



## The H2H Study: Hospital-to-Home digitally enabled exercise pathways to improve older adult's post-operative outcomes during the COVID-19 pandemic



### Summary

The H2H study was launched during the second COVID wave. Recruitment across two centres was completed towards the end of 2021 with 12-month outcomes to be completed by the end of 2022.

In total 66 participants were recruited. Of these 26 were at the intervention site. The intervention included a Smartwatch and associated App with activity videos.

Data has been extracted remotely to help inform the clinical team with progress.

Feasibility and acceptability of the intervention has been robustly explored and summarised in a first paper under submission in a peer reviewed journal.

Initial findings have been presented at the Leaders in Healthcare Conference 2021 (BMJ Leader <http://dx.doi.org/10.1136/leader-2021-FMLM.30>).

The project was set in a research naïve setting and has led to significant enthusiasm for the work from the MDT. We involved early career researchers (physiotherapists) throughout.

However, importantly clinical teams, not previously exposed to research, have taken part. Future work is planned which will help to build research capacity at the hospital and better establish links with the community. For example, we have explored the different pathways of the patients and have found significant variation in community services accessed.

Findings included a shorter hospital stay in the intervention cohort (10 days (7-16) vs 12 (10-18),  $P=0.05$ ); 15 falls related re-admissions in the control cohort, including 11 fractures, with none in the intervention cohort ( $P=0.016$ ).

477 (IQR 320-697) in hospital, to 931 (505-1238) 1-week post-discharge, to 5352 (3552-7944) at 12-weeks ( $P=0.001$ ). During follow-up, 12 of the intervention cohort withdrew. Focus groups have helped the team understand what works and what doesn't to inform further study.

The award enabled me to lead a team delivering the study. The intervention, using technology to support patients in acute settings, has significant potential from both a research perspective and clinically.

I have subsequently brought together a team and submitted an RFPB grant for a multi-centre study using the intervention to support critical care survivors.

## Public and Community Involvement

PPIE has been involved throughout the project.

We have had PPIE attend to fully take part in regular research meetings to discuss progress and also think about dissemination plans.

One of our PPIE Ann Bates is now on our RFPB application and we have used H2H to further strengthen our Trust PPIE Research Champions.

## Dissemination

We are still in the process of completing study follow-up however dissemination has been an important activity this year. We have presented our findings at a number of local meetings in the hospital across disciplines (medicine, surgery and physiotherapy). This will ensure that results can then be implemented into practice in a timely fashion. We have presented early findings to the BMJ Leader conference. Our first paper has been submitted for publication.

Further publication submissions will take place over the course of the next six months, alongside conference presentations.

We will work with our PPIE to facilitate wide dissemination locally and collaborate with AHSN & the ARC to ensure findings are spread regionally. The study was CRN portfolio adopted and we will use their expertise as well in dissemination plans.

During the study we have established closer relationships with Active Sussex and Age UK

Sussex which we will use both in research setting and in clinical practice to help the work we are doing with our local coastal communities.

## Impact and Implementation

The project has helped sustainable growth of the local research ecosystem to date by: introducing frontline clinical workers into research helped further develop the intervention which has resulted in a further IDA award to one of the research collaborators.

We have engaged with community partners including Age UK Sussex to further establish both research and clinical working in the future. We have also now established collaborations with researchers at Chichester (Melissa Day), Canterbury (Prof Kersten), BSCTU (Prof Brennan) and elsewhere as part of an RFPB grant application.

The participants, staff at the hospital and community partners have all been part of a move towards health and well-being focusing on community activities to rehabilitate and get fit.

Value for money/ Value of additional funds leveraged.

Sustainability – this will come from further developing and evidencing effectiveness of the intervention for example in RCTs.

Patients and the public have to date engaged in the research firstly by PPIE shaping the research intervention and then participating.

Once we have published our initial 3-6-month findings and gathered 12-month outcomes we will engage with Trust management/leadership and the ICT regarding implementation in clinical practice for patient benefit.