

Effect and process evaluation of implementing patient monitoring in spinal cord injury rehabilitation

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Abstract The purpose of this study was to evaluate the implementation of standardized physical and functional tests to individually monitor patients with a spinal cord injury (SCI) in 8 rehabilitation centers and to analyze enablers and barriers of the implementation process. A prospective effect- and process evaluation was performed. Team members responded to mailed questionnaires at the start (n=115) and end (n=82) of the one-year implementation period. Furthermore, a questionnaire was administered to managers (n=8), coordinators (n=8) and 32 persons with SCI in 4 centers. Outcome of the effect evaluation was the phase of implementation of standardized testing in each center. The process evaluation analyzed enablers and barriers of the implementation process. After a year of implementation, half of the centers shifted to higher implementation phases. None of the centers was classified in the highest phase. Enablers were the positive attitude of the team members regarding standardized testing and an encouraging local coordinator. Most important barrier was lack of time to implement standardized testing. It can be concluded that there is a large support for implementing standardized tests to monitor functioning of patients with SCI. During a year a positive shift was visible in the extent of implementation. Successful implementation of patient monitoring requires substantial amounts of time and effort of the rehabilitation centers involved.

Keywords Outcome and process assessment (Health Care), spinal cord injury, questionnaires, program evaluation

Introduction

The use of objective standardized measurements to quantify results of rehabilitation and as part of evidence-based rehabilitation practice, is seen as an increasingly important part of good clinical practice (Haigh, Tennant et al, 2001). In the Netherlands, as part of the spinal cord injury (SCI) research program (www.scienn.nl), 8 rehabilitation centers started to implement standardized physical and functional tests to individually monitor patients with a SCI. The aims of the present study are to investigate 1) the extent to which patient monitoring was implemented in SCI rehabilitation after 1 year; 2) the enabling factors and barriers of successful implementation of patient monitoring.

Methods

Participants

Process and effect evaluations were performed in all eight SCI-specialized rehabilitation centers in the Netherlands. Four questionnaires (for patients (n=32), coordinators (n=8), team members (n=115), managers (n=8)) were administered to measure the opinions of participants on the effect and process of implementing patient monitoring at baseline (T1) and at 1 year follow-up (T2).

Process and effect evaluation

For each rehabilitation center, the effect was described as phase of implementation (orientation, insight, acceptance, change or maintenance (Grol, Wensing et al. 2005) at T1 and T2, determined with the questionnaire filled out by the team members.

The process was described by 4 domains of enablers or barriers of the implementation: characteristic of the innovation itself, of the individual team member involved, of the group of team members and of the organization.

Statistics

A rehabilitation center has reached a particular phase of implementation (effect) if 75% of the team members have given a positive answer on questions belonging to that phase and also in the previous implementation phases.

To determine the relationship between the implementation phase and the enablers and barriers of the implementation process, the number of positive answers on the questions belonging to the 4 domains were analyzed. Thereafter, a Kruskal-Wallis non-parametric test was performed to analyze factors that were significantly different between the different implementation phases ($p < 0.05$).

Results

Following the criteria of the effect evaluation, the number of centers in the different implementation phases were as follows: orientation (T1: 2 centers; T2: 1 center), insight (T1: 2 centers; T2: 1 center), acceptance (T1: 1 centers; T2: 1 center), change (T1: 3 centers; T2: 5 centers), maintenance (T1: 0 centers; T2: 0 centers). In summary, there was a shift towards higher implementation phases between T1 and T2.

The center in the orientation phase had a lower percentage positive answers on all 4 domains compared to the centers in the other implementation phases (Figure 1). Enablers were the positive attitude of the team members regarding standardized testing and an encouraging local coordinator. Most important barrier was lack of time to implement standardized testing.

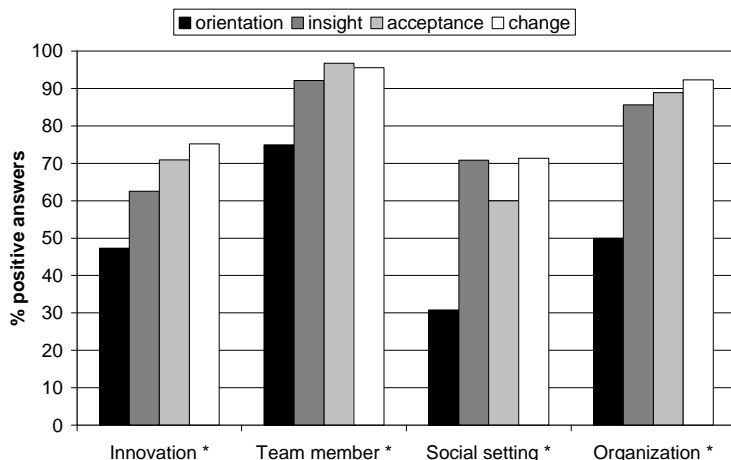


Figure 1. Results of the percentage positive answers of the team members on the 4 domains per implementation phase. * = Significant difference between implementation phases at $p < 0.05$.

Conclusion

There is a large support for implementing objective tests in SCI rehabilitation and after 1 year of implementation a positive shift was visible in the extent and level of implementation. Successful implementation of patient monitoring costs a lot of time and effort and needs financial and substantial support of the organization. SCI rehabilitation and patients are suggested to profit from more objective and structured monitoring.

References

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