

Evaluation of Prehabilitation Prior to Surgery for an Orthopaedic Pathway

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Abstract : Background: The Go Well Health (GWH) platform is a web-based programme that allows patients to access personalised care plans and resources, aimed at prehabilitation prior to surgery. The online digital platform delivers essential patient education and support for patients prior to undergoing total hip replacements (THR) and total knee replacements (TKR). This study evaluated the impact of an online digital platform (ODP) in terms of functional health outcomes, health related quality of life and hospital length of stay following surgery. Methods: A retrospective cohort study comparing a cohort of patients who used the online digital platform (ODP) to deliver patient education and support (PES) prior to undergoing THR and TKR surgery relative to a cohort of patients who did not access the ODP and received usual care. Routinely collected Patient Reported Outcome Measures (PROMs) data was obtained on 2,406 patients who underwent a knee replacement (n=1,160) or a hip replacement (n=1,246) between 2018 and 2019 in a single surgical centre in the United Kingdom. The Oxford Hip and Knee Score and the European Quality of Life Five-Dimensional tool (EQ5D-5L) was obtained both pre-and post-surgery (at 6 months) along with hospital LOS. Linear regression was used to compare the estimate the impact of GWH on both health outcomes and negative binomial regressions were used to impact on LOS. All analyses adjusted for age, sex, Charlson Comorbidity Score and either pre-operative Oxford Hip/Knee scores or pre-operative EQ-5D scores. Fractional polynomials were used to represent potential non-linear relationships between the factors included in the regression model. Findings: For patients who underwent a knee replacement, GWH had a statistically significant impact on Oxford Knee Scores and EQ5D-5L utility post-surgery (p=0.039 and p=0.002 respectively). GWH did not have a statistically significant impact on the hospital length of stay. For those patients who underwent a hip replacement, GWH had a statistically significant impact on Oxford Hip Scores and EQ5D-5L utility post (p=0.000 and p=0.009 respectively). GWH also had a statistically significant reduction in the hospital length of stay (p=0.000). Conclusion: Health Outcomes were higher for patients who used the GWH platform and underwent THR and TKR relative to those who received usual care prior to surgery. Patients who underwent a hip replacement and used GWH also had a reduced hospital LOS. These findings are important for health policy and or decision makers as they suggest that prehabilitation via an ODP can maximise health outcomes for patients following surgery whilst potentially making efficiency savings with reductions in LOS.

Keywords : digital prehabilitation, online digital platform, orthopaedics, surgery

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