

# Young Hearts in Action:

Recommendations from Young  
Patient Representatives to Shape  
the Future of Cardiovascular Health



**European Heart Network**  
Fighting heart disease and stroke



This document has been developed by the European Heart Network (EHN) Young Hearts Task Force, a group of young people from across Europe living with diverse cardiovascular diseases (CVD). The Task Force was established to bring together the lived experiences of young CVD patients, across different diagnoses, countries, and life situations, and translate them into meaningful recommendations for policy, practice, and research.

The recommendations reflect a cross-sectoral, comprehensive effort to identify the common challenges faced by young people with CVD, regardless of their specific condition. While recognising that each type of CVD carries its own medical and psychosocial complexities, this work draws on examples and data from different conditions to identify patterns and parallels, highlighting shared barriers and systemic gaps that affect young CVD patients collectively—from education and employment to healthcare access, social inclusion, and mental wellbeing.

The ultimate goal is to ensure that the voices of young CVD patients contribute to the implementation of the European Cardiovascular Health Plan and to a more inclusive, equitable approach to cardiovascular health across Europe.

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# Executive summary.

Young people across Europe are increasingly affected by cardiovascular disease (CVD), yet health systems, social structures and public awareness still largely view heart disease as an older person's problem. This disconnect leads to delayed diagnosis, fragmented care, insufficient prevention, and inadequate psychosocial support for young patients. Drawing directly on the lived experiences of its members - young people living with diverse CVDs - the Young Hearts Task Force has compiled these recommendations to represent a community whose needs are too often overlooked. The aim is to ensure that young CVD patients are fully recognised, heard, and supported across the life course, and that their perspectives shape a more inclusive cardiovascular health agenda for Europe.

## Key Recommendations by Area.



### **Prevention & Early Detection:**

Implement Europe-wide awareness campaigns and age-neutral clinical protocols to ensure timely recognition of cardiovascular symptoms in young adults.



### **Psychosocial & Lifestyle Risk:**

Embed mental-health and lifestyle support into cardiovascular prevention frameworks and reduce environmental barriers to healthy behaviours.



### **Inherited Cardiovascular Conditions:**

Expand systematic family-history screening and early genetic testing to identify risk earlier and prevent avoidable early disease.



### **Transition from Paediatric to Adult Care:**

Establish coordinated, structured transition pathways to secure lifelong specialist follow-up for congenital, inherited, and early-onset conditions.



**Interactions Between Hormonal/Reproductive Health & CVD:**

Integrate reproductive, endocrine, and cardiovascular services to ensure safe pregnancy planning, contraceptive counselling, and consistent support for gender-diverse youth.



**Preparing Healthcare Systems for the Future:**

Develop national training, clear referral pathways, and rapid specialist-consultation systems to equip frontline providers for the rising population of young CVD patients.



**Rehabilitation, Work & Independence:**

Create age-tailored rehabilitation and return-to-work programmes with economic protections reflecting the long-term, fluctuating nature of early-onset CVD.



**Mental Health & Peer Support:**

Provide integrated psychological care and expand age-specific peer-support networks to address isolation, stigma, and emotional recovery.

# CVD in Europe's Young Populations: A Growing Concern.

Cardiovascular disease (CVD) remains the leading cause of death in Europe. However, recent data reveal concerning age-specific trends. In the UK, from 2000 to 2019, the overall incidence of CVD declined by approximately 19%, primarily due to reductions in older age groups. In contrast, the incidence of **coronary heart disease (CHD)** among individuals under 60 improved little or not at all. Notably, diagnoses of arrhythmias, valve disease, and venous thromboembolism have risen during this period.<sup>1</sup>

Globally, **stroke** incidence among 15–39-year-olds is rising. After mid-2000s plateaus, ischemic stroke rates increased from 2010 to 2019, with Western Europe reporting ~7 per 100,000 and Eastern Europe often exceeding 20 per 100,000.<sup>2</sup>

**Adult congenital heart disease (ACHD)** is increasingly common, as over 90% of CHD infants now survive to adulthood. European surveys show ACHD affects predominantly young adults, many of whom experience complications such as arrhythmias or prior endocarditis despite low short-term mortality.<sup>3</sup>

**Familial hypercholesterolemia (FH)** affects about 1 in 200–250 Europeans, leading to very high LDL cholesterol from birth. Adults with FH have 3.5-fold higher overall CVD and 4–5 times higher CHD prevalence than peers without FH, often resulting in heart attacks in their 30s–50s if untreated.<sup>4</sup>

