

# The efficacy of SMS and phone call pre-habilitation and rehabilitation intervention on orthopaedic surgery patients: What does it mean for Waiting Well?

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## INTRODUCTION

### AIMS

- Investigate the efficacy of SMS and phone call pre- and re- habilitation intervention in orthopaedic surgery patients
- Use insight to inform Waiting Well intervention strategy
- Identify direction for future work



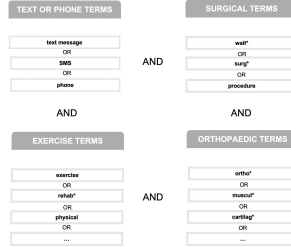
### WHAT IS WAITING WELL

- Waiting well aims to help keep patients as healthy as possible whilst waiting for their elective surgery starting with patients on the trauma and orthopaedic waitlist at West Suffolk Hospital
- Waiting well intervention depends on identified risk level ranging from a phone call to higher risk groups to signposting to lower risk groups



## METHODS

### SEARCH TERMS



## RESULTS

There were three main interventions...



| Author                          | Post / Pre | Control            | Significant  | Non-significant  |
|---------------------------------|------------|--------------------|--|--|
| Zhang et al 2023 (n=102)        | Post       | No intervention    | ROM SF-36 EQOL   | WOMAC KSS Pain Catastrophisation                               |
| Saunders et al 2022 (n=100)     | Post       | No intervention    | VAS  |  |
| Stevens et al 2022 (n=133)      | Post       | No person training |  | Significant difference between in-person and app intervention! |
| Mishra et al 2022 (n=65)        | Pre        | No intervention    | VAS EQOL   | KOOS LoEC  |
| McIntyre-Rice et al 2016 (n=70) | Post       | No intervention    | OSAS ROM Time to first visit Time to recovery          | VAS DASH KOOS  |
| Li et al 2014 (n=249)           | Post       | No intervention    | EQOL Compliance  | KOOS   |
| Campbell et al 2019 (n=158)     | Post       | No intervention    | Compliance VAS Return Costs Time to first visit ROM Sw | ROM Sw   |
| Van Park et al 2022 (n=162)     | Post       | No intervention    | Symptoms Rehabilitation EQOL                           |  |

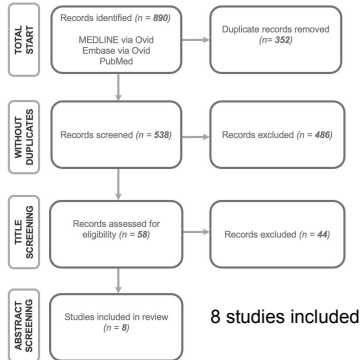
and many outcome measures...

- Broad health and wellbeing: SF-36, KOOS, LoEC, length of stay
- Pain: Functionality and Stability: KSS, ROMs
- Pain only: VAS, WOMAC, SSET
- Functionality only: VAS, DASH
- Stability only: OSAS
- Population level: Restriction, Call-back rate, Exercise participation

### KEY FINDINGS

- Both functional outcomes and broader health outcomes show significant differences.
- Bauwens et al 2022 showed that app intervention could in fact replace in-person intervention.
- Positive results seen on a range of different outcome measures including 'population-level' measures.
- Significant results had very low p-values (<0.004)
- Again, significance shown in a range of different outcome measures.
- Like in app and phone intervention, non-significance seen in longer time intervals.

## PRISMA DIAGRAM



## PICO CHART

|                     |   |
|---------------------|---|
| <b>PATIENTS</b>     | Patient waiting for surgery or just finished surgery            |
| <b>INTERVENTION</b> | Text message or phone call leading to exercise intervention     |
| <b>COMPARISON</b>   | Patients who have not received text/phone exercise intervention |
| <b>OUTCOME</b>      | Recovery and other health outcomes                              |



## KEY TAKEAWAYS

### WHAT IS THE CONCLUSION OF THE RESULTS?

**SMS and phone call prehabilitation intervention on orthopaedic surgery patients is effective in improving patient outcomes in terms of broader wellbeing, functional improvement, physical pain improvement and population level benefit.**

### IS THERE EVIDENCE TO SUPPORT WAITING WELL?

**Yes. Results strongly suggest that post-operative rehabilitation improves patient outcomes with all 7 of the studies reporting supportive findings given they can be extrapolated to prehabilitation. The 1 prehabilitation study showed significantly improved patient outcomes.**

### HOW SHOULD WE IMPLEMENT WAITING WELL?

**More work is needed in a number of areas to optimise the Waiting Well initiative. Firstly, work is needed to investigate the longer-term outcomes beyond the 2 month period the majority of studies attended to. Secondly, to investigate the differences between pre-habilitative and post-habilitative intervention outcomes (particularly pre-habilitative). Thirdly, in general more work is needed to define the different outcomes of both rehabilitation and prehabilitation as well as their mechanisms with different variations of intervention.**