

EU SHD Coalition

Optimising the EU Cardiovascular Health Check Protocol: The Case for Systematic Auscultation and ECG for SHD

1. Rationale

Cardiovascular disease remains the leading cause of mortality and disability across Europe, with structural heart diseases (SHD) such as aortic stenosis and mitral regurgitation affecting over 14 million Europeans. Many SHD conditions develop silently, with symptoms recognized only late, resulting in advanced disease, hospitalisation, heart failure, and premature death. Early detection is critical yet inconsistent across Member States due to varying screening practices.

The absence of harmonised approaches to early detection of structural heart disease continues to contribute to significant variability in access to timely diagnosis across Member States.

The EU Safe Hearts Plan presents a vital opportunity to establish a **standardised, evidence-based Heart Health Check Protocol** that integrates **cardiac auscultation and ECG alongside blood tests**. This approach addresses the silent progression of SHD and bridges gaps in early diagnosis and timely management as well as helping reduce health inequalities across Member States, ensuring consistent cardiovascular care across the EU.

2. Clinical Evidence Supporting Inclusion

The 2025 ESC/EACTS Guidelines for the Management of Valvular Heart Disease¹ underline that:

- **Cardiac auscultation is a fundamental component of clinical evaluation** and often the *first detectable sign* of valvular disease.
- Many VHD forms present with **no early symptoms**, reinforcing the need for systematic, opportunistic checks.²
- Auscultation is **efficient and comparable to basic echocardiography** (non-Doppler) in the initial triage of aortic stenosis.
- Tricuspid valve disease, while sometimes harder to detect, often presents with subtle findings that necessitate **routine auscultation and ECG**, with echocardiography as confirmation.

Given the ageing European population, these tools are indispensable for proactive, equitable cardiovascular care.

¹ Fabien Praz, et al, ESC/EACTS Scientific Document Group , 2025 ESC/EACTS Guidelines for the management of valvular heart disease: Developed by the task force for the management of valvular heart disease of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS), *European Heart Journal*, 2025;, ehaf194, <https://doi.org/10.1093/eurheartj/ehaf194>

² Carrabba, N., et al. (2025). The PREVASC study: Prospective REgistry of Valve disease in Asymptomatic Italian elderly SubjeCts. *Aging Clinical and Experimental Research*, 37, Article 98. <https://doi.org/10.1007/s40520-025-02937-5>

3. Proven Feasibility in Europe

Several EU regions and health systems already apply routine auscultation:

Spain – Madrid Region³

- Systematic cardiac auscultation every 2 years for all citizens aged 65+.

Spain – Extremadura Region⁴

- Cardiovascular plan includes **routine auscultation** to improve early detection of valvular disease.

Spanish National Cardiovascular Strategy⁵

- States that **up to 50%** of moderate-to-severe VHD can be detected through auscultation.
- Confirms auscultation is **simple, scalable, and cost-effective**.

NHS Health Check (UK)⁶

- Uses auscultation and **referral for ECG** as standard pathways for suspected heart disease.

Italy (PREVASC) – Prospective Registry of Epidemiology of Valve Disease Remote Area⁷

- Asymptomatic patients show prevalence of 30% mild/moderate valvular pathologies

San Marino⁸

- For all citizens aged between 50 and 70 with a 84% participation rate, involving Risk card analysis, cardiological examination, and advanced testing

JACARDI⁹

- JACARDI Work Package 8 (WP8) implements 19 pilot projects across 11 countries to develop and test standardised screening protocols and strategies aimed at the early identification and improved access for high-risk populations for cardiovascular disease and diabetes.

³ Comunidad de Madrid, Consejería de Sanidad. (2025, September 30). Cartera de Servicios Estandarizados de Atención Primaria de Madrid. Actualización 2025, versión 8ª. Available [here](#)

⁴ Consejería de Salud y Servicios Sociales; Servicio Extremeño de Salud. (2024). Plan Integral de Enfermedades Cardiovasculares y Cerebrovasculares de Extremadura (PIECC) 2024-2027 (horizonte 2037). Available [here](#)

⁵ Ministerio de Sanidad. (2022). Estrategia en salud cardiovascular del Sistema Nacional de Salud (ESCAV). Available [here](#)

⁶ See [here](#)

⁷ Carrabba, N., et al. (2025). The PREVASC study: Prospective Registry of valve disease in asymptomatic Italian elderly subjects. *Aging Clinical and Experimental Research*, 37, Article 98. <https://doi.org/10.1007/s40520-025-02937-5>

⁸ See [here](#)

⁹ See [here](#)

4. Core Components of the Ideal EU Heart Health Check Protocol

To ensure consistent early detection and management, the protocol should include:

A. Standardised Health History

- Symptoms: breathlessness, chest discomfort, palpitations, dizziness, fainting, ankle swelling, reduced exercise tolerance.
- Risk factors: hypertension, diabetes, lipid disorders, smoking, alcohol use, family history, previous cardiac interventions.
- Lifestyle: diet, physical activity, sleep, stress.
- Tools: standardised set of tools for symptom and clinical history collection ensures consistency, data comparability and coherent implementation of the protocol across Member States

B. Physical Examination

- Vital signs: blood pressure (bilateral measurement on first visit), heart rate/rhythm, oxygen saturation, BMI/waist circumference.
- Peripheral signs: ankle oedema, jugular venous pressure (JVP), fluid retention.
- Cardiac auscultation: systematic, every 2 years for all citizens aged 65+ ¹⁰, standard valve areas, in multiple positions (sitting, supine, lateral), during normal and deep inspiration; detailed documentation of heart sounds and murmurs without requiring primary care diagnostic classification.

Basic standardised training in cardiac auscultation for primary care professionals, which encompasses these three key points, would ensure quality, consistency and confidence in the screening process at EU scale.

C. Minimum Diagnostic Tests

- Routine blood tests including cardiac biomarkers where indicated.
- ECG for patients with symptoms, murmurs, or irregular pulse.

5. Conclusion

The EU Safe Hearts Plan must explicitly include cardiac auscultation and ECG within its Health Check Protocol as standard components alongside blood testing. This will ensure early detection of structural heart disease, equitable access to diagnosis and treatment, and ultimately reduce morbidity and mortality across Europe.

¹⁰ Carrabba, N., et al. (2025). The PREVASC study: Prospective REgistry of valve disease in asymptomatic Italian elderly subjects. *Aging Clinical and Experimental Research*, 37, Article 98. <https://doi.org/10.1007/s40520-025-02937-5>