

Use of a Work Simulator in Work Rehabilitation

The majority of patients referred for Occupational Therapy at Sandwell General Hospital in the West Midlands are employed in heavy industry. Most have suffered recent trauma, such as nerve and tendon injuries, crush injuries and hand fractures.

The Unit acquired a BTE (Baltimore Therapeutic Equipment) Work Simulator in 2001, and this is now a valuable treatment method in many of our patients.

Process

Following a period of initial therapy, the Occupational Therapist (OT) performs a task analysis with the patient to identify movements required to carry out his existing job, or desired occupation.

A BTE programme is set, using tools such as pliers or a screwdriver for grip strength, or a pulley system for lifting ability. Short sessions with little or no resistance are gradually increased as stamina and strength increase.

Therapists' view

The BTE can be used as a method of measuring functional capacity and evaluating the patient's progress. It offers a varied choice of activities to simulate work more accurately than functional exercises. With practice, the patient is able to conduct his own treatment session with only minimal input from an OT or Technical Instructor.

Patients' view

The Work Simulator is particularly popular with patients, as it provides a clear visual feedback on screen as the treatment session is carried out. Progression from traditional functional exercises to a more high-tech method of treatment, and the ability to upgrade exercises independently, motivates the

participant towards recovery. He feels part of the process as he is consulted in setting up a personalised programme of treatment.



Once returned to work, he may continue to attend Occupational Therapy to work on specific actions that he still has difficulty with.

Case Study

J, a man in his fifties, was referred to OT two and a half years after release of Dupuytren's contractures in both hands. He had been working in a steel mill for twenty years, and the Company were still keen for him to return to work. J complained of a weak grip in both hands and poor stamina.

A BTE programme was created with emphasis on improving grip and his ability to push heavy iron rods onto a machine bed. Over a period of four months with twice weekly attendances, the weight and duration of the tasks were gradually increased.

A workplace assessment was conducted with the patient and his manager. Using a printout of the BTE progress report, we were able to show the employer how J had progressed, and that continued improvement was expected when he was back at work. J returned to work, initially on shortened hours and lighter duties. Although he did not reach the goal of return to his original job, he was moved to a post with lighter duties, and using his expertise to train apprentices.

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