

## SYMPOSIUM PRESENTATION 3: PHYSICAL AND MENTAL HEALTH

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### Care coordinator application to manage chronic disease in primary care

B. L. Cho (Convener)

**Participants:** B. Cho (Korea) **ISSUE** Care coordination is important to manage chronic disease. But, there are in shortage of care coordinator in primary care of Korea. We started 'Comprehensive chronic care project in primary care' demonstration project. Care coordinator application program was introduced to solve the care coordinator shortage problem. **CONTENT** The application program consists of 1) AI chatbot application 2) Communication with health coach 3) Life style monitoring (exercise, diet, stress). It adopted blended approach with AI and health coach direct consultation. Primary care doctors and health coaches shared the health information of patients who agreed to this program. New system to facilitate communication among medical doctors and health coaches and patients was developed. **STRUCTURE** Patients are asked to install app by primary care physician. Primary care physician, health coach and patient communicate through the app more efficiently. **CONCLUSION** Patients who use care coordinate app managed their life style more efficiently.

### References

- Jan-Niklas Kramer et al. A Cluster-Randomized Trial on Small Incentives to Promote Physical Activity. *American journal of preventive medicine*, 2019; 56(2), e45-e54
- Wurst R et al. Effects of Incentives on Adherence to a Web-Based Intervention Promoting Physical Activity: Naturalistic Study. *J Med Internet Res*. 2020;22(7):e18338.
- Xu, Hongxuan, and Huanyu Long. "The effect of smartphone app-based interventions for patients with hypertension: systematic review and meta-analysis." *JMIR mHealth and uHealth* 8.10 (2020): e21759.
- Liu, Kaifeng, Zhenzhen Xie, and Calvin Kalun Or. "Effectiveness of mobile app-assisted self-care interventions for improving patient outcomes in type 2 diabetes and/or hypertension: systematic review and meta-analysis of randomized controlled trials." *JMIR mHealth and uHealth* 8.8 (2020): e15779.

**Keywords:** chronic disease care model, primary care, care coordination, application

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## SYMPOSIUM PRESENTATION 3: PHYSICAL AND MENTAL HEALTH

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### **Information technology-supported integrated health service for older adults in long-term care settings: A cluster randomized controlled study**

K.-I. Kim

**ISSUE:** As a result of a rapidly aging population in South Korea, there is a growing number of people who reside or are admitted to nursing home of long-term care hospital for treatment, recovery, and care due to multiple comorbidities or functional impairment. In addition, due to a lack of effective collaboration among acute care facilities and subacute and long-term care facilities, patients who already admitted to a nursing home or long-term care hospital are either required to visit an acute care hospital or their caregivers must see an acute care physician if special treatment is needed. In other words, the current reality is inefficient as care continuum cannot be maintained due to the lack of a collaboration model in the healthcare information system. Management of chronic diseases, rehabilitation, medication management, and treatment goal-setting would differ in long term care hospital or nursing (in which older adults reside / hospitalized for long-term care), from that of community-dwelling older adults. Further, there is currently no video-conferencing or consultation model involving geriatric medicine specialists and long-term care facilities in Korea. There are limited data regarding whether information sharing between acute hospitals and long-term care facilities can improve the management of older patients. **CONTENT:** The Health-RESPECT study will adopt cluster randomized controlled trial (RCT) design with parallel equal arms performed in South Korea. The long-term care institution will be assigned into the cluster by the same category (LTCH or NH), and the same number of clusters will be allocated to the intervention and control groups through randomization. Thereafter, the patients and medical staff recruited from the clusters will be assigned to the intervention or control groups. **STRUCTURE:** Kim will present the results of the Health-RESPECT clinical study. **CONCLUSIONS:** Information technology-supported integrated health service was effective in reducing potentially inappropriate medication use and diabetes control among older patients in long-term care hospital or nursing home without functional decline or increase of healthcare utilization.

**Keywords:** health services for the aged, information technology, long-term care

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## SYMPOSIUM PRESENTATION 3: PHYSICAL AND MENTAL HEALTH

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### Technology based frailty prevention model with an eCBT application and a multisensor device

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**Purpose** In prior studies, we showed clinical efficacy of person-centered community based multicomponent program in preventing progression of frailty and disability in vulnerable older adults. Even with its potential efficacy, person specific provision of multicomponent exercise has been rarely provided for frailty prevention in resource-constrained communities. To facilitate the scaling up of multicomponent frailty prevention program, we aimed to develop an electronic cognitive behavioral therapy (eCBT) based smartphone application comprising multicomponent mobility exercises with incentive features that was personalized to physical performance parameters acquired by a multisensor device. **Methods** Pilot programs using eCBT application were conducted in welfare centers and daycare centers. Adherence rate was compared between participants with or without the presence of eCBT feature in the application. **Results and Discussion** By before-after analysis, physical performance was meaningfully improved in participants with mean change of short physical performance battery (SPPB) score of 1.3. eCBT feature was associated with higher adherence in study populations. In resource-scarce community settings of Korea, eCBT based approach might be a potential solution to provide person-specific multicomponent exercise program for frailty prevention.

### References

- Oh G, Lee H, Park CM, Jung HW, Lee E, Jang IY, Guralnik JM, Kim DH. Long-term effect of a 24-week multicomponent intervention on physical performance and frailty in community-dwelling older adults. *Age Ageing*. 2021 Nov 10;50(6):2157-2166. <https://doi.org/10.1093/ageing/afab149>
- Jung HW, Roh H, Cho Y, Jeong J, Shin YS, Lim JY, Guralnik JM, Park J. Validation of a Multi-Sensor-Based Kiosk for Short Physical Performance Battery. *J Am Geriatr Soc*. 2019 Dec;67(12):2605-2609. <https://doi.org/10.1111/jgs.16135>
- Park CM, Jung HW, Jang IY, Baek JY, Yoon S, Roh H, Lee E. Comparison of Two Electronic Physical Performance Batteries by Measurement Time and Sarcopenia Classification. *Sensors (Basel)*. 2021 Jul 29;21(15):5147. <https://doi.org/10.3390/s21155147>

**Keywords:** sensors, eCBT, applications, multicomponent interventions, frailty

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