The incidence of major complications following total joint arthroplasty is low, however, surgeons often continue to see patients regularly to monitor outcomes and the performance of the implant. The purpose of this study was to assess the feasibility, effectiveness and cost-effectiveness of a web-based follow-up compared to in-person assessment following primary total hip or total knee arthroplasty. We also determined patient satisfaction and preference for follow-up method.

Patients who were at least 12 months post-operative were randomized to complete either a web-based follow-up or to have their appointment at the clinic, as usual. We excluded patients who had revision surgery, osteolysis, or identified radiographic issues. We report the frequency of web-based patients who had an issue missed by using the web-based follow-up. We recorded travel costs and time associated with each follow-up, and any health care resource use for one year following the assessment. We conducted a cost analysis from the health-care payer (Ontario Ministry of Health and Long-Term Care) and societal perspectives. All costs are presented in 2012 Canadian dollars. We used descriptive statistics to summarize the satisfaction and preference results and compared satisfaction between groups using Pearson’s chi-square test.

Two hundred-twenty nine patients completed the study (111 usual-care, 118 web-based), with a mean age of 69 years (range, 38-86 years). There were no patients who had an issue missed by the web-based follow-up. The cost for the web-based assessment was significantly lower from both the societal perspective (mean difference, $-64; 95% confidence interval [CI], $-79 to $-48; p < 0.01) and the health-care payer perspective (mean difference, $-27; 95% CI, $-29 to $-25; p < 0.01). Ninety-one patients (82.0%) in the usual-care group indicated that they were either extremely or very satisfied with the follow-up process compared with 90 patients (75.6%) in the web-based group (p < 0.01; odds ratio [OR] = 3.95; 95% CI = 1.79 to 8.76). Similarly, 92.8% of patients in the usual-care group were satisfied with the care they received from their surgeon, compared to 73.9% of patients in the web-based group (p < 0.01, OR = 1.37; 95% CI = 0.73 to 2.57). Forty-four percent of patients preferred the web-based method, 36% preferred the usual method, and 16% had no preference (p = 0.01).

Web-based follow-up is a feasible, clinically effective alternative to in-person clinic assessment, with moderate to high patient satisfaction. A web-based follow-up assessment has lower mean costs per person compared to the usual method of in-person follow-up from both a societal and health-care payer perspective. The web-based assessment may introduce additional efficiency by redirecting limited outpatient resources to those awaiting first consultation, patients who have complications, or those who are further post-operative and may require a revision.
References:


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