzuki M. Editorial summary to the special edition on "recent advances in pulmonary rehabilitation". *Pulm Res Respir Med Open J.* 2017; SE(2): Se1-Se2. doi: [10.17140/PRRMOJ-SE-2-e001](https://doi.org/10.17140/PRRMOJ-SE-2-e001)

### Copyright

©2017 Kohzuki M. This is an open access article distributed under the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Editorial Summary to the Special Edition on "Recent Advances in Pulmonary Rehabilitation"

**Masahiro Kohzuki, MD, PhD\***

*Department of Internal Medicine and Rehabilitation Science, Tohoku University Graduate School of Medicine, 1-1, Seiry-cho, Aoba-ku, Sendai, Japan*

Chronic obstructive pulmonary disease (COPD) is the third leading cause of death worldwide, and contributes substantially to annual healthcare expenditure. Key management strategies for people with COPD target symptom reduction and minimization of disease progression. Pulmonary rehabilitation (PR) is recognized as a core component of COPD management, and has been repeatedly shown to improve outcomes that matter to patients, such as dyspnea, exercise tolerance and quality of life (QoL).

PR is now an essential part of therapeutic strategy in the wide range of respiratory diseases. Since the effect for rehabilitation is difficult to be evidenced, PR should be recognized not only as an evidenced-based medicine but also as a narrative-based medicine. In this special edition, we plan to share not only the scientifically established knowledge but also the narrative experiences in PR for diverse respiratory diseases.

This issue contains ten invited reviews describing recent and exciting scientific advances in PR, including rehabilitation for patients with COPD, pulmonary hypertension (PH), multi-morbidity and multiple disabilities (MMD), pneumonia, intensive care unit (ICU), palliative care, lung transplantation, and peripheral arterial disease. It also contains assessment of dyspnea, measurement of activities of daily living for them.

Akizuki et al<sup>1</sup> reported that supervised exercise training in patients with PH seems safe and beneficial although the long-term effect of exercise in PH has not been shown.

Shioya et al<sup>2</sup> emphasized that positive outcomes associated with PR in COPD patients are realized without demonstrable improvements in lung function. This paradox is explained by the fact that PR identifies and treats the systemic effects of the disease.

Kohzuki et al<sup>3</sup> indicated that PR, cardiac rehabilitation, and renal rehabilitation have become important concepts that all rehabilitation-related professionals should be familiar with in the era of MMD.

Goto<sup>4</sup> suggested that one of the problems is the inability to measure changes in ADL resulting from treatment or rehabilitation and interventions to improve physical activity in patients with COPD, if the instrument cannot accurately measure the concept of daily activity.

Dawson et al<sup>5</sup> has done a literature review of PR for persons receiving palliative care treatment. Prominent themes that emerged were the beneficial effects of PR, even in late stages of lung disease, and the positive impact palliative care can have on the patient. Simultaneously, there were considerable barriers to access mentioned throughout the literature, which prevents patients from receiving either PR and/or palliative care at the end-of life.

Kanezaki<sup>6</sup> focused on the underlying mechanism of dyspnea and recent advances in assessment in PR in COPD. Dyspnea appears not to be just a single sensation, as it includes the three sensory quality of dyspnea; work/effort, air-hunger and chest tightness. In addition to sensation of dyspnea, complex emotions including anxiety, attention and fear can involve

through processing of the limbic system.

Sato et al<sup>7</sup> made an overview of positioning and early mobilization (EM) examined in high-evidence studies. Positioning and EM in critically ill adult patients have both positive and negative effects.

Ebihara et al<sup>8</sup> pointed out that the rehabilitation for aspiration pneumonia should be the combination of pulmonary and dysphagia rehabilitations. The best strategy to achieve the comprehensive interventions is making the multidisciplinary team with various medical amenities.

Izoe et al<sup>9</sup> summarized the reports on PR before and after lung transplantation (LTx). PR can improve exercise capacity and QoL. However, it has been reported that after LTx, the rate of return to work is low. It is necessary to consider the effects of psychotherapy, psychological support, and behavioral therapy for depression on patients after LTx.

