Care-Connect
Empowering Healthcare Journeys

Care-Connect: Mapping a Cardiac Pathway

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Care-Connect is a payer-provider partnership

Centric Health and Irish Life's partnership is tasked with care management, population health, and coordination of patients' healthcare.

Care-Connect aim to support at risk patients out of hospital, leverages data to enhance care, and optimizes chronic diseases through digitally enabled high-touch care.

Centric Health

Irish Life health

Care-Connect

Empowering Healthcare Journeys

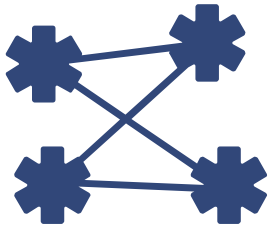
"We are trusted partners in health, connecting patient care across the healthcare system to empower healthier lives."

Care-Connect Brings Healthcare Back Home

We provide everything needed to manage a range of conditions outside the hospital

We do this with a digital infrastructure and clinical team working together to provide an end-to-end service:

1. Identify problems, research and design the service



2. Map the care pathway and protocols

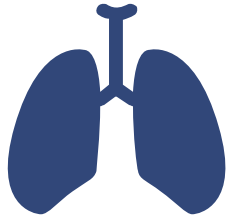
3. Care-Connect clinical team coordinate care

4. Optimise for target outcomes, use data to feedback

We are most focused on chronic condition management, post-acute care, and population analytics

This includes targeting (re)admission avoidance, long term optimisation, and preventive stratification

1. Post-Acute and Chronic Heart Failure
2. Hypertension
3. Cardiac Rehabilitation
4. Post-Acute CABG / MI / PCI



1. COPD
2. Chronic Bronchitis
3. Emphysema
4. Sleep Apnoea

1. Multiple Condition Elderly / Frailty
2. Care Transition

1. Population Data Analytics and Reporting
2. Condition identification and stratification

HeartCare at Home: A healthcare collaboration researching integrated virtual care for patients with Heart Failure

1 **2003** — Established in 2003.

2 **Early 2020** — In 2020, Centric Health partnered with Roche Diagnostics to develop a new approach to Heart Failure management

3 **June 2020** — HeartCare at Home was established mid 2020 with the onboarding of the first patient in June 2020

4 **Sept 2020** — In Sept 2020, HeartCare at Home joined the Living Labs team

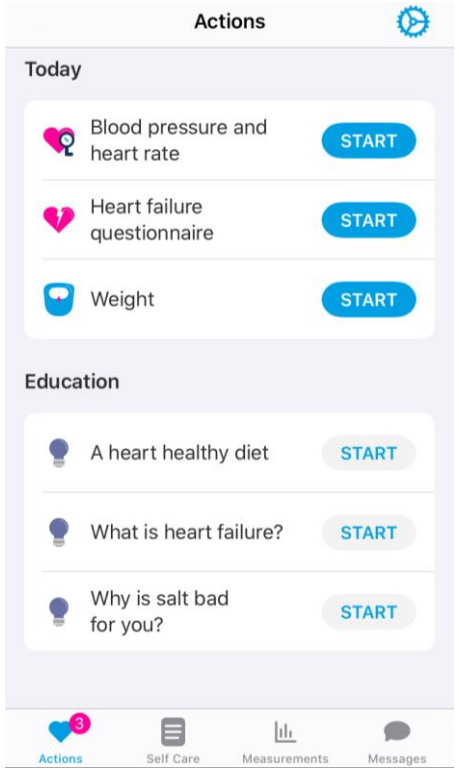
5 **April 2021** — Our clinical research study launched in April 2021 examining the impact and outcomes of the programme

6 **November 2023** — Study data collection completed. Currently in analysis.

