

# Outcomes comparable for in-person and in-home telerehabilitation following total knee replacement surgery

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Patients who received rehabilitation instructions via video teleconference, or "telerehabilitation," following total knee replacement (TKR) surgery had comparable outcomes to patients who received in-person physical therapy, according to a study appearing in the July 15 issue of *The Journal of Bone & Joint Surgery (JBJS)*.

"This study is the first to provide strong evidence for use of telerehabilitation as an alternative to conventional face-to-face care following [total knee replacement](#) surgery," said H  l  ne Moffet, PhD, lead study author, physical therapist and professor at Universit   Laval in Quebec.

Post-surgical [rehabilitation](#) can be costly, time-consuming and challenging, especially when the patient or physical therapist must travel a significant distance to receive or deliver rehabilitation services. In a preliminary study, researchers randomly divided 205 [patients](#) scheduled for [hospital discharge](#) following TKR into two groups: one to receive face-to-face home visits, or "standard" post-surgical rehabilitation, and another to receive in-home telerehabilitation using special interactive video conferencing. Both patient groups received the same instructions and number of interactions with a physical therapist over a two-month period. Patients were evaluated prior to TKR, immediately after the two-month rehabilitation program, and again at four months post-hospital discharge. Standard validated outcome measures were used to assess

pain, stiffness, overall function, range of motion, strength, ability to participate in sports and daily activities, and overall life quality.

The demographic and clinical characteristics of the two patient groups were similar at baseline, and nearly identical following rehabilitation. More specifically:

- Pain, function and stiffness scores were identical two months following hospital discharge in both the standard and telerehabilitation groups.
- At four months after discharge from the hospital, these outcomes remained comparable between the two groups.
- Range of motion, strength, activity and quality of life outcomes also were similar between the groups at two and four months after hospital discharge.

While not yet widely available, telerehabilitation shows promise for future postoperative management after total joint replacement.

"For patients, the advantages of telerehabilitation are numerous," said Moffet. "First, they may receive the same quality services in their home environment with predetermined appointments and without travel. Many patients do not receive appropriate rehabilitation, or a limited number of rehabilitation appointments, because of the required travel time or a shortage of available therapists.

"Telerehabilitation also shows promise in rural or underserved regions, and may substitute for, or complement, face-to-face care," said Moffet. "This is important information for patients, as well as surgeons, clinicians and clinic managers who are interested in incorporating this type of innovative service into their practice as it becomes more widely available."

Provided by American Academy of Orthopaedic Surgeons

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