<sup>1</sup> <https://pubmed.ncbi.nlm.nih.gov/38925788/>

<sup>2</sup> <https://pubmed.ncbi.nlm.nih.gov/39080669/>

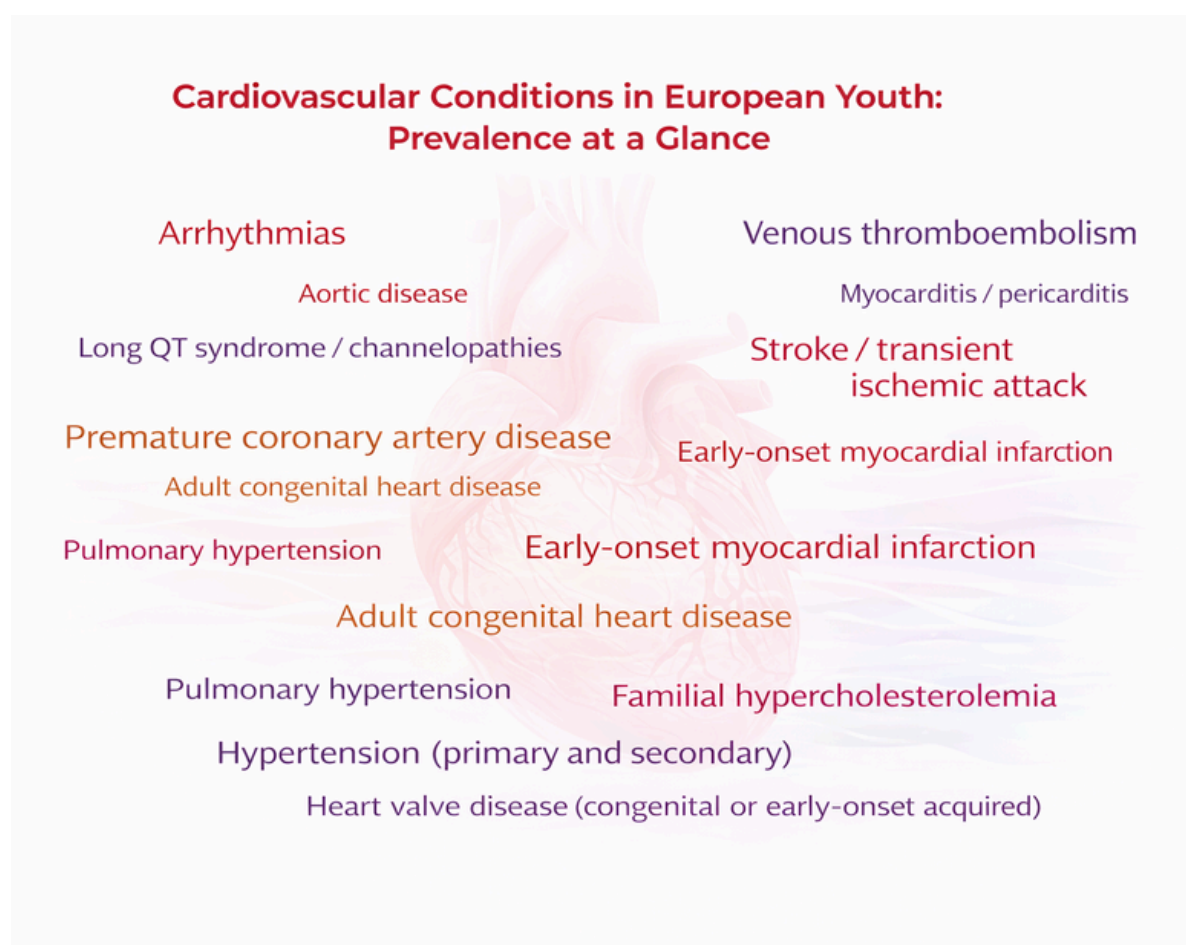
<sup>3</sup> <https://pubmed.ncbi.nlm.nih.gov/15996978/>

<sup>4</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC10314327>

**Premature coronary artery disease (CAD)** is also rising, with 5–15% of myocardial infarctions occurring in adults under 45–55. In Eastern and Southeastern Europe, smoking, high cholesterol, diabetes, and hypertension drive these early events; one multi-country cohort found smoking increased the risk of premature acute coronary syndrome 3–4-fold.<sup>5</sup>

**Arrhythmias**, such as **atrial fibrillation** remain uncommon under 40 but are increasing, with incidence in 15–49-year-olds rising ~57% from 1990 to 2021. Many CHD patients are predisposed to atrial or ventricular arrhythmias, and new diagnoses of arrhythmias increased from 2000–2019 even as overall CVD declined.<sup>6</sup>

These trends show that CVD increasingly affects younger populations, highlighting the urgent need for prevention, early detection, and tailored healthcare strategies for young patients.



