

## Effective Rehab Using a Wireless Data System

Patients undergoing treatment in rehabilitation centers receive therapies up to 3 hours per day to meet their individualized discharge goals which is driven in part by clinical practice guidelines (CPG). These guidelines are based on published research and help therapists in making treatment decisions. Therapists must observe the patient and continually make notes about their progress which is labor intensive, time consuming and expensive.

### The technology

Researchers at Virginia Commonwealth University have developed an automated patient-centered data capture system that will incorporate a device worn by the patient to transmit performance data wirelessly to a central database. Using a proprietary algorithm to analyze the encrypted data, therapists will now have a comprehensive assessment of the patient's progress. This data stored in the Electronic Medical Record will also provide data for the rehabilitation center to evaluate and modify its CPGs-thus improving patient care and utilization of therapists and potentially reducing health care costs.

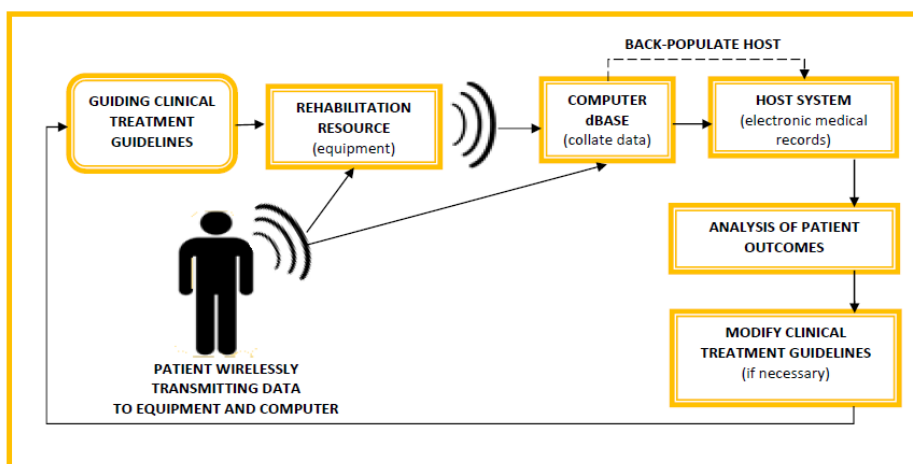


Figure 1. Schematic of the automated patient-centered data capture system.

### Benefits

- » Wireless system allows for automated patient monitoring
- » Automated data collection reduces therapists record keeping and lost time
- » Stores data for continuous evaluation of patient progress
- » Data can be used to benchmark patient care against CPGs and other centers

### Applications

- » Rehabilitation treatment plan aid
- » Objective assessment of quality of care and outcomes of therapy
- » Assures compliance with Electronic Medical Record

#### Patent status:

N/A

#### License status:

This technology is available for licensing to industry for further development and commercialization.

#### Category:

Biomedical

#### VCU Tech #:

14-017

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