

Tele-Rehabilitation for Total Hip and Knee Arthroplasty Patients: No Increase in Readmissions

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INTRODUCTION:

Innovative methods to deliver high quality care at lower costs are essential for financial success in bundled payments. Implementation of tele-rehabilitation in total hip arthroplasty/total knee arthroplasty (THA/TKA) may drive value. Our hypothesis was that readmissions at 90 days will not be increased with use of tele-rehabilitation.

METHODS:

Patients scheduled for primary THA/TKA who were able to ambulate with an assistive device were offered enrollment in a tele-rehabilitation protocol. The protocol included daily exercises with the tele-rehabilitation avatar as well as 4-6 face-to-face physical therapy sessions. The system recorded compliance and accuracy, functional outcomes, and satisfaction surveys.

RESULTS:

Fifty patients were enrolled in this pilot study and their outcomes were compared to 50 patients with traditional home/outpatient physical therapy. The demographics and outcomes between the groups were similar. Readmission and ED visit data for each group was analyzed. There were no readmissions or ED visits in the TKA tele-rehabilitation group, compared to the traditional therapy group's rate of 4.4% and 0.2% respectively. None of the TKA tele-rehabilitation patients required manipulation post surgery.

Table 1 shows outcomes of the tele-rehabilitation program 8 weeks after surgery.

	TKA	THA
Adherence to the program	64%	47%
Accuracy in performing exercises	93%	90%
Average minutes of exercise daily	23.8	11.8
Average days per week	4.4	3.2
Koos Jr/Hoos Jr (initial/final)	13.8/4.6	14.5/4.4

Patient willingness to recommend the tele-rehab program was 91.2 (net promoter score), correlating to a rating of world class. Cost analysis showed minimum \$1,000 less in post-discharge rehabilitation costs with use of tele-rehabilitation protocol.

DISCUSSION AND CONCLUSION:

Use of tele-rehabilitation after primary THA/TKA did not increase readmissions, ED visits, or the need for manipulation post surgery, based on our early experience. TKA patients had higher utilization of the tele-rehabilitation program compared to THA patients. Patient satisfaction was high with a NPS of 91.2 and post-discharge expenses were lower.

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