

## Home Rehabilitation with Bio-Psycho-Social Axes Developing by Interprofessional Work (IPW)

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### Abstract

In developed countries, home rehabilitation has been gradually more prevalent. It has perspectives from bio-psycho-social points of view. It includes several treatments, such as exercise, physical therapy, occupational therapy, speech therapy, prosthesis, drug, psychological treatment, nutrition therapy. World Health Organization created the International classification of functioning, disability and health (ICF). The ICF model consists of health and living functions, individuals, and environmental factors, which are important assessment in home rehabilitation. It comprehensively evaluates physical, psychosocial and social problems, and provides integrated medical care and life support as an interprofessional work (IPW). By IPW, medical staffs can treat patients with satisfactory degree.

**Keywords:** Home rehabilitation; Bio-psycho-social; International classification of functioning; Disability and health (ICF); Interprofessional Work (IPW); Integrative Medicine Japan (IMJ).

### Editorial

Physical therapy and rehabilitation have been performed for adequate contents at various places and times. They have been mainly conducted in the hospitals for the patients with various diseases. They include mainly cerebrovascular disease (CVD), orthopedic disease, and so on [1]. As the level of physiotherapy and rehabilitation, facilities and equipment in the country improve, the time and place will change from hospital to home. In other words, it gradually became possible to meet the wishes of patients or clients, and home rehabilitation became gradually prevalent [2].

Home rehabilitation medical care is gradually becoming widespread in developed countries, such as Japan [3]. The purpose is to respect the patient's values, to stay close to their usual, and to help them continue their preference personal life. Dr. Huber of the Netherlands proposed positive health perspective as a new concept of health [4]. The new health concept has influenced politicians and health policy makers to change their thinking concerning medical/health care and disease prevention.

As regards to home rehabilitation, two areas of related medicine would be described. One is integrative medicine (IM) [5]. The author is in charge of the director of Integrative Medicine Japan (IMJ), Shikoku Island division. There have been annual meetings and annual reports long years. Among them, the patient-oriented perspective has been crucial in the light of IM. It is important to comprehensively diagnose and treat from bio-psycho-social points of view [6].

The other is primary care medicine [7]. As a principle of primary care, Professor Saultz summarized the five Cares with the ACCCC [8]. They are Access, Comprehensive, Coordination, Continuity and Contextual. The author was the president of the 2017 Annual Academic Meeting at the Japanese Primary Care Association (JPCA), and 4600 out of 10,000 members participated. As the world organization of PC, WONCA (World Organizations of Family Doctors) has an important role of developing PC medicine, which has mutual relationship with WHO. Dr. Huber cited the concept of WONCA for understanding the health [4].

The therapies and treatments provided for home rehabilitation treatment are shown below [9].

- i) Exercise therapy: strengthening, coordination, cardiopulmonary function,
- ii) Physical therapy: thermotherapy,
- iii) Occupational therapy: Activities Daily Living (ADL),
- iv) Speech therapy: hearing language and communication,
- v) Prosthesis and equipment therapy: prescription of prosthesis and orthosis,
- vi) Drug therapy: Basic treatment, spasm treatment, Botox injection,
- vii) Psychological treatment: Behavioral therapy, counseling,
- viii) Nutrition therapy: malnutrition treatment, and so on.

As mentioned above, the range of the therapeutic method is very wide, and then it seems to develop broadly like Integrative Medicine in the future [5].

The outline of home rehabilitation has been described above. At first, it is important to consider what the health is like. Formerly, WHO regarded the health as complete wellbeing. However, it is no longer fit for present situation with the rise of chronic illness. Dr. Huber and colleagues suggested the importance of focus on adapting and self-managing for social, physical and emotional challenges [4]. These three factors can correspond to bio-psycho-social axes for the Integrative Medicine [6]. As the world economy and rehabilitation medicine develop together in each country, medical staffs have to keep those three axes in the mind [10].

In 2001, WHO created the International classification of functioning, disability and health (ICF) [11]. The committee also created a new framework that captures the view of health for all people, not just persons with disabilities, to lead an equal social life. This is called the IDF research branch [12]. By providing home medical care

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within the framework of ICF, it becomes possible to give patients adequate daily life associated with supporting the life. The medical staffs, who hope to study ICF, can approach to e-Learning Tool for actual medical practice [13].

The concept of assessment and treatment in home rehabilitation is important. The ICF model consists of health and living functions, individuals, and environmental factors. These are important elements of assessment in home rehabilitation. In addition to the evaluation of disabilities using the Barthel index and FIM (Functional Independence Measure), the assessment at home rehabilitation can include houses, caregivers, social resources, medical institutions, and care facilities. These are the principles of the ICF. Recently, the reassessment of ICF has been found [14]. The concept of ICF remodeling was shown, which will bring future development of the issue [15]. Furthermore, the teaching and learning methods of ICF are also evolving [16].

Home rehabilitation medical care comprehensively evaluates the physical, psychosocial, and social problems of medical professionals. It provides integrated medical care and life support as an interprofessional work (IPW). IPW means a multidisciplinary professional team led by the related individuals and families [17].