<sup>5</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC1092829>

<sup>6</sup> <https://academic.oup.com/europace/article/26/7/euae196/7716748>

# Prevention and Early Detection



**Cardiovascular disease (CVD) in people under 40 is often detected late or misdiagnosed across Europe.** Evidence from stroke, acute coronary syndromes, inherited lipid disorders, congenital heart disease, pulmonary vascular disease, myocarditis, and cardiomyopathies highlights a consistent pattern of delayed recognition, prolonged diagnostic pathways, and loss of specialist follow-up. Consequences include avoidable harm, missed opportunities for time-sensitive therapies, preventable progression to chronic disease, late family cascade testing, and increased lifetime disability and healthcare costs.

**Adolescence and early adulthood are decisive windows for shaping lifelong cardiovascular health.** Habits, exposures, and care experiences established during these years influence disease trajectories for decades. Failure to act early increases lifetime CVD risk and carries social and economic costs, including lost education and employment, reduced productivity, and higher healthcare needs. In short, neglecting prevention and timely diagnosis in young people represents a lost opportunity for both individual wellbeing and societal resilience.

## Factors driving delays include:

- **Age heuristics:** The pervasive assumption that “young people don’t get heart disease” leads to fewer investigations and delayed referral.
- **Atypical or subtle presentations:** Non-classic symptoms are more common in youth, especially among women.



- **Low public awareness:** Young people and their peers, but also family members and hospital staff, may misinterpret warning signs and delay help-seeking.
- **Limited age-disaggregated surveillance:** National registries rarely report delays for under-40s, obscuring the scale of the problem and hindering policy response.

## Diagnostic Challenges.



*“I was having a stroke and had to convince the doctors it was happening - they couldn't believe me because I was so young.”*

Meaghan, Ireland

*“Preconceptions cost me more than a decade of proper care. At 17, a respected cardiologist dismissed my symptoms as ‘just anxiety’ and put me on antidepressants without running any tests. It set my diagnosis back by over ten years.”*

Mehitabel, Italy





Young adults presenting with chest pain, palpitations, unexplained breathlessness, or focal neurological signs are often misdiagnosed with anxiety or benign conditions. For example, the SIFAP study (~3,000 participants aged 18–55 across 15 European countries) found almost 25% had evidence of prior silent cerebral infarcts, including 19% with no recognised symptoms.<sup>7</sup> Registry and smaller studies also indicate longer diagnostic delays for young women with myocardial infarction or acute coronary syndrome.<sup>8, 9, 10, 11</sup>

Young people's symptoms are also frequently dismissed or self-attributed to stress, anxiety, exhaustion, or intense lifestyles. This tendency, reinforced by social norms and lack of awareness, delays help-seeking and reduces the chances of timely diagnosis for conditions such as arrhythmias, myocarditis, acute coronary syndromes, and stroke. Prevention and early detection therefore require not only clinical guidelines but also a broad societal shift in how young people, workplaces, universities, sports environments, and healthcare providers recognise early CVD warning signs.

**7** <https://www.fabrydisease.org/images/ReferencePDFs/Acute%20Cerebrovascular%20Disease%20in%20the%20Young%20The%20Stroke%20in%20Young%20Fabry%20Patients%20Study.pdf>

**8** <https://academic.oup.com/ehjacc/article/10/10/1150/6263899>

**9** <https://pmc.ncbi.nlm.nih.gov/articles/PMC5761653>

**10** <https://pmc.ncbi.nlm.nih.gov/articles/PMC2696860>

**11** <https://bmccardiovascdisord.biomedcentral.com/articles/10.1186/s12872-016-0271-x>

## What Young Hearts Need

- **Europe-wide awareness campaigns targeting both public and healthcare professionals.** Public campaigns should feature lived experiences of young people affected by acute myocardial infarction, myocarditis, arrhythmia, stroke, and sudden cardiac arrest. Using authentic stories improves relatability and counteracts the assumption that heart disease only affects older adults or those with visible risk factors. Campaigns should prioritise social media platforms where young people spend most of their time, ensuring accessible, shareable, visually engaging content.
- **Age-neutral emergency/primary care protocols** requiring basic cardiac/neurologic screening (ECG, troponin, FAST/CT/MRI as indicated) for red-flag symptoms irrespective of age, with clear referral triggers to cardiology/stroke services.
- **Workplace, university, and community-based screening initiatives,** including blood pressure, cholesterol, and optional ECG checks. Mobile or pop-up screening stations could provide immediate, personalised results via QR codes, alongside brief counselling and signposting. Coaches and fitness professionals should receive basic training on cardiovascular red-flag symptoms and appropriate referral pathways.