Data from January 2021 to January 2022	
Patients / Age Range	150 / 34-95
Measurements collected	>50,000
Engagement (data inputted on requested day)	85%
Acute deteriorations managed remotely by the HeartCare at Home team	49
HF-related hospital admissions	4
Predicted admissions	>20

Sample Patient View and Clinician Dashboard

Low friction for patients, relevant insights for clinical decision making



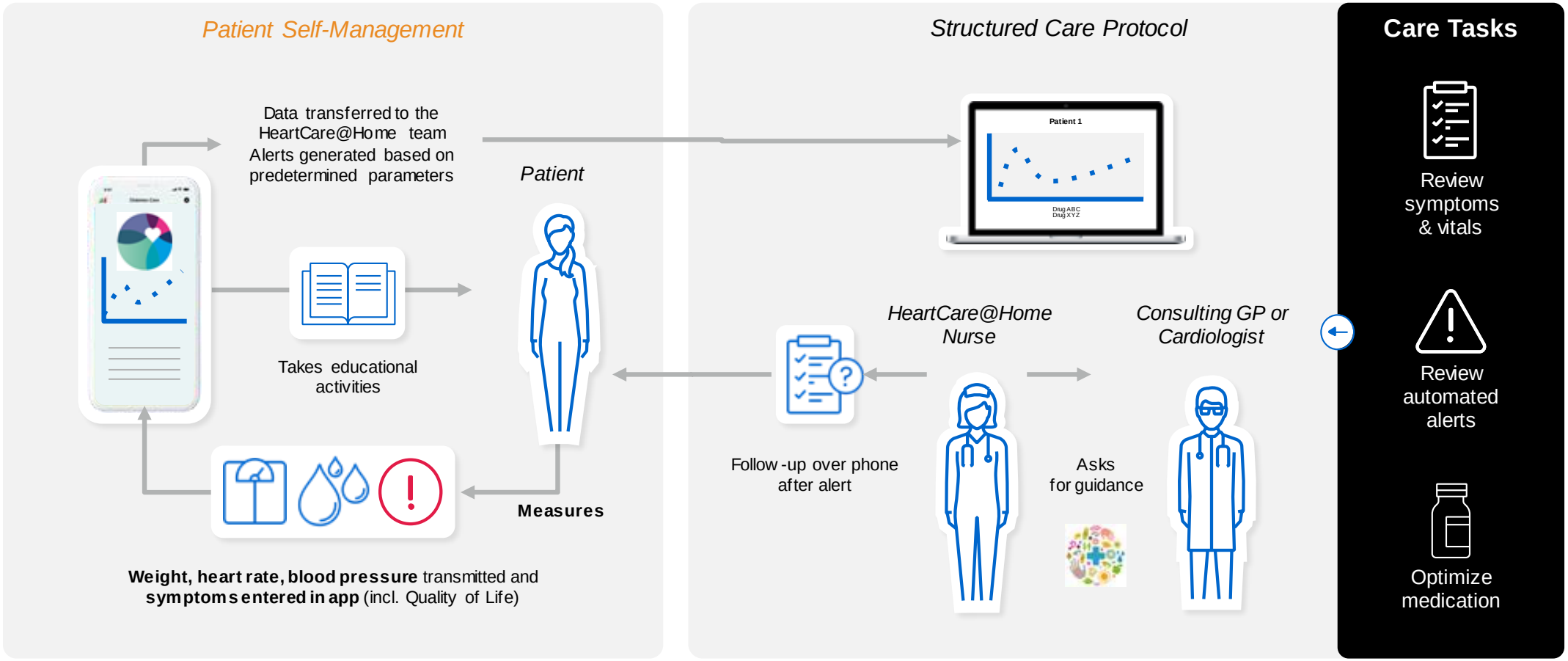
Patient view

Patients are provided with all devices as required.
On-demand access to the clinical team.

Clinician view

Data flows from into the clinical dashboard
Results are flagged on a protocol-driven system
Patients are managed using cardiologist and GP approved protocols

The overall model of remote monitoring and patient management is quite straightforward…



But it must operate in a world filled with unique challenges and legacy issues.

What follows are some of our main learnings in bringing this together.

Keep in mind:

- We started this in a research environment with extensive data collection but simple hypotheses.
- We align with the goals of Slaintecare, so the over-arching priorities are established.
- We come from the primary care perspective.

Learning 1: Even a simple linear pathway is complex, and a cross functional approach is required.

