Collaboration and Teamwork in Rehabilitation Medicine in the Korean Healthcare System*1

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Introduction

Collaboration between individual members of different health care disciplines has been increasingly formalized in the form of multidisciplinary and interdisciplinary teams in most modern health care systems, particularly in the field of rehabilitation medicine.1,3 Teamwork is a core element of rehabilitation medicine that allows realistic rehabilitation measurements to be obtained, with clear objectives to obtain the best possible outcome for patients.4,5 Successful patient outcomes are dependent on the proper functioning of interdisciplinary health care teams.

In recent years, rather than focusing on simple team building, there has been increasing interest in the type of team approach or amount of collaboration required for optimal clinical outcomes.6-9 Therefore, understanding the levels or types of team approach, including attitudes of individual members towards teamwork is essential, as well as how the optimum collaboration among disciplines, and the building of an effective and practical team. The types and characteristics of teamwork in rehabilitation medicine are variable according to level of health care service delivery, severity of diseases, and clinical course. For example, the teamwork should focus on clinical paths differently in tertiary acute-care centers vs. chronic long-term care centers. The team approach has been specialized to promote patient care in the treatment of each disease or impairment (i.e., stroke, spinal cord injury, cerebral palsy, geriatric and cancer etc.).10-12 In addition, interdisciplinary rehabilitation is closely linked with the medical services policy, socio-economic conditions, and cultural background of each country.13,14 Due to the ethnic and cultural similarities among East-Asian countries, sharing the experience of building rehabilitation teams in each country is a reasonable approach. Understanding the collaboration and teamwork currently established in Korea can improve teamwork in rehabilitation medicine, especially in Asian countries.

Team Approach Dependent on Functional Recovery

Acquired disorders—such as stroke and spinal cord injury—usually show an active recovery period in the early phase after the acute event, followed by a gradual recovery or maintenance state in the long term. It has been reported in many studies that the degree of functional recovery following severe diseases or injuries depends on whether rehabilitation management was provided properly and timely.15-17 Various types of teamwork can be divided broadly into three types based on the clinical setting; i.e., acute inpatient care, outpatient care, and chronic care setting.18 The first two types focus mainly on minimizing disease sequelae and impairment in the acute or sub-acute recovery phase. In the chronic care setting, teamwork is centered on gradual recovery, social adaptation, and integration with home and community (Fig. 1 A).
Rehabilitation Service and Delivery System in Korea: Current Status and Challenge

Most practices in rehabilitation medicine appear to be strongly influenced by the health care system of each country. The Korean health care system has few similarities to those of other countries, and has several unique features. For example, most medical services are provided via the universal national health insurance system through three tiers of medical facilities classified according to the size and number of departments – primary local clinics, secondary hospitals, and tertiary general hospitals. Rehabilitation service delivery is based on the national health care system. First, intensive rehabilitation care in the acute phase is usually provided to the patient at tertiary care centers. A patient progresses through the second and third stages of rehabilitation care, or long-term care, before returning to their home (Fig. 2). However, major problems exist as this system of provision is not well operated. Because an effective care system supporting sub-acute care to help restore impaired function to facilitate a patient's return to the home or community has not been established, these roles tend to be dispersed to general hospitals and long-term care facilities. Furthermore, rehabilitation specialists in Korea are distributed relatively evenly among the three types of hospitals.

Most countries are at present faced with a rapidly aging society. Indeed, Japan entered a super-aged society (populations with more than 20% elderly) in 2005. Currently, Korea is the most rapidly aging country. It is expected to take only eighteen years to enter from aging society to aged society. Furthermore, advances in medical treatment and novel innovations in technology have occurred recently. Under these circumstances, the original three tiers of health care delivery in Korea appear to be dichotomized into specialized intensive or chronic long-term care. Several large and top ranked hospitals are leading contemporary medical advances, focusing on serious conditions such as cardio- and neuro-vascular disease, cancer, and rare & intractable diseases. At the secondary level, chronic long-term care systems play a major role in maintaining an individual's function. The increased frequency of major impairment in old age may require more intensive and comprehensive medical care since older adults are more vulnerable and tend to experience more accelerated functional decline with multiple comorbidities. Therefore, team-based approaches involving enhanced communications among departments is necessary to strengthen the care provided during the acute phase. This type of teamwork can improve multidisciplinary rehabilitation of patients with long-term illnesses (Fig. 1 B).

Rehabilitation delivery systems are changing in Korea. We are making an effort to reinforce acute and subacute rehabilitation setting to maximize the functional outcome of the patient who has the potential to improve. Therefore, it has become more important to establish effective models of collaboration and teamwork according to the characteristics and clinical course of each disease or trauma.
Interdepartment Collaboration and Teamwork, Physicians to Physicians

According to the disease features and clinical course, various types of team practice have been developed and gradually expanded into clinical settings. For example, although the initial severity or clinical presentation of a condition is not serious and does not involve functional limitations, unrecognized functional decline or impairment would not be prevented in the follow-up period if potential problems were not properly and timely managed. In this situation, teamwork should focus on screening or surveillance to identify any change in functional level and determine the appropriate timing of rehabilitation intervention. This would be facilitated by a team approach centered around a trust-based relationship between physicians in the involved departments. In cases of more severe disability, the role of specific rehabilitation teamwork becomes more important.