## Psychosocial and Lifestyle Risk.

Adolescence and early adulthood are periods of social, educational, and economic transition, often coinciding with mental-health challenges, irregular sleep, unhealthy diets, physical inactivity, and substance use, all contributing to early cardiometabolic risk. Chronic stress, poor mental health, and sleep disruption are independently associated with higher CVD incidence and worse outcomes after cardiac events.<sup>12</sup>

Recent analyses estimate that 15–20% of young Europeans have a diagnosable mental disorder, with higher prevalence among adolescent girls and vulnerable groups.<sup>13</sup> Sleep disruption affects over half of adolescents in many European surveys, increasing obesity, hypertension, and metabolic dysregulation.<sup>14,15</sup> Although some traditional risk behaviours (smoking, alcohol) have declined in parts of Europe, e-cigarette use, non-medical use of pharmaceuticals, and other harmful behaviours remain common.<sup>16, 17</sup>

Such behaviours do not arise in isolation. They are reinforced by social and structural factors. Young people are often not considered at immediate cardiovascular risk, by themselves, by society, or by clinicians, and are therefore less likely to prioritise prevention. Being perceived as “normally healthy,” they tend to overlook self-care to meet age-related expectations: to study or build careers intensively and maintain active social lives. This can lead to chronic sleep deprivation, poor diet and neglected exercise. Stress is frequently overlooked or normalised, while anxiety and emotional strain are sometimes stigmatised rather than addressed. As a result, ongoing anxiety is often blamed for serious physical symptoms, including chest pain, palpitations or breathlessness, delaying appropriate investigation and treatment.

<sup>12</sup> <https://www.thelancet.com/journals/lanepi/article/PIIS2666-7762%2825%2900165-6>

<sup>13</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC9800241>

<sup>14</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC7999763>

<sup>15</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC6301929>

<sup>16</sup> <https://www.who.int/europe/news/item/25-04-2024-alcohol--e-cigarettes--cannabis--concerning-trends-in-adolescent-substance-use--shows-new-who-europe-report>

<sup>17</sup> [https://www.euda.europa.eu/news/2025/new-espad-survey-results\\_en](https://www.euda.europa.eu/news/2025/new-espad-survey-results_en)

## What Young Hearts Need

- **Policies reducing structural and commercial barriers to healthy behaviours**, including measures to shield minors from the marketing of unhealthy products and limit exposure to addictive substances.
- **Prevention frameworks** integrating mental-health support within cardiovascular care.
- **Education and workplace programmes** promoting sleep, nutrition, physical activity, and emotional wellbeing, with attention to gender and socioeconomic disparities.
- **Age-disaggregated monitoring of youth cardiovascular health** to inform national CVD plans and evaluate interventions.



## Inherited Cardiovascular Conditions.

Inherited disorders such as familial hypercholesterolemia (FH), cardiomyopathies, and genetic arrhythmias often manifest in childhood or early adulthood but remain largely undiagnosed. FH, for instance, affects approximately 1 in 200–250 Europeans, yet 80–90% of carriers are unidentified until after a cardiovascular event.<sup>18</sup> Similarly, studies of genotype-positive relatives of dilated cardiomyopathy patients show over 10% develop disease within three years, yet many remain unmonitored.<sup>19</sup> Genetic testing in paediatric channelopathies detects pathogenic variants in 20–50% of cases, even when symptoms are mild or absent.<sup>20</sup>

These findings confirm that early detection (via family history, genetic screening, lipid measurement) can materially alter outcomes and reduce early cardiovascular risk in young people.

### What Young Hearts Need

- **Routine collection of family history** for cardiovascular risk in adolescents and young adults in primary care and paediatric settings.
- **Early genetic testing programmes** for FH, inherited arrhythmias/conduction disorders, and cardiomyopathies in at-risk youth.