Kakahana et al<sup>10</sup> outlined the association of COPD with PAD. Increased prevalence of PAD in COPD patients may be caused by COPD disease itself including systemic inflammation rather than by smoking status. PAD is associated with worse functional capacity and health status in COPD patients.

The *Pulmonary Research and Respiratory Medicine - Open Journal* is an international journal presenting original research in all the detailed matters related to pulmonary and respiratory system. The journal publishes original research, review, case-report, mini-review, editorial, short-communication, book-review, opinion, commentary, letter to the editor, conference proceedings, technical report, errata, illustrations, etc.

The excellent research works published in this journal contribute to improving human health and reducing suffering. I confirm that this edition will help right away your tomorrow's respiratory practice.

## REFERENCES

1. Akizuki M, Serizawa N, Izoe Y, Ito O, Kohzuki M. Pulmonary rehabilitation in patients with pulmonary hypertension. *Pulm Res Respir Med Open J.* 2017; SE(2): S1-S6. doi: [10.17140/PRRMOJ-SE-2-101](https://doi.org/10.17140/PRRMOJ-SE-2-101)
2. Shioya T, Iwakura M, Kawagoshi A, et al. Recent advances in pulmonary rehabilitation for patients with COPD. *Pulm Res Respir Med Open J.* 2017; SE(2): S7-S19. doi: [10.17140/PRRMOJ-SE-2-102](https://doi.org/10.17140/PRRMOJ-SE-2-102)
3. Kohzuki M, Cho C, Lee C, Harada T. Pulmonary rehabilitation in the era of multimorbidity and multiple disabilities (MMD). *Pulm Res Respir Med Open J.* 2017; SE(2): S20-S22. doi: [10.17140/PRRMOJ-SE-2-103](https://doi.org/10.17140/PRRMOJ-SE-2-103)
4. Goto Y. Measurement of activities of daily living in patients with chronic obstructive pulmonary disease. *Pulm Res Respir Med Open J.* 2017; SE(2): S23-S25. doi: [10.17140/PRRMOJ-SE-2-104](https://doi.org/10.17140/PRRMOJ-SE-2-104)
5. Dawson K, Freeman S, Adam K. A review of non-pharmacological pulmonary rehabilitation for patients receiving palliative care. *Pulm Res Respir Med Open J.* 2017; SE(2): S26-S46. doi: [10.17140/PRRMOJSE-2-105](https://doi.org/10.17140/PRRMOJSE-2-105)
6. Kanezaki M. Recent advances in assessment of dyspnea. *Pulm Res Respir Med Open J.* 2017; SE(2): S47-S49. doi: [10.17140/PRRMOJSE-2-106](https://doi.org/10.17140/PRRMOJSE-2-106)
7. Sato R, Ebihara S, Kohzuki M. Recent advances in pulmonary rehabilitation for patients in the intensive care unit (ICU). *Pulm Res Respir Med Open J.* 2017; SE(2): S50-S53. doi: [10.17140/PRRMOJ-SE-2-107](https://doi.org/10.17140/PRRMOJ-SE-2-107)
8. Ebihara S, Sekiya H. Recent advances in rehabilitation for aspiration pneumonia. *Pulm Res Respir Med Open J.* 2017; SE(2): S54-S56. doi: [10.17140/PRRMOJ-SE-2-108](https://doi.org/10.17140/PRRMOJ-SE-2-108)
9. Izoe Y, Harada T, Kohzuki M. Rehabilitation in patients undergoing lung transplantation (LTx). *Pulm Res Respir Med Open J.* 2017; SE(2): S57-S62. doi: [10.17140/PRRMOJSE-2-109](https://doi.org/10.17140/PRRMOJSE-2-109)
10. Kakihana T, Kohzuki M. The relationship between peripheral arterial disease and chronic obstructive pulmonary disease. *Pulm Res Respir Med Open J.* 2017; SE(2): S63-S66. doi: [10.17140/PRRMOJ-SE-2-110](https://doi.org/10.17140/PRRMOJ-SE-2-110)