

## **INNOVATION COMPETITION IC4**

# **Checkercise® Enhances Functions and Motivation Level of Stroke Survivors**

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### **ABSTRACT**

The increase in the prevalence and incidence of stroke has led to a rise in stroke case referrals between 2017 and 2018. However, there has been a decrease in stroke patient attendance due to the unappealing nature of existing exercise prescription programs during 2019 and the Movement Control Order between 2020 and 2021. Factors contributing to the identified problem include: 1) unappealing existing stroke patient exercise prescriptions, 2) insufficient productivity of existing stroke patient exercise prescriptions, 3) lack of savings in existing stroke patient exercise prescriptions, 4) existing stroke patients' lack of empowerment in exercising at home, and 5) inefficient monitoring of stroke patients' home exercises. Thus, Checkercise® innovation has been introduced, with its enriched gaming-themed environment, designed to be enjoyable and easily implemented at home, proves beneficial to stroke patients. To sustain exercise during the Movement Control Order, the Checkercise® website was introduced to help patients stay healthy and active. Comparison of stroke patient exercises using Checkercise® website with exercises in regular environments found: 1) a 3% increase in motivation levels, 2) an 11% increase in leg strength and quality of life status, 3) a 40-minute reduction in treatment time per treatment session, with a monthly exercise frequency of one session with 50% reduction in monthly hospital travel costs for appointments. With the Checkercise® website, 4) home exercise empowerment increased by two sessions per week, with 5) more efficient and systematic monitoring. Checkercise® website proves beneficial and has the potential to pioneer exercise care with an enriched environment among Physiotherapy. Alternatively, the Checkercise® box, which is filled with board games and game cards, can be purchased separately at RM30 per unit.

**Keywords:** Stroke; Function; Motivation

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