Report:
National Coordinators Workshop

ESC Congress 2025 in Madrid, Spain

31 August 2025

EAPC
European Association
of Preventive Cardiology
European Society of Cardiology

National CVD Prevention Coordinators (NCPC) Meeting

Sunday 31 August 12:15 – 13:45, ESC Meeting Room N° 06 – North Convention Centre – Level 1

Digital health in atrial fibrillation (AF) prevention and management		
12:15 – 12:20	Welcome & Objectives of the workshop	Maryam Kavousi
12:20 – 13:00	Discussion in groups (40 minutes) **A) Status and know-how in your country** Q1: What is the status of AF prevention through early detection by digital devices in your country? Q2: What is the status of telerehabilitation of patients with AF in your country? Q3: How is the digital data transmitted to the medical doctor in your country? Q4: What happens next in your country, if a patient documents AF with a smart phone? **B) Reimbursement in your country** Q5: Are digital health applications and telerehabilitation in general reimbursed in your country? **C) Future directions** Q6: Is there potential for integrating wearable and smartphone-based detection technologies into clinical practice in your country? ➢ What is most needed in your country to improve digital health for preventing and managing AF?	All
13:00 – 13:40	Comparison of outcome & discussion (40 minutes)	All
13:40 – 13:45	Closing remarks	Maryam Kavousi

EAPC
European Association of Preventive Cardiology
European Society of Cardiology

Invited experts

Professor Natasja de Groot

- Erasmus University Medical Centre, Rotterdam, NL
- EHRA Fellow
- Cardiologist-electrophysiologist

Professor David Duncker

- Hannover Heart Rhythm Center, Hannover (Germany)
- Chair of the EHRA Digital and mHealth Committee
- Cardiologist-electrophysiologist

EAPC
European Association
of Preventive Cardiology
European Society of Cardiology

Group discussions by risk region

Low risk

High risk

Moderate risk

Very high risk

EAPC
European Association
of Preventive Cardiology
European Society of Cardiology

Presentation of results

Digital health in atrial fibrillation (AF) prevention and management

A) Status and know-how in your country

Q1: What is the status of AF prevention through early detection by digital devices in your country?

Q2: What is the status of telerehabilitation of patients with AF in your country?

Q3: How is the digital data transmitted to the medical doctor in your country?

Q4: What happens next in your country, if a patient documents AF with a smart phone?

B) Reimbursement in your country

Q5: Are digital health applications and telerehabilitation in general reimbursed in your country?

C) Future directions

Q6 a): Is there potential for integrating wearable and smartphone-based detection technologies into clinical practice in your country?

- b) What is most needed in your country to improve digital health for preventing and managing AF?

EAPC
European Association of Preventive Cardiology
European Society of Cardiology

Participation by European risk regions:

Low risk: Denmark, Norway, Switzerland

Moderate risk: Germany, Iceland, Ireland, Malta, Portugal, Slovenia, Sweden

High risk: Bosnia and Herzegovina, Estonia, Poland, Türkiye

Very high risk: Georgia, Lithuania, Romania

Chair: Maryam Kavousi, Netherlands

Experts: Natasja de Groot, Netherlands & David Duncker, Germany

European Heart Network CEO: Birgit Beger, Belgium

Note: National Coordinator for Austria joined the workshop during the discussions.

EAPC
European Association
of Preventive Cardiology
European Society of Cardiology

Very high risk (presenter: Iulia Kulcsar, Romania)

Questions	Georgia	Lithuania	Romania	Observations
Q1: What is the status of AF prevention through early detection by digital devices in your country?	Holter ECG, Blood pressure, Loop recorder	Holter ECG, Blood pressure, Loop recorder	Holter ECG, Blood pressure, Loop recorder	Other devices are not yet validated
Q2: What is the status of telerehabilitation of patients with AF in your country?	Onsite rehabilitation programmes	Onsite rehabilitation programmes, Telemedicine pilot programmes (videocall) – in progress	Onsite rehabilitation programmes, Telemedicine pilot programmes (videocall) – in progress	Only 2 countries have pilot studies for telerehabilitation
Q3: How is the digital data transmitted to the medical doctor in your country?	Not implemented			
Q4: What happens next in your country, if a patient documents AF with a smart phone?	This is considered as a proof and the Medical Doctor proceeds to check if there is AF or other rhythm anomalies			
Q5: Are digital health applications and telerehabilitation in general reimbursed in your country?	No			
Q6 b: What is most needed in your country to improve digital health for preventing and managing AF?	The following would be required: • A global validation of the wearable and smartphones-based technologies to be used in clinical practice • Develop procedures and protocols to establish the reimbursement framework for telemedicine programs.			