It is important to do this in a structured way that pulls any tech and clinical teams together – we do not want to repeat unnecessary steps which could be eliminated in a digitally enabled model of care.

Even the simple previous slide requires dozens of SOPs, data dictionary, process flows, training manuals etc.

While this is necessary, it is also a risk that you become paralysed by the low probability scenarios. You will need to be creative when these arise, but they (usually) do not stop the process from proceeding.

Set up your process and build on it as you need to. But it must be structured.

This requires a new skillset, and it is inherently cross functional (clinical, technical, data, operations) rather than any one team's role. It cannot be isolated, and it must be protected by overall leadership.

Learning 2: In care pathway design, a structured process is needed to maintain cohesion.

Our process is similar to a Rapid Improvement Event but there are many structures to use.

1. **Goal**: Agree the area of priority and optimization target. Assign team.
2. **Current state**: Assess what currently happens – systems, interview, workarounds etc.
3. **Future state**: Template the care pathway and protocol on the ideal standard of care. This should avail of all optimization opportunities and tech solutions possible rather than repeat and digitise existing processes. Map out and iterate. Overlay on the current state for comparison.
4. **Implementation plan**: Complete a gap assessment and realistic deployment plan to get from current state to target state – this cannot put the current state at risk in favour of the future; start with quick wins to create capacity for the teams
5. **Validate** the plan, implement, study, refine, repeat: it may be possible to prototype solutions in advance depending on the case.

Whatever structure you choose, a clear system to move forward while maintaining alignment is needed in high complexity settings.

Note: This does not include the desktop literature reviews, internal position papers, health economic assessments etc which are done mainly in advance. Nor does it include the quality feedback loop and service refinement process because they are not static.

Learning 3: The importance of a clear objective and relevant data.

What are we optimizing for? The core hypothesis should be clear at the outset, this will help enormously. E.g.

- Reduce avoidable admissions
- Support earlier discharge
- Improve QOL and experience of care

Even simply, reducing admissions vs reducing length of stay forces you to optimize the care pathway and protocols differently.

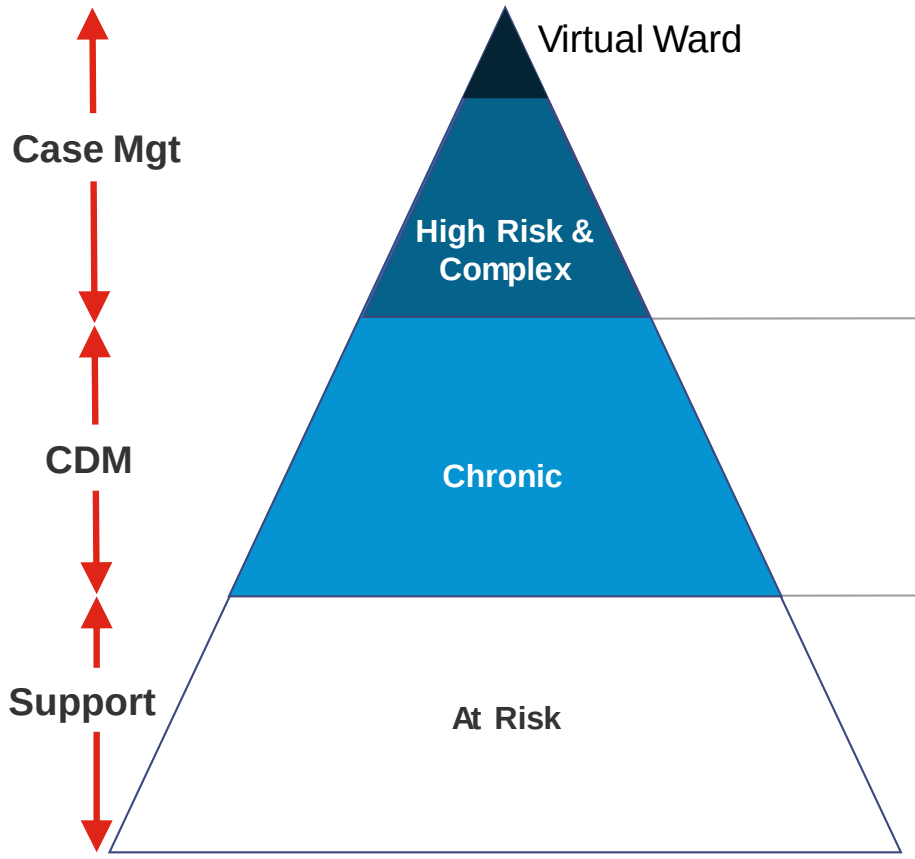
Test: Be clear on how you will know that you are achieving or falling short of your objective

