High patient satisfaction and compliance in using Robot Assisted Gait Training (RAGT) for Cerebral Palsy patients with gait disorders.

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Introduction
Patient’s engagement in therapy session is an important factor to enhance treatment effectiveness. According to the principle of neuroplasticity, it is believed that gait motor pattern and function could be improved in neurological patients through repetitive task specific practice. However, patients, especially those with Cerebral Palsy, often could not tolerate the motor training program due to fragility resulting in low training motivation and compliance. Robotic Assisted Gait Training (RAGT) is a new therapeutic option. It has an advanced body weight supported system to facilitate training and an interactive computerized guidance and biofeedback to act as a motivation component. Various studies on the efficacy of RAGT in Cerebral Palsy with gait disorder patients had been published with promising effects in terms of improved functional outcome. The Duchess of Kent Children’s Hospital (DKCH) has started using RAGT for treatment of clinically indicated patients since third quarter of 2013.

Objectives
To evaluate patient satisfaction and compliance with the newly implemented RAGT service for Cerebral Palsy outpatients in the Physiotherapy Department, DKCH.

Methodology
Patients suffering from Cerebral Palsy (GMFCS Level II-IV) with gait disorders were recruited for RAGT. Ethics approval was obtained from HKWC Institute Review Board before the study. Each patient attended a total of 15 sessions of training 2-3 times per week with an average time of 45 minutes in conjunction with conventional goal
orientated physiotherapy training e.g. stretching and strengthening exercises. Patient subjective rating on improvement and overall satisfaction on the new service were rated with numeric rating scale from 0-10.

**Result**
From Sept 2014 to Jan 2015, 14 cases ranging from 10 to 22 years old were included for RAGT. All patients in the study could finish 15 sessions of RAGT within 2 months (100% compliance). The effect of RAGT reported by the study subjects was promising. Overall patient satisfaction with the program was 89%. All study subjects reported the RAGT therapy to be comfortable and showed high willingness to participate in the training session. All subjects could complete the intensive training program. They all experienced improvement in balance and walking speed and are willing to continue on for the second course of training if required. The use of Robot Assisted Gait Training (RAGT) for Cerebral Palsy with gait disorders is welcomed by patients with high patient satisfaction rate. This new intervention has proven effective to successfully engage patients in therapy session with good training compliance.