EAPC
European Association of Preventive Cardiology
European Society of Cardiology

High risk (presenter: Baris Gungor, Türkiye):

Questions	Estonia	Bosnia & Herzegovina	Poland	Türkiye
Q1: What is the status of AF prevention through early detection by digital devices in your country?	Digital devices are well-known by the population and are used frequently. The main purposes are ECG recording and BP recording. The proportion is < 5%. The practitioners recommend these devices. The practitioners believe that these devices have a role in diagnosis and prevention of AF and HT.	No national level organisation for AF diagnosis and follow-up. Used more frequently in private hospitals. The proportion is < 5%. Younger people use it more often, and they usually don't have AF.	Almost non-existent for the patients and the doctors. < 1% of the population use digital devices for AF diagnosis. < 5 % of the cardiology cases use these devices.	< 1% of the population use digital devices for AF diagnosis. No structured system for AF diagnosis. Used at personal level or only in some private hospitals.
Q2: What is the status of telerehabilitation of patients with AF in your country?	No telerehabilitation programs	No telerehabilitation for AF patients in public hospitals but in private hospitals it is possible.	No telerehabilitation for AF patients.	Telerehabilitation systems are set in some hospitals but are not used adequately. Has great potential for cardiology patients. Cardiac rehabilitation is not used for most patients.
Q3: How is the digital data transmitted to the medical doctor in your country?	Personal transmission – but the results are included in the hospital files. Used frequently by cardiology patients.	Personal transmission usually by WhatsApp.	No digital transmission, can only show the results during follow-up visits.	E-pulse system is used commonly for primary and secondary care facilities. All laboratory and imaging data are collected in this system. But data from smart devices may be incorporated in this system if confirmed by the patient.

High risk contd. (presenter: Baris Gungor, Türkiye):

Questions	Estonia	Bosnia & Herzegovina	Poland	Türkiye
Q4: What happens next in your country, if a patient documents AF with a smart phone?	The recordings are used for diagnosis purposes, and the patients are scheduled for outpatient clinic.	Conventional methods	Everything except digital such as physical examination, echocardiography and Holter monitoring.	The patients should apply to emergency service or schedule from outpatient clinic from central system. Physician confirms the diagnosis by conventional techniques.
Q5: Are digital health applications and telerehabilitation in general reimbursed in your country?	Telerehabilitation is not reimbursed. Teleconsultation is legal.	No reimbursement for digital devices and telerehabilitation. No teleconsultation for now.	No reimbursement for digital devices and telerehabilitation.	No reimbursement. The patient should pay for telerehabilitation if applicable.
Q6 a: Is there potential for integrating wearable and smartphone-based detection technologies into clinical practice in your country?	Great potential.	Great potential.	Great potential for the system.	High potential in clinical use.
Q6 b: What is most needed in your country to improve digital health for preventing and managing AF?	Reimbursement is a major problem. Very feasible technology if reimbursed.	These technologies should be reimbursed for widespread use.	Integration between personal devices and the system is necessary.	The doctors are busy and are not eager to solve the patient's problems with digital technologies. The patients are referred to specific arrhythmia outpatient clinics.

Moderate risk (presenter: Borut Jug, Slovenia)

Theme	Iceland	Germany	Malta	Sweden	Ireland	Slovenia	Portugal
Formal AF screening	None; opportunistic checks, campaigns	None	None; GP pulse checks	None; GP puls checks	None	None; pulse campaigns	None; opportunistic checks
Public awareness	Campaigns for citizens & professionals	Limited	Campaigns, focus on primary prevention	Limited; regional campaigns	Past nurse-led lifestyle support, now weaker; awareness campaign of the Irish Heart Foundation on how to check the pulse.	National campaigns (“measure your pulse”)	Campaigns by cardiology society; pharmacies check BP/pulse
Use of devices	Opportunistic, no system pathway	Wearables upload via platform (PDF)	Holter, loops; athletes use consumer wearables	Patches, holter; loops; upload platform	holter monitors, patch and loop recorders for syncope but also after stroke to look for Paroxysmal Atrial Fibrillation (PAF)	Research projects developing devices	Holter, BP monitors in pharmacies; concern about false positives
Wearable-driven detection	Patient-initiated, private sector	Only certified apps are reimbursable; few exist	Private sector driven	Public sector integration (upload system)	Not structured	Patient-initiated, some research	Early detection possible in pharmacies; concern over false positives
Telerehabilitation	Not reimbursed	Not reimbursed	Usability study ongoing	Rehab program for ablation candidates limited access	Not reimbursed	Research pilot only	Integrated in prevention framework but not reimbursed
Reimbursement status	None	Only for certified apps (rare)	None	None	None	None	None

Moderate risk - continued (presenter: Borut Jug, Slovenia)

Key Observations

- **None of the countries have formal AF screening** – opportunistic detection dominates.
- **Awareness campaigns** are common but vary in scope and sustainability.
- **Wearables and devices** are widely available but largely patient-driven and unevenly integrated.
- **Telerehabilitation** is universally in research/pilot phase, not yet reimbursed.
- **Reimbursement** is the main bottleneck; Germany's certification pathway is an exception, but uptake is low.