- What data points will you need?
- From where? Collected by whom?
- When and how often?
- Is the data or tool validated? Is there a better alternative?
- For what will this be used? Should you use generic and specific metrics to compare broadly?
- Be careful of your assumptions and bias.

Aim for a clear hypothesis that aligns decisions, and that you can study with data.

Learning 4: Build for now and for future priorities: the operational and digital infrastructure should be common across a range of conditions

It is only the protocols and intensity of care that change with acuity, not the infrastructure.



Care Focus	Example Conditions
Care Coordination	Multi-Morbid Frailty
Medication reconciliation	Heart Failure
Care gaps / GP follow-up	Renal Failure
Care Transition Support	COPD
Social determinants	Readmission Avoidance
Remote monitoring	Early Discharge
Health Coaching	Diabetes
Behaviour change	OA
Care gaps / GP follow-up	CAD
Health education	CKD
Self-mgmnt./monitoring	Asthma
Digital Coaching	Obesity
Behaviour change	Chronic Pain
Care gaps / GP follow-up	Prevention
Health education	
Self-mgmnt./monitoring	

Learning 5: Detailed integration, but simplicity of workflow interaction, are key

The improved clinical outcomes and cost efficiencies from a shared care model are of greatest impact among the most unwell patients, which is a minority of the population but requires a deep dive approach.

Detailed Integration

- For instance, we assessed a slim but broad model of a common patient record and a deep but narrow patient record.
- Depth of data was the absolute priority in delivering clinical and operational utility.
- However, that means a logarithmic level of complexity but should not be compromised.