<sup>18</sup> <https://world-heart-federation.org/wp-content/uploads/Preliminary-Analysis-of-User-Submitted-Data-Final-1.pdf>

<sup>19</sup> <https://www.jacc.org/doi/10.1016/j.jacc.2024.02.036>

<sup>20</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC7408669>

## Treatment and Care



**Across Europe, young people with cardiovascular disease often face fragmented and poorly coordinated care.**

Specialist teams, paediatric, adult, and across disciplines, too rarely communicate effectively. This leaves many patients navigating complex transitions without structured support. Referral systems after paediatric care are inconsistent, and long-term follow-up is frequently lost. As a result, preventable complications, unmonitored risks, and treatment discontinuities remain common. Addressing these gaps requires integrated, multidisciplinary care pathways that accompany young people across life stages. Bridging paediatrics and adult services, cardiology and reproductive health, endocrinology, and mental health, could ensure continuity, safety, and equitable outcomes.



*“When I turned 18, my paediatric cardiologist told me I needed to find an adult cardiologist. Not because she lacked the capacity to continue my care, but because she was no longer allowed to treat me. We both wished there were systems in place that allowed her to see me beyond age 18. But there I was, searching for a new cardiologist and explaining my entire medical history to a complete stranger. I think that’s one of the biggest challenges young heart patients face when transitioning to adult care.”*

Svenja, Germany





*"My specialist team put a lot of time and care into supporting me during my transition to adult services. I had joint appointments and was given tours of the hospital over the course of two years. Despite all of that preparation, my first adult appointment ended up being with a doctor who didn't know me at all.*

*Later, when I needed inpatient care, I felt isolated and out of place on a cardiology ward where every other patient was at least 50 years older than me. Their needs were so different from mine, and it felt like I didn't belong there; such a stark contrast to being on children's wards surrounded by peers my own age.*

*Ever since becoming an adult, every visit to my local hospital feels like they're not equipped for someone like me. Staff often look at me, then at the machines, unsure what to do, as if they're confused that I grew up. I've been under adult care for 10 years now."*

Chloe, United Kingdom





## Transition from Paediatric to Adult Care.

For congenital and inherited heart disease, care continuity is a critical yet unmet need. Across Europe, studies report that 30–60% of young patients experience gaps or complete loss of specialised cardiac follow-up during the transition from paediatric to adult services. Fewer than one-third successfully complete structured transition programs.<sup>21</sup>

Transition challenges are not limited to congenital conditions. Young patients with inherited cardiomyopathies, genetic arrhythmias, lipid disorders, or acquired CVD often encounter fragmented care pathways, inconsistent specialist access, and poor integration across services.

### What Young Hearts Need

- **Coordinated pathways that support adolescents moving from paediatric to adult care**, with clear handover of medical history and treatment plans.
- **Continuity of care, early recognition of complications, and timely intervention** across all CVD subtypes.

<sup>21</sup> <https://academic.oup.com/europace/article/26/7/euae196/7716748>

## Health Transitions Interactions That Affect Diagnosis and Care.



*"I'm on gender-affirming hormone treatment, but no clinician has been able to tell me how it might affect my heart condition or what signs of cardiovascular risk I should be looking out for. It's terrifying to feel like I'm making needed life-changing decisions without the guidance I need."*

Anonymous, Belgium



Hormonal and reproductive transitions in adolescence and young adulthood are critical yet often neglected dimensions of cardiovascular health.

Across Europe, care systems rarely integrate reproductive and cardiovascular services, despite clear evidence of their interaction. Data from the Registry of Pregnancy and Cardiac Disease covering over 5,700 pregnancies in women with pre-existing heart disease show that 10–20% experience cardiac complications such as heart failure or arrhythmia, and maternal mortality remains around 0.6–1%.<sup>22</sup> Yet many young women with congenital or acquired heart disease lack access to pre-pregnancy counselling or tailored contraceptive advice.<sup>23</sup>

<sup>22</sup> <https://pubmed.ncbi.nlm.nih.gov/30907409/>

<sup>23</sup> <https://academic.oup.com/eurheartj/article/39/34/3165/5078465?login=false>

Large European cohorts also link early menarche (before 12) to 16% higher risk of ischemic stroke compared to those with menarche at 13–15 years,<sup>24</sup> yet such markers are rarely used in prevention programmes. Among young women, estrogen-containing combined hormonal contraceptives (CHCs) are associated with approximately a two- to three-fold higher risk of arterial thrombotic events (e.g. myocardial infarction and ischemic stroke) compared with non-use. The risk increases when combined with other factors such as smoking, obesity, or hypertension.<sup>25, 26</sup> Despite this, cardiovascular counselling on contraception remains inconsistent.