In summary

The **prevention of AF remains anchored in traditional risk factor management**, with digital tools currently positioned more for detection. **Reimbursement is absent**, integration is fragmented, and uptake depends heavily on patient initiative. The future lies in **validated, reimbursed, and integrated digital solutions**, underpinned by **education, awareness, and policy harmonisation** at the European level.

Low risk (presenter: Charlotte Ingul, Norway)

Questions	Denmark	Norway	Switzerland
Q1: What is the status of AF prevention through early detection by digital devices in your country?	No status		
Q2: What is the status of telerehabilitation of patients with AF in your country?	Lifestyle modifications (according to ESC recommendations)	RCT with 300 participants with exercise intervention where a digital app has been used (NEXAF)	Lifestyle modifications (according to ESC recommendations)
Q3: How is the digital data transmitted to the medical doctor in your country?	No status, patients show data on the mobile. Photoplethysmography (PPG) alone not accepted as diagnostic, will require confirmation by long-term ECG monitoring	ECG 24/7 is opened by the medical doctor in a secure database. Otherwise, patients show data on mobile with possibility to print and store in the patients' file.	No status, show the data on the mobile
Q4: What happens next in your country, if a patient documents AF with a smart phone?	PPG alone not accepted as diagnostic. Smartphone ECG diagnostic and oral anticoagulants initiated if indicated In Norway, some invasive physiologist accept Apple watch ECG		
Q5: Are digital health applications and telerehabilitation in general reimbursed in your country?	No		
Q6 a: Is there potential for integrating wearable and smartphone-based detection technologies into clinical practice in your country?	Hand-held single lead ECG devices preferred	ECG 24/7	No
Q6 b: What is most needed in your country to improve digital health for preventing and managing AF?	• Important to involve GPs in more systematic screening approaches • Organising platforms for digital health. • Secure transmission of smart watch ECGs • Reimbursement from 65 yrs and with risk factor		

Summary I

Digital Health in AF Prevention & Management

Main barriers
Lack of formal screening programs • Most countries rely on opportunistic detection (e.g. pulse checks), with no structured national AF screening.
Low integration of digital devices • Wearables and smartphone-based tools are used informally or privately. • Data from devices is rarely transmitted securely or systematically to healthcare providers.
Limited telerehabilitation • Telerehabilitation is mostly in pilot or research phases. • No country has fully implemented or reimbursed telerehabilitation for AF patients.
No Reimbursement Framework • Digital health applications and telerehabilitation are **not reimbursed** in any country except Germany (only for certified apps, with low uptake). -> This is the **most cited barrier** across all risk groups.
Validation and Trust Issues • Many digital tools are not yet validated for clinical use. • Physicians are hesitant to rely on patient-generated data without formal protocols.
Fragmented Policies and Infrastructure • Lack of national strategies or platforms for digital health. • Data transmission is often informal (e.g. WhatsApp, showing phone screen).

Summary II

Digital Health in AF Prevention & Management

Proposed solutions
Validation of Digital Technologies • Establish **clinical validation** for wearable and smartphone-based AF detection tools. • Ensure **quality standards** for apps and devices used in healthcare.
Reimbursement Pathways • Develop **clear reimbursement frameworks** for digital health and telerehabilitation. • Include coverage for older adults and those with risk factors.
Integration into Clinical Practice • Create **secure platforms** for transmitting patient-generated data to healthcare providers. • Link wearables to national health systems (e.g. Türkiye's E-pulse model).
Education and Awareness • Train healthcare professionals on digital health tools. • Launch **public campaigns** to promote early detection and responsible use of devices.

EAPC
European Association of Preventive Cardiology
European Society of Cardiology

National Coordinators workshop

31 August at the ESC Congress 2025 in Madrid, Spain

24 participants from 20 countries

EAPC
European Association
of Preventive Cardiology
European Society of Cardiology

EAPC
European Association
of Preventive Cardiology
European Society of Cardiology