Workflow Simplicity

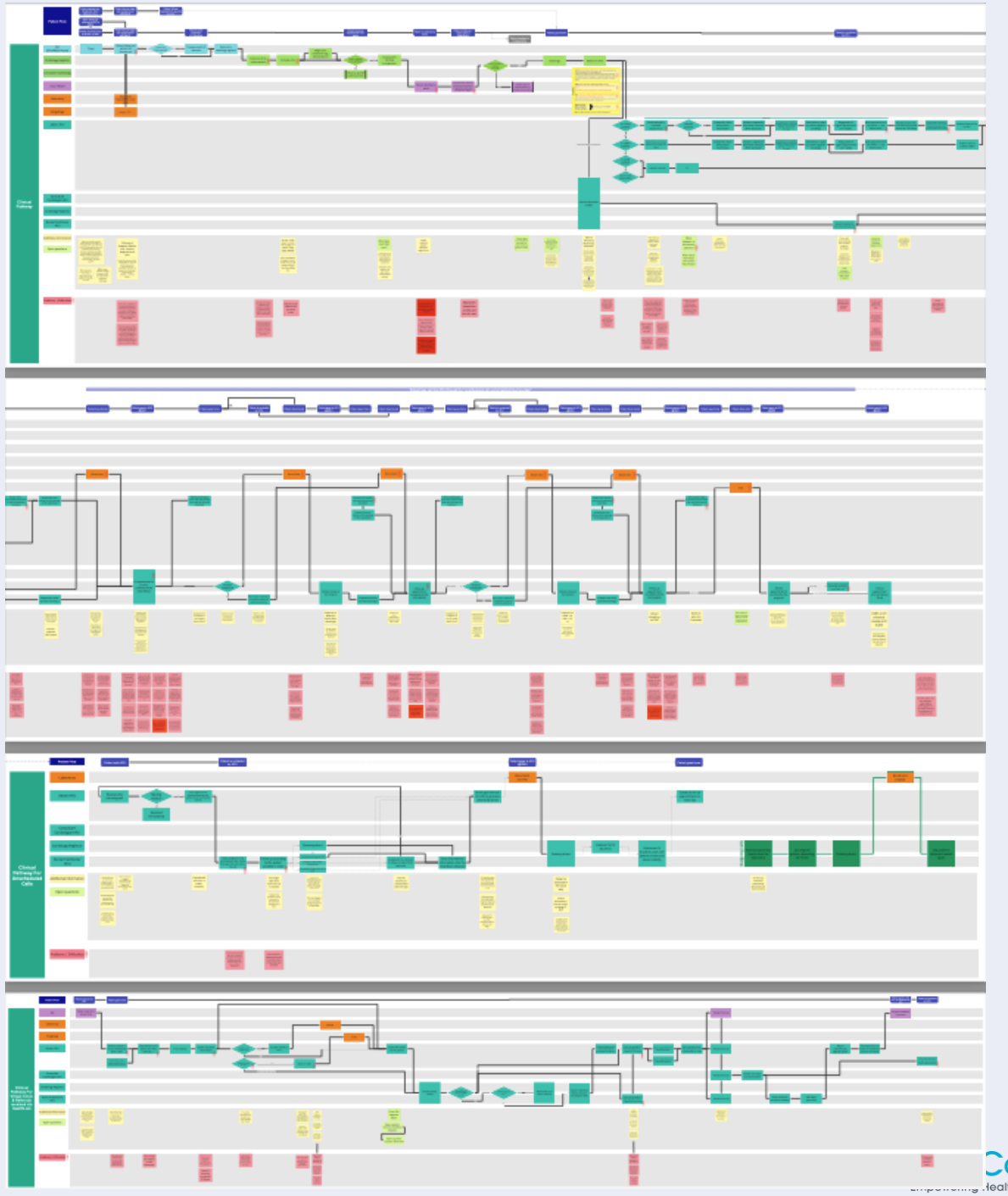
- Any imposition on the clinical and operations teams has the immediate potential to doom a project.
- If you have to say “but it only takes you an extra few seconds” you are on shaky ground.
- It is the responsibility of the pathway mapping and implementation teams to overcome those challenges.

Learning 6: Investigating today is just as important as building for tomorrow.

This is the lowest level resolution worth capturing that still accurately reflects the flow of interactions and decisions that must be made when a patient is diagnosed with HF.

A significant number of these steps can be eliminated or streamlined with, for example

- Sharing of records and structured communications
- Standardised shared care protocols
- Remote patient management
- Care coordination



Learning 7:
Change is one of the biggest challenges. You will need to find quick wins to build momentum.

The goal in designing a care pathway is similar to that of medical device designers:

- Provide a complete model/system – it is clear what happens, when, and what it is supposed to achieve.
- That delivers highly effective care and outcomes. You must be able to prove it.
- Fits with existing workflows and is not intimidating. e.g. no extra logins or passwords used once a week and forgotten.
- Any interactions are quick and simple

Design for adoption by making tasks and actions easier.

Assume everyone is too busy to think about extra steps – because they are.

Finally, some closing thoughts we did not touch on in detail.

1. **Integration is foundational**: All possible manner of integration including workflow, comms, etc and not just tech / data.

2. **Broad engagement**: A shared care pathway is a plan to distribute decision making, this is an opportunity to bring new perspectives and create an effective protocol for all involved.

3. **Governance and Team**: Transparent and robust governance is foundational as boundaries are otherwise blurred.

4. **Change is always hard:** Find quick wins, ask others, and share learnings.

5. **Be careful of your assumptions:** “The first principle is not to fool yourself, and you are the easiest person to fool.”

Next steps for us

1. **Continued development** of care pathways.

2. **Further integration** of care across teams.

3. **Population Health analysis** and care gap assessments.

4. Extension from care pathway into comprehensive **service design** with input from a broader group.

5. **Continued collaboration** with Irish, European, and global peers to accelerate shared learning.

Questions to Donal.Bailey@Care-Connect.ie

Thank you.

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