

Next generation digitally-enabled cardiovascular care

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OVERVIEW

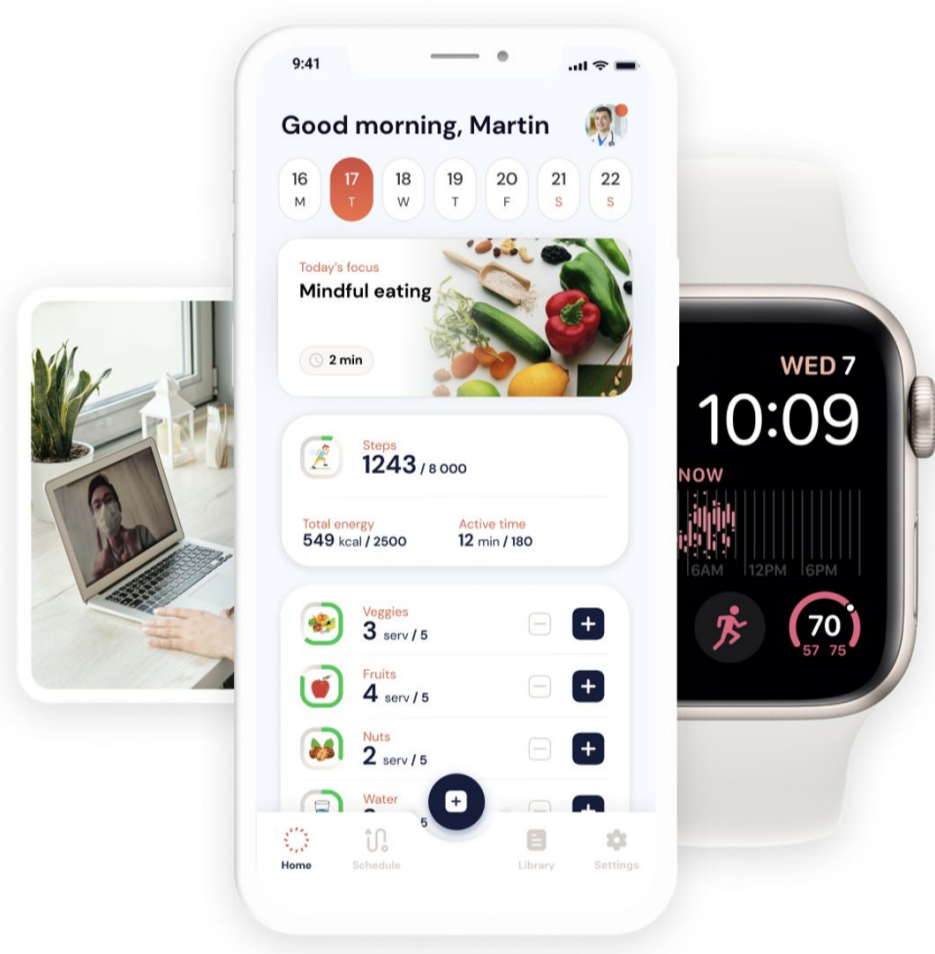
UNMET NEED

- The UK is suffering its '**worst heart care crisis in living memory**' as early deaths from heart disease among under-75s have risen to a 14-year high.
- The NHS cardiac waiting lists are at a record high, reaching **414,596** people in March 2024, almost double what they were in 2020.¹
- There is 1 death every 3 minutes from CVD, accounting for 25% of all deaths, **1,139,140 admissions** and **1,806,203 inpatient episodes** in 2021.^{1,2}
- Heart failure** contributes to 36% of CV deaths and 86% of CVD is attributed to risk factors: **obesity** (26%), **hypercholesterolaemia** (43%), **diabetes** (7%), **hypertension** (31%), **smoking** (12%), **inactivity** (39%).³
- A growing burden of disease, the lack of a proactive preventative approach, broken standards of care, a shortage of physicians and unsustainable healthcare-related costs require urgent remedial action.

SOLUTION

- Lifeyear is the next generation **cardiovascular health management tool** that helps care providers monitor and treat more patients with less workload.
- By digitising, automating and gamifying care pathways, Lifeyear enables providers and patients to **identify** elevated risk early, and **intervene** holistically and optimally to **prevent** downstream adverse clinical outcomes.

- Patient-friendly **pathway companion app**
- Population **screening**
- Patient **risk calculator**
- Remote patient monitoring (**RPM**)
- Gamified **care pathways**
- Electronic Patient Reported Outcomes **PROMs**
- **Medication reminders & optimisation**
- **Patient manager** connected to EHR/EMR
- Automated **reports**

