

Digital Rehabilitation for Virtual Wards

Heart failure (HF) Virtual Wards are a technology-enabled model of care that enables individuals to receive support remotely, following an emergency HF admission, which enhances secondary care capacity. Cardiac Rehabilitation (CR) is advised for all patients discharged from the HF Virtual Ward to optimise recovery and reduce readmission risk.

Exercise based interventions are a cornerstone of CR and KiActiv® now presents a compelling alternative to these services for patients and clinicians that requires no visits to clinics or gyms and has no barriers to age or mobility. Our proven patient and system benefits include:

- Increased take up of CR **from 6% to 63%**, with a programme completion rate of **71%**
- A reduction in hospital readmission rates by **76% at 30 days & 70% at 90 days**
- Improved cardiorespiratory fitness by more than **2X** that of **standard care**
- Improved Mental Wellbeing and Quality of Life
- Improved ability to work and sustained lifestyle change
- Enables real-time monitoring

BACKGROUND

KiActiv®'s clinical impact and acceptability has been proven in a randomised control trial for CR in the NHS at UHLG. This evidence has resulted in KiActiv®'s introduction into the HF Virtual Ward pathway at UHLG by Dr Sankaranarayanan, Consultant Cardiologist at LUHFT, Heart Failure Lead for Cheshire & Merseyside and NHSE GIRFT Co-Clinical Lead for Virtual Wards.

HOW IT WORKS

KiActiv® harnesses all everyday movement in the context of individual health, capacity and surroundings to personalise care, and expands the therapy window to include all ~112 waking hours per week for the optimum personal dose of physical activity across its multiple dimensions. Leveraging all the intensities of movement is vital for reducing sedentary time and this delivers significantly better cardiorespiratory fitness than exercise based programmes.

HEALTH ECONOMICS - SYSTEM BENEFITS

Based on the data collected from this service improvement we can demonstrate the potential for significant cost savings, which provides the evidence for expanding patient access.

Model Cohort Size = 20,000	Current Care	KiActiv®	Difference
Readmission Rate	21%	5%	16%
Number of Readmissions	4200	1060	3140
Cost of Readmissions (at £3,796 per patient)	£ 15,943,200	£ 4,023,760	£ 11,919,440
Total Cost of KiActiv® (at a per patient cost of £154.99)			£3,099,800
Net Cost Savings using KiActiv®			£ 8,819,640
Notes:			
* Number of Readmissions Avoided to be Cost Neutral			817
* Number Needed to Treat to be Cost Neutral			5204
* Time to Cost Neutral (months)			3.1

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HEALTH ECONOMICS - PATIENT BENEFITS

We can also demonstrate the economic value of patient benefits and the additional return on investment of the KiActiv® programme within this Heart Failure pathway.

QALYs gained per person	0.02
Value of QALYs gained per person	£397
Social Value gained per person	£3,194
Total QALYs gained	282
Total Value of QALYs gained	£5,636,308
Total Mental Wellbeing Social Value	£45,352,692
Total Value of Patient Benefits	£50,989,000

Notes:

* The model shows financial benefits associated with gains in QALYs measured using EQ5D, and Mental Wellbeing Social Value gains, measured using the SWEMWBS

KiActiv® collects quantitative and qualitative data across the 12-week programme and beyond

>5,165

Days of Personalised Physical Activity Data

>273

Daily Symptom Tracking & Behavioural Reports

>7.4 million

Minutes of Accurate Physical Activity Data

>9,300

Minutes of Mentor Calls with Individual Patient Insights

PATIENT INSIGHTS

186 people have been referred to KiActiv® by their Heart Failure specialist nurse following discharge from LUHFT's Heart Failure Virtual Ward

88% of people continue to engage with their personalised technology beyond the initial 12-week programme

78% of people were able to improve their everyday physical activity

236 days and counting for the longest continued engagement

In-year patient benefit ROI
+£16 per £1 spent

58% of people improved their overall Quality of Life

74% of people improved their Mental Wellbeing

69% of people improved their overall Self-Efficacy

“Taking part has made me think about how I am using my energy throughout the day without over doing it.

It's helped me feel more motivated and given me the ability to plan and achieve my health goals!

Female, 73-years, Heart Failure

Weight Loss

Reduced Breathlessness

Greater Confidence

More Energy

Reduced Pain

Increased Mobility

Improved Strength