Title: Survey of Awareness of Terminology Related to Functional Impairment and Muscle Health Among Rehabilitation Healthcare Staff

Running head: Rehab Staff Awareness on Functional Impairment

Key words: sarcopenia; frailty; locomotive syndrome; cachexia; post intensive care syndrome

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Older adults undergoing rehabilitation are often complicated by functional and nutritional impairments [1][2][3]. Research has highlighted the importance of nutritional rehabilitation in addressing frailty, malnutrition, and sarcopenia in this population. Combining rehabilitation and nutritional care can significantly improve physical function, activities of daily living, and overall quality of life in older adults [4]. Therefore, effectively addressing nutritional and functional impairments is key for successful rehabilitation in this population.

However, although several terms are used to describe functional impairment, they are not widely recognized by healthcare providers and may not be recognized when they occur [5]. Therefore, we conducted a survey to determine the awareness of the terms used to describe functional impairments among staff working in convalescent wards.

We surveyed the staff of a hospital convalescent ward. The survey used Google Forms (Google LLC, California, United States), which preserved the anonymity of the respondents, and contained questions to investigate staff awareness of terms related to different areas of dysfunction, including post-intensive care syndrome (PICS), locomotor syndrome, sarcopenia, frailty, disuse syndrome, and cachexia as terms related to functional impairment. PICS is mainly discussed in the acute phase, while disuse syndrome and cachexia are often discussed after the acute phase.
Locomotor syndrome, sarcopenia, and frailty are well-known terms to describe changes in health status. Although all these terms involve the acute to the chronic phases, we included them in this study because of their different central phases. The respondents were asked whether they were familiar with each term, choosing from a five-point scale of “Well known,” “Known,” “Can't say either,” “Don't know,” or “Not at all familiar.” Although the survey items collected personal information, all items were controlled by response ID and did not contain identifiable personal information.

The Ethics Committee of Kumamoto Rehabilitation Hospital approved this study.

The 196 valid responses included those from 7 physicians, 56 nurses, 62 physical therapists, 34 occupational therapists, 14 speech therapists, and 23 allied health professionals. The awareness of sarcopenia, frailty, locomotive syndrome, and disuse syndrome was 83.8%, 76.1%, 70.6%, and 94.9%, respectively. In contrast, 28.9% and 9.6% of the respondents recognized cachexia and PICS, respectively (Figure 1). Physicians had higher recognition rates for all terms, while physical therapists tended to have higher-than-average rates for all terms except PICS.

The survey results revealed high levels of awareness of locomotive syndrome [6], sarcopenia

Regarding the high levels of awareness of locomotive syndrome, sarcopenia, frailty, and disuse syndrome, our convalescence wards treat patients with many orthopedic and neurovascular diseases, and the fields of orthopedics and rehabilitation are directly linked. These terms are widely used in these fields, indicating a high level of recognition in directly related fields. Comorbidities, such as locomotive syndrome, sarcopenia, frailty, and disuse syndrome, have also been studied, highlighting their prevalence and interrelationships [12]. Thus, the recognition of these terms in the orthopedic and rehabilitation fields is high.

The low level of cachexia recognition in this study may be because our convalescent wards have few opportunities to see chronically ill patients who meet the diagnosis of cachexia and have little experience in dealing with them. However, such patients may be overlooked due to a lack of staff awareness. Conversely, convalescent wards often accept patients who have completed intensive care. To the best of our knowledge, as no other reports have been described in the English literature, it is difficult to determine the actual situation regarding the degree of recognition of PICS outside the intensive care unit (ICU). The results of the present study suggest an extremely low awareness of PICS outside the ICU, and that awareness and collaboration must be addressed.
Although physicians and physical therapists tended to have a higher level of awareness of the term dysfunction, understanding the causes of dysfunction and opportunities for direct intervention may have influenced this level of awareness. Further evaluation of professional awareness is warranted.

Ensuring that functional impairment is recognized and linked to support, requires increasing recognition and the coordination of terms with low recognition.

However, this survey was conducted in a single medical facility and cannot be considered fully representative of the situation in convalescent homes nationwide. The response rate was approximately 70%, and respondents with greater interest in dysfunction may have been more likely to respond.

We observed variations in the recognition of dysfunctional terms among staff working in convalescent wards, with high recognition of terms in directly related domains and low recognition in less related domains. Collaboration across domains required the broader dissemination of terminology rather than their use in limited domains.