Home rehabilitation treatment becomes more effective with a multifaceted approach by IPW. Ultimately, the key is to link rehabilitation to the voluntary efforts of the rehabilitator. There are some important points: i) It is effective to conduct a comprehensive evaluation based on the ICF model and intervene with IPW, ii) Support home care with the slogan "No care without the health of the caregiver", iii) Considering the trajectory of the disease, rehabilitation treatment is performed along with the primary disease / comorbidity disease, complications / disuse syndrome [18].

IPW has been considered a core competency for medical and healthcare staffs. For physiotherapy and nursing students, observational study was conducted for interprofessional learning and work [19]. As a result, interprofessional simulation activities can develop peer-assessment framework and timetabling resources. Several patients have received certain rehabilitation at home, where physiotherapists and home trainers are involved in the treatments [20]. Their investigation of the actual performance revealed some elements of demonstration, instruction and reflection.

In summary, recent trend and some topics concerning home rehabilitation are introduced. As medical system and economy develop in each country, various rehabilitation will be transit from hospital to home. This article becomes hopefully a reference for future research.

## References

- Gelaw AY, Janakiraman B, Gebremeskel BF, Ravichandran H (2020) Effectiveness of home-based rehabilitation in improving physical function of persons with Stroke and other physical disability: A systematic review of randomized controlled trials. *J Stroke Cerebrovasc Dis* 29(6): 104800.
- Bettger JP, Green C, Holmes DN, Chokshi A, Mather RC, et al. (2020) Effects of virtual exercise rehabilitation in-home therapy compared with traditional care after total knee arthroplasty: VERITAS, a randomized controlled trial. *J Bone Joint Surg Am* 102(2): 101-9.
- Picha KJ, Howell DM (2018) A model to increase rehabilitation adherence to home exercise programmes in patients with varying levels of self-efficacy. *Musculoskeletal Care* 16(1): 233-7.
- Huber M, Knottnerus JA, Green L, van der Horst H, Jadad AR, et al. (2011) How should we define health? *BMJ* 343: d4163.
- Bando H, Yoshioka A, Nishikiori Y (2020) Various Care Option of Integrative Medicine from the Viewpoint of Patient-Oriented Medicine. *Int J Conf Proc* 2(1): 1-3.
- Pai AB, Shuart LV, Drake DF (2021) 18-Integrative Medicine in Rehabilitation. *Braddom's Physical Medicine and Rehabilitation* (6th Ed.) 364-373.e3.
- Bando H (2018) Medical Practice and Research in Primary Care with Hinoharism. *J Gen Med Prim Care* 2(1): 100009.
- Saultz JW (2001) Textbook of family medicine, McGraw-Hill, Medical Professions Division, 830.
- Mansbach WE, Mace RA, Tanner MA, Knoepfel EM, Maxwell R, et al. (2020) Integrating Working Memory Exercises With Nursing Home Rehabilitation to Achieve "Better, Faster" Functional Outcomes. *Topics Geriatr Rehab* 36(1): 60-8.
- Falvey JR, Murphy TE, Gill TM, Stevens-Lapsley JE, Ferrante LE (2020) Home Health Rehabilitation Utilization Among Medicare Beneficiaries Following Critical Illness. *J Am Geriatr Soc* 68(7): 1512-9.
- ICF Research Branch. 2nd Edition ICF Core Set Manual for Clinical Practice. Retrieved from: <https://www.icf-research-branch.org/>.
- ICF Research Branch. Bickenbach J, Cieza A, Selb M, Stucki G (Eds). (2021) ICF Core Sets. Manual for Clinical Practice (2nd ed.). Hogrefe Publishing.
- ICF e-Learning Tool. Retrieved from: <https://www.icf-elearning.com/>.
- Heerkens YV, de Weerd M, Huber M, de Brouwer CPM, der Veen SV, et al. Reconsideration of the scheme of the international classification of functioning, disability and health: incentives from the Netherlands for a global debate. *Disabil Rehabil* 40(5): 603-11.
- Sykes CR, Maribo T, Stallinga HA, Heerkens Y (2021) Remodeling of the ICF: A commentary. *Disability and Health Journal* 14(1): 100978.
- Scholten I, Barradell S, Bickford J, Moran M (2020) Twelve tips for teaching the International Classification of Functioning, Disability and Health with a view to enhancing a biopsychosocial approach to care. *Med Teach* 43(3): 293-99.
- Trivedi D, Goodman C, Gage H, Baron N, Scheibl F, et al. (2013) The effectiveness of inter-professional working for older people living in the community: a systematic review. *Health Soc Care Community* 21(2): 113-28.
- Bettger JP, Green C, Holmes DN, Chokshi A, Mather RC, et al. Effects of Virtual Exercise Rehabilitation In-Home Therapy Compared with Traditional Care After Total Knee Arthroplasty. *J Bone Joint Surg Am* 102(2): 101-109.
- Dennis D, Furness A, Duggan R, Critchett S (2017) An Interprofessional Simulation-Based Learning Activity for Nursing and Physiotherapy Students. *Clinical Simulation in Nursing* 13(10): 501-510.
- Eliassen M, Henriksen NO, Moe S (2019) Physiotherapy supervision of home trainers in interprofessional reablement teams. *J Interprof Care* 33(5): 512-8.