Treatment-related dysfunction following cancer therapy is a good example of teamwork that requires close communication between the primary physician and physiatrist. Functional issues that could threaten independent living and quality of life of cancer patients have been highlighted in the diagnosis, initial treatment, rehabilitation, and palliation in cancer care. Cross-department communication, an agreed clinical pathway and effective management are the main elements in this type of teamwork. From the acute to chronic stage, integrated, comprehensive supportive care between a primary oncologist, physiatrist and other health care professionals is now implemented in cancer rehabilitation as a supportive model of care. In addition, the inpatient clinical pathway for acute care and rehabilitation in fragility fracture is one of agreed clinical pathway which emphasizes ortho-geriatric–rehabilitation collaborative works from hip fracture surgery to rehabilitation and discharge.

Rehabilitation Teamwork based on Comprehensive Functioning Evaluation

A conventional rehabilitation team comprising multiple disciplines has been established in typical rehabilitation programs. However, over the past several years, we were not convinced that our team practice was working towards a common goal, despite the fact that team-based approaches were considered an important element for which most rehabilitation professionals strive. In particular, our teamwork was not effective or efficient in terms of patient-centered care. On the team conference table, team members used to be confined to their own perspective. It was necessary to have a common language to communicate and deliver the requirements of the patients. Using the International classification of functioning, disability and health (ICF) as a tool to enhance communication between our team, we were able to alter the way in which our team functioned. We
have developed new guidelines for evaluation of a team-based approach that focuses on improved patient care and teamwork. Most functional activities within a multidisciplinary team involve more than one discipline. Team members sharing their ideas and collaborating would facilitate effective resolution of impaired activities. Previously, discussion during team conferences typically involved each team member in turn presenting the patient's problems and their care plan (Fig. 3 A). The method of communication during such conferences was changed as follows: anyone involved in a specific problem of the patient could participate in the discussion if the corresponding problem was on the table (Fig. 3 B).  

Application of ICF to rehabilitation management in clinical practice enabled us to communicate patients' problems and treatment goals from the perspective of both the patient and the health care professional in a more comprehensive manner, which also enhanced communication. The ICF core set contains the most relevant functioning categories to guide multidisciplinary assessment and treatments. Furthermore, information of functional status is expressed as a format by means of ICF coding for each condition. We found that the communication among rehabilitation team members could be easily implemented to electronic health record system because main information was delivered as formatted. Online interactions among rehabilitation team members have become an important form of health care communication. Each team member inputs information related to patient care, allowing them to communicate what they have done and what they wanted to discuss using the EMR system or hospital messenger system. We choose online communication, offline meetings, or both, depending on the status of a patient and the availability of team members (Fig. 4).

### Teamwork for Social Integration

Successful integration to the home and community from the hospital and long-term care facility setting is the ultimate goal of rehabilitation management. Community-based coordination and coherence is necessary for social integration, which relies on collaboration and networks across disciplines and delivery systems. Since 2000, the Korean Ministry of Health and Welfare Services and National Rehabilitation Center have conducted community-based rehabilitation programs through nationwide district rehabilitation centers and community health centers. In addition, some hospitals began to augment community-based programs to better suit the social and home environment. However, community-based teamwork has been viewed as being less important compared to hospital-based teamwork in Korea since the needs of institution-based rehabilitation have increased tremendously in recent years. At pres-
ent we are seeking to reform the previous community-based rehabilitation system by introducing interdisciplinary telecommunication and/or teleconferences to build a new type of community-based teamwork.

**Barriers**

Several barriers to implementation of teamwork-oriented rehabilitation into clinical practice exist. Currently, rehabilitation teamwork is not mandatory in clinical practice in Korea. Under this circumstance, the only institution that can afford to provide team services appears to fulfill proper collaboration and teamwork in rehabilitation management. Secondly, the cost-effectiveness of rehabilitation programs is always challenging. In actual, proper teamwork cannot be established without basic resources such as manpower and financial support. Moreover, the teamwork should be implemented in an efficient manner. Lastly, the expense associated with rehabilitation teamwork is not yet covered by the National Insurance system. We are struggling to gain formal fiscal support for collaboration and teamwork from the government. We wish to share our experience and to discuss the barriers that exist in various countries.

**Conclusion**

There is at present no standard international guideline for evaluation of teamwork-oriented rehabilitation treatment and for development of qualified rehabilitation in Asia. We expect that sharing our team-based evaluation guidelines will improve patient care. A Korean perspective regarding teamwork and collaboration in rehabilitation medicine may increase the awareness of the role of a physiatrist in various Asian countries.

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![Fig. 4 Online interactions among rehabilitation team members using EMR system or hospital messenger system.](image)
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