Abstract

GENETIC HEARTS NETWORK: A HUB-AND-SPOKE APPROACH TO INHERITED CARDIAC CONDITIONS (ICC) CARE

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BACKGROUND
Inherited Cardiac Conditions (ICC) are collectively prevalent in over 340,000 individuals in the UK.[1] Currently, diagnostic and therapeutic services are predominantly centralised within a few tertiary centres. This results in fragmented referral pathways, long waiting times, and limited local expertise—leading to delayed diagnoses, missed family screening opportunities, and variable care quality. The recent advent of transformative therapies, such as Mavacamten for hypertrophic cardiomyopathy (HOCM), has further highlighted the urgent need for equitable and timely access to specialist care. A hub-and-spoke model was proposed to decentralise service delivery, support local workforce development, and improve patient outcomes and system efficiency.

OBJECTIVE
To implement a hub-and-spoke model that integrates local service delivery with specialist tertiary centre collaboration, aiming to improve access, efficiency, and equity in ICC care.

METHODS
A start-up pilot was developed to test the feasibility of delivering ICC services locally at a district general hospital, in close collaboration with a tertiary ICC centre. A retrospective review of 220 ICC referrals from 2022–2024 was conducted to map patient pathways and determine what services could be effectively delivered in-house. Core goals included establishing a dedicated ICC clinic stream, performing ajmaline and genetic tests locally, enabling virtual MDT access with the tertiary centre, and setting up an outpatient Mavacamten service.

The proposal was presented at a clinical governance meeting in November 2024. The service began implementation in December 2024, and early activity and outcomes were re-evaluated in Q1 2025.

RESULTS
Since initiating the local ICC service in December 2024:

- **14 new referrals** were seen within the local clinic stream (combining face-to-face and virtual reviews).**10 genetic tests** and **6 ajmaline challenge tests** were successfully performed in-house.**8 patients** were returned to local follow-up following joint specialist input.A shared care agreement with the tertiary centre was finalised, and preparations for the first local Mavacamten initiation are underway, with the first patient scheduled for June 2025.
- **Cost and productivity benefits** included: £500 saved per new referral and £100 per follow-up not sent to tertiary care.Commercial revenue potential of ~£4,000 per patient commenced on Mavacamten therapy.
- **Patient satisfaction**: 6 patients interviewed reported 100% satisfaction, citing reduced travel, improved communication, and continuity of care.

- **Sustainability impact**:Estimated carbon savings of ~0.12 tonnes CO_2e per patient annually due to reduced travel.
- **Workforce empowerment**:1 administrative ICC lead and 3 cardiac physiologists supported by 3 ad-hoc nurses received training to deliver specialist elements of care locally.

CONCLUSIONS

The implementation of a hub-and-spoke model for ICC care at a district general hospital has demonstrated promising early results in improving access, efficiency, and patient satisfaction. The approach reduces tertiary centre dependency, empowers the local workforce, and aligns with NHS goals of integrated, sustainable care. Future aims include securing specialised commissioning, expanding the in-house team with a dedicated ICC nurse, and fully launching the Mavacamten HOCM service.

REFERENCES

1. 2013/14 NHS standard contract for cardiology: inherited cardiac conditions (all ages).

FIGURES

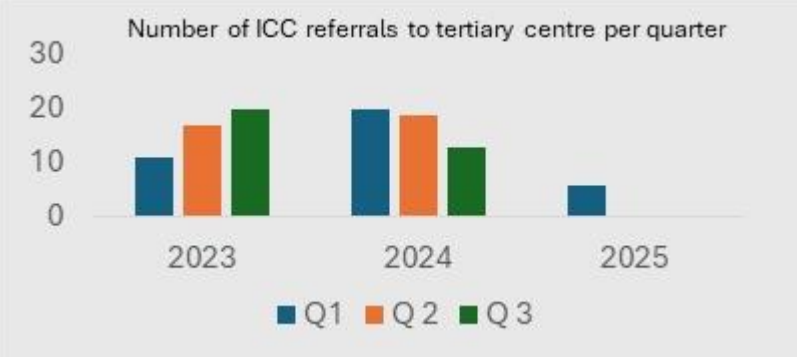

Fig 1: Number of referrals to the tertiary centre per quarter from 2022 – 2025, showing trend towards decrease in number of referrals since the introduction of the initiative in Dec 2024.

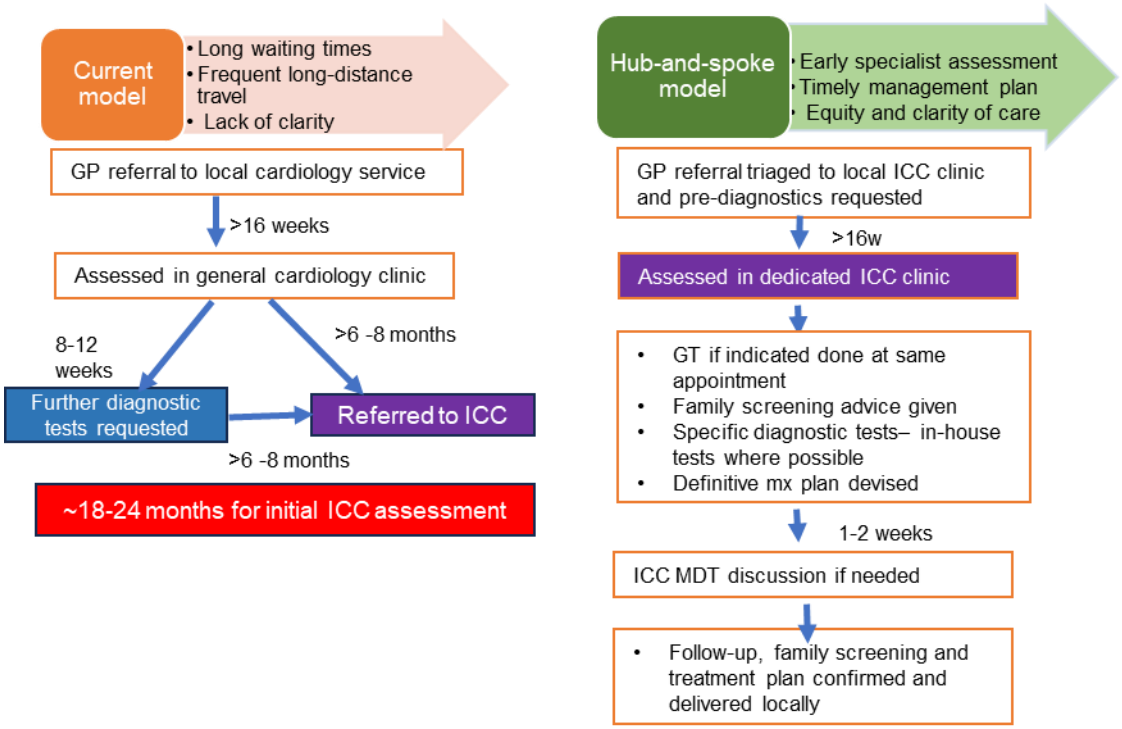

Fig 2: Proposed model of care vs current model:

Fig 3: Challenges and Success stories