



Patient engagement with an online patient education system for total hip and total knee replacements is high irrespective of age, gender and operation



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Introduction

Patients should be active participants in decisions about their care. Using the GoWellHealth platform we piloted an online patient education system (PES) for patients undergoing total hip and knee arthroplasty. The PES provides individualised patient information in a time-lined care program. Patients can access the content in their care program at any time of the day from any internet ready device. There has been concern that online platforms such as ours may discriminate against older patients who may be less technologically literate.

Aims and Objectives

The aims of this study were to:

1. Analyse the demographics of the patients using the PES and determine how and when they accessed the programs (using phone, tablet or computer).
2. Establish whether there was a difference in how patients interacted with the program dependent upon their gender and age.

Using this information we aimed to determine if using an online PES results in bias or discrimination against patients based on their demographics.

Methods

Demographics for patients registered to the total hip and knee arthroplasty programs between 21/09/2017 and 28/05/2020 were obtained. Patients engagement with the program was assessed through the number of interactions and time spent on the PES. The association between age (5 groups: ≤50, 51-60, 61-70, 71-80 and >80 years old), gender, type of surgery, device used, time of day accessed and level of engagement was assessed using non-parametric statistical comparisons.

Results

In total 1195 patients were registered of which 832 (69.6%) accessed their program. The mean total time spent on the PES per patient was 83 minutes and each access lasted an average of 4 minutes. There was no difference in the proportion of patients accessing the PES dependent upon age ($p=0.10$) or gender ($p=0.75$). Figure 1 demonstrates the usage pattern throughout the day of the various age categories.

There were no differences in the number of times patients accessed the PES or total time spent on the platform dependent upon age ($p=NS$). The oldest age groups (71-80 years $p<0.001$; >80 years $p=0.008$) spent longer on the program per access when compared with patients aged <50 years. Older patients preferred the use of a computer compared to phone to access the PES (Figure 2). Females accessed the system more than males ($p=0.03$).

Figure 1: Time of day the program was accessed dependent upon age category

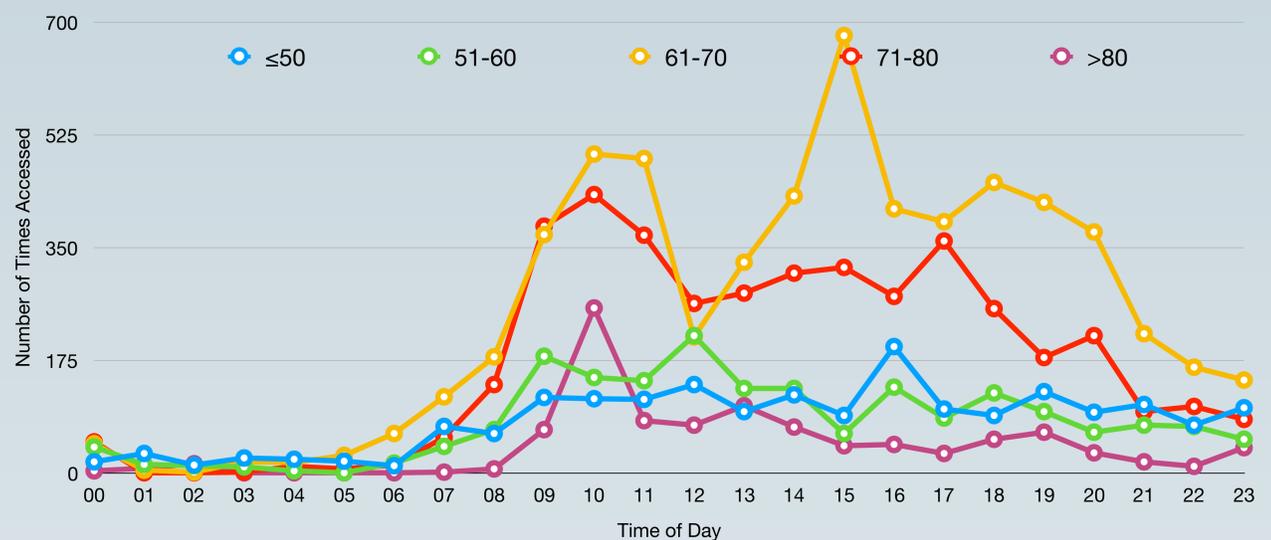


Figure 2: Devices used by age category



Conclusion

An online PES is effective and demonstrates high levels of patient engagement irrespective of age. It does not discriminate against age or gender in terms of accessibility. While all age groups demonstrated variation in their viewing habits, older age groups relied more on computers therefore smart phone app based programs may discriminate against this population.

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