Current evidence on Gender-affirming hormone therapy (GAHT) and cardiovascular risk in youth and young adults is growing but still limited, and several key gaps remain. While studies show increased VTE risk in trans women<sup>27</sup> and changes in lipids/blood pressure in trans men,<sup>28</sup> most data come from small observational cohorts, registry analyses, or biomarker studies, with relatively few large, long-term European cohorts that capture hard cardiovascular outcomes (MI, stroke) in young populations.

**24** <https://bmcmmedicine.biomedcentral.com/articles/10.1186/s12916-023-02757-2>

**25** <https://medicalxpress.com/news/2025-05-combined-oral-contraceptives-triple-cryptogenic.html>

**26** [https://academic.oup.com/eurheartj/article/45/Supplement\\_1/ehae666.1535/7836559](https://academic.oup.com/eurheartj/article/45/Supplement_1/ehae666.1535/7836559)

**27** <https://pmc.ncbi.nlm.nih.gov/articles/PMC8907681>

**28** <https://academic.oup.com/ajendo/article/190/2/S13/7596368>

## What Young Hearts Need

- **Integrated, multidisciplinary cardiovascular care pathways** that extend beyond traditional specialties, ensuring continuous collaboration across cardiology, nephrology, neurology, endocrinology, obstetrics, mental health, and gender-health services.
- **Systematic preconception counselling and multidisciplinary management** for women with known or suspected CVD, supported by registry reporting (e.g., ROPAC-style data capture).
- **Further education programmes for gynaecologists and obstetric teams on heart medication use**, potential complications during pregnancy, and guidance on breastfeeding with cardiac conditions, to improve safety and continuity of care for young women.
- **Comprehensive pregnancy planning for young people with CVD.** Young adults with CVD should receive clear, proactive counselling on medication adjustments, pregnancy risks, timing, and safe family-planning options. This should include tailored discussions after AMI, myocarditis, arrhythmia, cardiomyopathy, or congenital conditions, ensuring patients and partners can make informed decisions early.
- **Systematic assessment of cardiovascular risk factors before prescribing estrogen-containing methods and regular follow-up monitoring.**
- **Investment in research on cardiovascular outcomes in young people receiving gender-affirming hormone therapy** to guide evidence-based monitoring and care.

## Preparing Healthcare Systems for the Future.

As survival rates for congenital and early-onset cardiovascular conditions improve, Europe is seeing a rapidly expanding population of young adults living with complex, lifelong cardiac needs. Yet many adult-care systems, designed decades ago around older CVD patients, are not strategically or operationally prepared for this shift. Hospitals, emergency departments, and primary care services often lack the training, infrastructure, and referral pathways required to deliver timely and appropriate care for young people with congenital, inherited, or early-onset cardiovascular conditions.

Young adults with ACHD, inherited cardiomyopathies, genetic arrhythmias, or lipid disorders frequently encounter clinicians who have limited experience with these conditions, leading to misinterpretation of symptoms, underestimation of risk, and delayed specialist evaluation. These gaps become especially critical during emergencies, when local hospitals may not have access to specialist advice and time-sensitive decisions depend on accurate, condition-specific knowledge. A forward-looking approach is needed to ensure health systems are equipped to meet the needs of the next generation of CVD patients.





## What Young Hearts Need

- **Integrated national training programmes for emerging cardiovascular care needs**, designed and delivered by ACHD specialists, multidisciplinary teams, and young people with lived experience. Training should address clinical management, psychosocial needs, recognition of complications, and communication skills for working with young adults.
- **Communication systems enabling rapid specialist support in emergencies**, to allow frontline clinicians to consult ACHD and other CVD specialists during acute presentations. These systems should also enable young patients to reach their specialist teams, including out-of-hours, reducing the risk of miscommunication, inappropriate triage, or missed warning signs.
- **Clear nationwide referral procedures for suspected young CVD cases**, aimed at reducing diagnostic delays, facilitate early access to expert care, and improving long-term outcomes by ensuring that young patients enter appropriate treatment systems without avoidable obstacles.

# Rehabilitation and Quality of Life



**Young people living with cardiovascular disease (CVD) face unique challenges that extend beyond the acute medical event.**

Early-onset CVD can disrupt education, work, social life, and mental wellbeing, while existing healthcare and rehabilitation services are often designed for older populations, leaving younger patients underserved. Recovery encompasses not only physical rehabilitation but also return-to-work or education, financial stability, mental health, and social reintegration. Families and caregivers are also affected, taking on new roles that can generate stress and emotional burden. Peer support and age-appropriate interventions are increasingly recognised as vital tools to address these gaps, improve engagement in rehabilitation, and foster psychological resilience. Inadequate support in any of these domains can limit independence, reduce quality of life, and amplify long-term social and economic consequences.

