Circular of 6 March 2012 on the organization of regional care functioning to the Pôle Saint-Helier activity outside. Results of 3 years of rehabilitation–rehabilitation: An Mobile team

CO06 Mobile team rehabilitation–rehabilitation: An activity outside. Results of 3 years of functioning to the Pôle Saint-Helier

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Discussion/conclusion Loss of autonomy occurs in the early stages of Alzheimer’s disease. Allowing early treatment at home, the ESA play an important role in home care for patients with Alzheimer’s disease.

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CO07 Home base rehabilitation and telerehabilitation: A promising strategy to improve service offering in patient with chronic lung disease

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Opinion/Feedback With more than 700,000 patients, chronic obstructive pulmonary disease (COPD), a sickness characterized by a progressive alteration of lungs function, presents a major burden in Canada. Even though COPD is primarily a respiratory system disease, progressive sedentary lifestyle, reduced exercise capacity and a restricted participation in daily life activities, which all contribute to a poor health-related quality of life are common consequences of the disease progression.

Cornerstone of the COPD management, there is unequivocal evidence that pulmonary rehabilitation is the most effective treatment to improve shortness of breath, exercise tolerance and quality of life of patients with COPD. Since 2001, pulmonary rehabilitation is thus considered an unavoidable intervention in the treatment of lungs disease. Usually delivered on an outpatient or in-hospital basis, accessibility and adherence to this intervention strategy remains limited. Thus, despite its clinical and socio-economic relevance, several surveys across Canada and around the world show that pulmonary rehabilitation is only available for less than 2% of patients with COPD. Pulmonary rehabilitation is not even part of the range of opportunities available to patients in half of the regions of the province of Quebec.

Bringing new insights to improve health care organisation and accessibility, several studies have shown that home-based pulmonary rehabilitation are as effective and safe as rehabilitation delivered in hospital or in rehabilitation center. In addition, telerehabilitation, a telehealth application that uses telecommunications technologies to rehabilitation services, is a promising new approach that could also contribute to improving accessibility and adherence to pulmonary rehabilitation.

The aim of this presentation is to report the latest consensus regarding pulmonary rehabilitation and to discuss how home-based rehabilitation and telerehabilitation could be considered to improve pulmonary rehabilitation service offering.

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CO08 Effectiveness of power wheelchair simulator training, delivered at home, on wheelchair driving skills

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Objective Use of a power wheelchair (PW) can improve quality of life and participation in individuals with mobility impairments. PW skills training is generally seen as insufficient by both clinicians and PW users. A virtual reality (VR) simulator may be helpful in improving PW driving skills, when used in addition to regular training. In previous work, challenging PW driving activities have been identified through interviews with expert clinicians and PW

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users and were then integrated in the McGill immersive wheelchair simulator (miWe). Our objective was to evaluate the effectiveness of VR simulator training, delivered through a home program on real PW driving skills.

Materials/patients and methods The miWe simulator included six PW driving activities (adapted bathroom, shopping center, supermarket, elevator, street crossing and adapted transport vehicle). A computer with a joystick was installed in the participant’s home. Participants (new PW users) were randomly allocated to the experimental or control group. Those in the experimental group were asked to practice all six-simulator activities for at least 20 minutes every two days, over a two-week period. Participants in the control group were asked to practice on a racing videogame, for an equivalent amount of time as the experimental group. We compared wheelchair-driving skills as measured by the wheelchair skills test (WST), before and after the intervention.

Results Preliminary analyses were made on the 35 participants who completed the study. All practiced on the simulator or computer game at least twice as much as what was minimally required. Results indicate that the WST scores in the experimental group increased by 6% on average, compared to 3% in the control group. Feedback regarding ease of use and potential usefulness of the PW simulator was very positive.

Discussion/conclusion Our preliminary results show that miWe simulator training may slightly improve wheelchair skills as compared to training with a racing videogame. A PW simulator may be helpful to new users if it promotes the practice of activities in specific environmental contexts to complement the basic skills training received in the clinic.

Keywords Power wheelchair; Simulator; Virtual reality; At-home training; Randomized control trial

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C009

Auto-rehabilitation at home for stroke patients
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Opinion/Feedback/Introduction Stroke is the greatest cause of morbidity in industrialised countries and the third cause of mortality (50,000 deaths per year). The annual incidence is around 300 per 100,000 inhabitants, equivalent to 150,000 new cases each year in France. Around half of survivors are left with some disability as a result of multiple impairments including motor impairments with a loss of strength, stereotyped movements, and changes in muscle tone and limitations in activities. Physiotherapy is essential and helps to reduce impairment and improve activities in patients with hemiparesis. It has been shown to be effective for the treatment of motor impairment and the improvement of function following stroke. Different techniques have been developed, however studies that have compared their effectiveness have not shown that any one technique is more effective than another. Nevertheless, it has been demonstrated that the intensity, the frequency, the specificity and the duration of physiotherapy is positively correlated with recovery. This means that increasing the frequency, the specificity and the duration of physiotherapy should lead to greater improvement in impairments and functional limitations. Since few years, several studies demonstrated the interest to associate usual physiotherapy to self-rehabilitation program. To that end, several devices such as self-rehabilitation logbook, web apps and games on games consoles (Wii®; Kinect®).

Objectives In this session, we will study the different supports already available, those which already demonstrated scientifically their interest and their respective limits. The national scientific program actually performed will also be briefly presented.

Results To summarize, over the past 15 years, there has been an increase in the number of studies of different home-based self-rehabilitation programs. These results suggest that this type of rehabilitation in the chronic phase of stroke can be effective to prevent deterioration as well as to continue improvement and ensure a good quality of life for patients.

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