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| **Title:** | Monitoring Patients during Neurorehabilitation Following Central or Peripheral Nervous System Injury: Dynamic Difficulty Adaptation | | |
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| **Abstract:** |  |
| Brain injuries including stroke often require extensive cognitive and physical rehabilitation. Active mental engagement and a positive emotional state are prerequisites for optimal learning in the rehabilitation of stroke patients. Stroke often affects aspects of gait requiring balance and gait therapy using robot-assisted devices. Cardiovascular diseases, genetic vascular abnormalities, infectious diseases, trauma, anoxia, and other conditions can result in central or peripheral nervous system injury. The majority of patients in stroke rehabilitation suffer from diffuse and complex comorbidities including but not limited to cardiovascular disease. The use of technology in stroke rehabilitation raises many questions around the design and the user experience. The virtual environmental task (VET), which sets the exercise or gait and balance requirements, can be viewed on monitors with auditory information projected from speakers. In rehabilitation, the measurement of interest is a measurement that reveals information about the condition of the patient and how the patient responds to the rehabilitation tasks and environment. | |