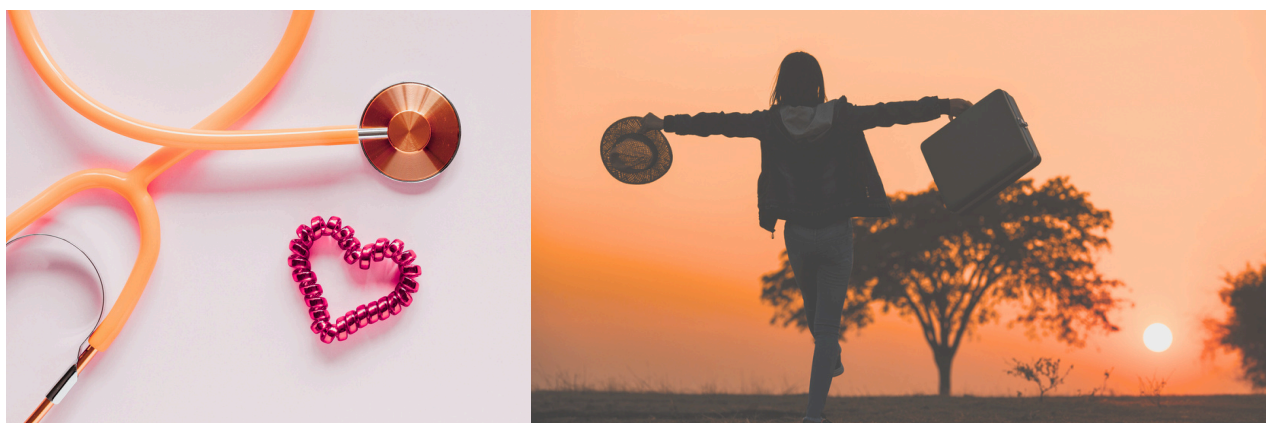


*“After my heart attack, I was discharged with just a brochure; no follow-up, no plan. I felt completely lost, trying to piece together what my life was supposed to look like on my own.”*

Janelle, United Kingdom

*“In cardiac rehab, I was the youngest by decades. Everyone stared at me like I didn’t belong. It was so isolating that I eventually stopped going. It just made me feel even more out of place.”*

Meaghan, Ireland



## **Rehabilitation, Work and Independence.**

Young people suffering from congenital heart diseases or recovering from heart infarction or stroke face distinct rehabilitation needs that are often unmet by existing services. European evidence shows that younger patients are more likely to drop out of or not attend standard cardiac rehabilitation programmes. Qualitative research documents that young survivors often find mixed-age rehab settings alienating or stigmatising, contributing to disengagement, limited recovery and poorer mental-health outcomes.<sup>29</sup>

Return-to-work (RTW) after cardiac events and young stroke is highly variable but often incomplete: cohort and systematic reviews in European samples report RTW rates that commonly range from ~40–80% at 6–12 months, depending on diagnosis, severity and social supports, indicating many young patients experience prolonged income loss.<sup>30</sup> Young women recovering from acute myocardial infarction (AMI) are furthermore less likely to resume work compared with men, reflecting both biological and psychosocial differences in recovery trajectories.<sup>31</sup>

<sup>29</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC11785345/>

<sup>30</sup> <https://pubmed.ncbi.nlm.nih.gov/39069314/>

<sup>31</sup> <https://pubmed.ncbi.nlm.nih.gov/26908859/>



These gaps have tangible social and economic consequences. Working-age adults with CVD are at higher risk of financial insecurity and reduced productivity, particularly due to early disease onset and chronicity. Access to economic and disability support is often further constrained by widespread perceptions of CVD as a “recoverable” or temporary condition. For example, long-term medication needs are frequently underestimated; in some countries, such as the UK, congenital heart patients are not exempt from recurring prescription charges, even though other lifelong conditions receive exemptions. Over a lifetime, with multiple medications, such costs accumulate significantly. In addition, the unpredictable nature of cardiac events and symptom “flare-ups” can make it difficult to meet eligibility criteria for disability or income-protection schemes, many of which require evidence of consistent, long-term functional limitation. As a result, many young people with CVD fall through the gaps of social-protection systems, despite having enduring and fluctuating health needs.