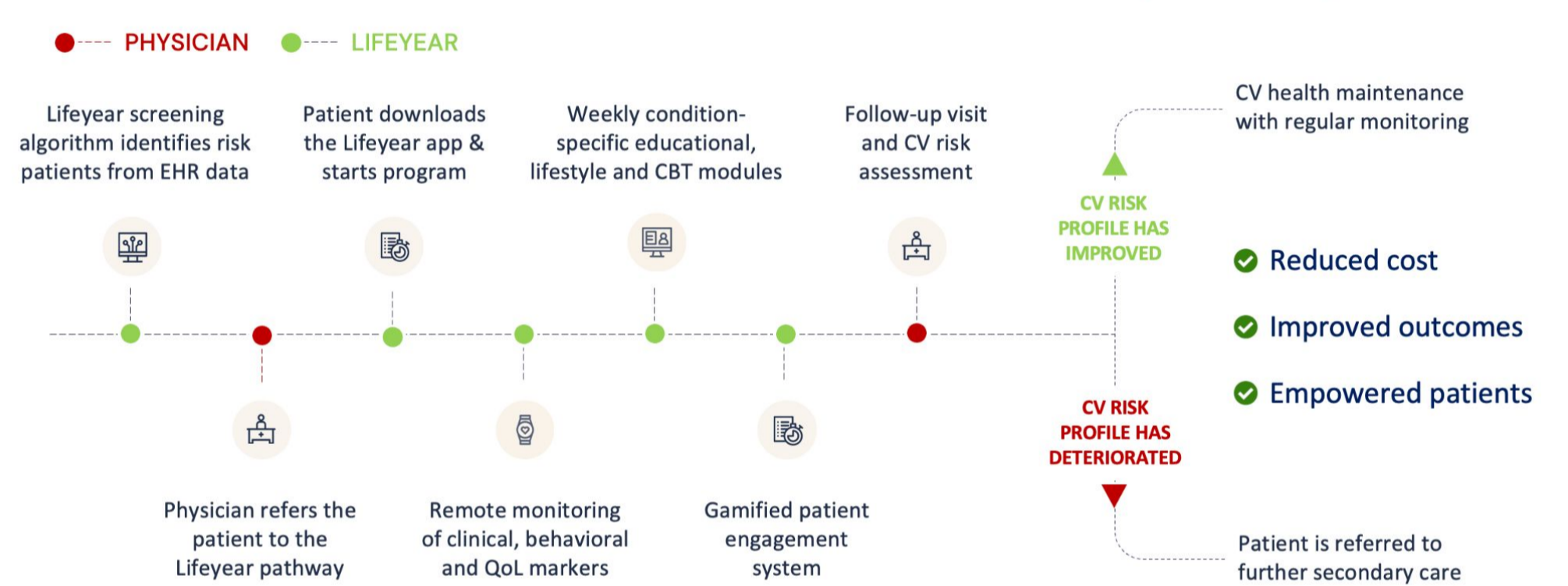


METHODS

CLINICAL APPLICATION

- Lifeyear can be applied in both **primary** and **secondary prevention** pathways to reduce costs and improve outcomes.
- Lifeyear can identify 'at risk' patients from existing NHS/E/D/I systems with an algorithm developed on the UK Biobank data.
- Lifeyear can calculate an individual's CV risk using the QRISK3 score. In case elevated risk, Lifeyear will prompt the care provider to prescribe a **Lifeyear evidence-based digital care program**.
- Remote patient monitoring (RPM)** capabilities will enable a longitudinal view of patient's clinical, behavioral and outcome data, including data from a novel 3D body scan, wearables, medical devices and lab results.
- Lifeyear care pathways include **medical weight reduction** alongside GLP1's, **pre-operative** optimisation and monitoring, supported discharge from hospital and digitised **cardiac rehabilitation**.
- Intervention methods** include:
 - remote patient monitoring and PROMs
 - evidence-based educational modules
 - CVD specific digital cognitive behavioral therapy (cardioCBT)
 - nutritional, physical activity and lifestyle guidance
 - medication reminders and side-effects tracking
 - gamification to enhance patient engagement

Lifeyear digital care pathway



CLINICAL EVALUATION

To validate our findings in the UK, we have planned a study in collaboration with Oxford University Hospitals NHS Foundation Trust (OUH) which examines effectiveness and clinical outcomes of the existing care pathway with and without the use of Lifeyear.

Aims:

- To evaluate the implementation and impact of the world's first digital heart health clinic in improving primary and secondary prevention, optimisation of CV risk and adverse outcomes.
- To determine the safety, interoperability, utility, compliance, clinical outcomes, added benefits and cost effectiveness of Lifeyear.



EXPECTED RESULTS

Lifeyear will:

- Reduce the number of people developing CVD and having events related to CVD (particularly heart attacks and strokes).
- Reduce the number of A&E attendances and admissions for heart attacks and strokes.
- Increase the capacity within primary and secondary care and will better utilise and optimise the efficiency of in person visits.
- Reduce the gap in life expectancy between the least versus most deprived communities within the ICS.
- Reduce waiting times for specialist care for people at high risk.
- Improve the management of cardiovascular risk factors through lifestyle change, remote monitoring and community-based treatment support.

CONCLUSIONS

Personalised and preventative healthcare is the key to achieving optimal population health. Technological solutions are critical to improving efficiency and effectiveness. Lifeyear provides an innovative and comprehensive digital solution to enable the delivery of optimal, accessible CV care at the population level.

FUTURE WORK

If you would like to participate in our upcoming clinical studies, please get in touch at partners@lifeyear.com

REFERENCES

- <https://www.myplannedcare.nhs.uk/>
- <https://www.gov.uk/government/publications/health-matters-preventing-cardiovascular-disease/health-matters-preventing-cardiovascular-disease>
- <https://www.bhf.org.uk>