### **What Young Hearts Need:**

- **Age-tailored rehabilitation programmes** considering mobility and developmental stage. Programmes should be designed around young adults’ fitness norms, potentially including strength training, interval-based models, and outdoor activities where safe. Programmes should be responsive to differing physical baselines, acknowledging that younger hearts may recover at different rates and that resistance to adjusting programmes can discourage engagement.
- **Longer-duration rehabilitation** including ongoing lifestyle coaching covering stress management, nutrition, sleep, relationships, independence, RTW planning, and coping with life changes such as moving back home after an event.

- **Digital and remote rehabilitation options**, such as app-based and hybrid cardiac rehabilitation programmes, including tele-coaching, interactive modules, and symptom monitoring, to support young adults returning to work or education, especially when attending in-person sessions is challenging.
- **Structured and gender-sensitive assistance for returning to work or education**, with flexible hours, protected time for medical appointments and rehabilitation, and integration with family-leave policies where relevant. Unique challenges faced by young women balancing early return with childcare responsibilities should be integral part of such programmes.
- **National legislative protections for phased return**, allowing reduced hours or modified duties until medically fit to resume full capacity.
- **Measures to reduce the economic impact of early-onset CVD**, including fair access to income-protection schemes, disability support, reduced prescription costs, and social services that recognise the chronic yet unpredictable nature of CVD and aim to support long-term independence.
- **Fair assessment of fluctuating cardiac conditions for disability benefits.** Disability-assessment systems often overlook episodic, unpredictable conditions such as CVD. Young people, who typically lack savings or pension support, should have clearer pathways to temporary or partial disability benefits during recovery.

## Addressing the Invisible Scars: Mental Health after a Heart Event.



*"Peer-support groups remind us that recovery isn't something we face alone. When we share our challenges and celebrate each other's progress, we create a space where hope, motivation, and understanding grow naturally."*

Fiona, Ireland

*"The way people, including healthcare professionals, react when I say I have a heart condition makes me feel like I've done something wrong. A doctor once even asked if I was a drug user, simply because they assumed someone my age could only have this condition because of drugs. I'm not. It was a painfully unfair assumption."*

Anonymous, Belgium



Experiencing a cardiac event or being diagnosed with CVD at a young age profoundly affects mental health. This demographic often faces stigma, as CVD is typically perceived as an "older person's disease" or linked to extreme lifestyles, which may not be applicable to them. Such perceptions can lead to feelings of isolation and emotional distress.

European studies indicate that individuals with CVD experience higher rates of depression compared to the general population. Specifically, one in three CVD patients experiences depression, and one in two develops it after major cardiac events.<sup>32</sup>

The impact extends beyond the patients themselves. Family members and partners often assume caregiving roles, which can lead to stress and emotional strain. Nearly one-quarter of relatives experience caregiver strain up to five years after out-of-hospital cardiac arrest.<sup>33</sup>

Peer support networks have shown promise in addressing these challenges. For young adults with chronic and rare conditions, including CVD, peer-based interventions—offered in-person, virtually, or through hybrid models—are increasingly recognised as valuable for providing emotional support, guidance, and a sense of community.<sup>34</sup>

Peer support has also demonstrated positive effects in other conditions, particularly for mental health outcomes. In severe mental health conditions, peer interventions have improved social inclusion, empowerment, and hope.<sup>35</sup>



**32** [https://www.escardio.org/The-ESC/Press-Office/Press-releases/to\\_aition-project-uncovers-links-between-cardiovascular-disease-and-mental-health](https://www.escardio.org/The-ESC/Press-Office/Press-releases/to_aition-project-uncovers-links-between-cardiovascular-disease-and-mental-health)

**33** [https://www.resuscitationjournal.com/article/S0300-9572\(24\)00192-8/fulltext](https://www.resuscitationjournal.com/article/S0300-9572(24)00192-8/fulltext)

**34** <https://pmc.ncbi.nlm.nih.gov/articles/PMC8973527/>

**35** <https://bmcpsy psychiatry.biomedcentral.com/articles/10.1186/s12888-023-04578-2>

### **What Young Hearts Need:**

- **Integrated peer-support groups stratified by age and gender** tailored for young adults with CVD to reduce stigma, create safe environments for sharing concerns, and improve engagement with recovery and rehabilitation. National heart foundations and civil-society organisations should expand and actively promote free peer-support groups for young adults.
- **Access to integrated mental health care** that addresses the unique psychological needs of young CVD patients, integrating these services into standard care pathways including structured education on symptom interpretation, recurrence risk, and safe activity levels should also accompany routine psychological care.
- **Targeted support for families and partners**, including counselling and respite care, to alleviate the emotional and physical burdens of caregiving.

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