

# 1) Core data

## 1. Primary cardiovascular diagnosis and date of diagnosis

- Coronary artery disease (CAD)
- Heart failure (HFrEF / HFpEF)
- Hypertension
- Arrhythmias (AF, ventricular arrhythmias, etc.)
- Valvular heart disease
- Peripheral arterial disease (PAD)
- Congenital heart disease

## 2. Comorbidities and date of diagnosis

- diabetes
- CKD
- COPD
- dyslipidemia
- obesity

## 3. Cardiologist / primary physician - Name

and contact details

## **2) Core Investigations**

### **A. Vitals & Clinical Measurements**

- Blood pressure (clinic & home readings)
- Pulse
- Weight, BMI, waist circumference
- NYHA class( Heart Failure) - (1 - 4)
- CCS class( Angina ) - (1 - 4)

### **B. Cardiac Investigations**

#### **Electrocardiography**

Upload image

Text - Explanation of findings

#### **Cardiac imaging**

- Echocardiogram
- Upload images
- Upload report

- Text - Summary of findings

Stress test results

Coronary angiogram or CT angiography

## C. Laboratory Investigations

- Lipid profile (LDL, HDL, TG, total cholesterol)
- High-sensitivity troponin (if acute episode)
- BNP / NT-proBNP (heart failure monitoring)
- Serum creatinine → **eGFR**
- Electrolytes (Na, K, Mg)
- HbA1c (if diabetic / risk stratification)
- CRP / hs-CRP (optional)
- Thyroid function (TSH)
- Coagulation profile (INR if on warfarin)

## D. Vascular & Other Screening

- Carotid Doppler (if stroke/TIA history)
- ABI (ankle–brachial index) for PAD
- Chest X-ray (if HF / structural concerns)

## E. Risk Scores

- ASCVD risk score
- CHA<sub>2</sub>DS<sub>2</sub>-VASc score (for AF stroke risk)
- HAS-BLED score (bleeding risk if anticoagulated)
- Heart failure prognostic markers (NYHA + BNP + EF trend)

### **3) Treatment / Medications**

Use a structured database of cardiovascular drugs.

#### **A. Core Classes**

##### **Antiplatelets / Anticoagulants**

- Aspirin
- Clopidogrel / ticagrelor / prasugrel
- DOACs: apixaban, rivaroxaban, dabigatran
- Warfarin

##### **Anti-ischemic therapy / CAD management**

- $\beta$ -blockers (metoprolol, bisoprolol, carvedilol)
- Nitrates (long-acting/short-acting)
- Ranolazine
- Calcium channel blockers (amlodipine, diltiazem, verapamil)

##### **Blood pressure management**

- ACE inhibitors (e.g., enalapril, lisinopril)
- ARBs (losartan, valsartan)

- ARNi (sacubitril/valsartan for HF)
- Thiazide diuretics
- Loop diuretics
- Aldosterone antagonists (spironolactone, eplerenone)

## **Lipid management**

- Statins (high-/moderate-intensity)
- Ezetimibe
- PCSK9 inhibitors

## **Heart failure–specific therapy**

- SGLT2 inhibitors (dapagliflozin, empagliflozin)
- Ivabradine
- Hydralazine + nitrates (specific indications)

## **Arrhythmia medications**

- Amiodarone
- Digoxin
- Flecainide / propafenone (if used)

## **B. Devices & Interventions**

- Coronary stents (with dates)
- CABG (coronary bypass)
- Pacemaker
- ICD
- CRT device

## **C. Vaccinations**

- Influenza
- Pneumococcal
- COVID-19
- Others as per local guidelines

## **4) Self-Management / Lifestyle Fields**

- Home BP monitoring (frequency, averages)
- Home HR tracking (rate/rhythm alerts from wearables)
- Weight tracking & fluid monitoring (HF)
- Medication adherence (auto-logs, reminders)
- Physical activity level (minutes/week,

step count)

- Diet plan (low-salt, Mediterranean diet, calorie goals)
- Smoking status
- Alcohol intake
- Stress / sleep patterns
- Cardiac rehabilitation enrollment status
- Education completed (HF education, anticoagulation education)
- Personalized action plan (e.g., HF weight threshold, when to call doctor)

## **5) Urgent / Red-Flag Items**

### **Symptoms requiring urgent care:**

- New or worsening chest pain / pressure
- Dyspnea at rest
- Syncope or near-syncope
- Palpitations with hemodynamic instability
- Sudden unilateral limb swelling (DVT suspicion)

### **Heart failure red flags:**



- Rapid weight gain >2 kg in 2 days
- Severe leg swelling, orthopnea, PND
- Very high BNP rising trend
- Oxygen saturation <90% (new)

### **Arrhythmia-related red flags:**

- New atrial fibrillation with HR >120 at rest
- Ventricular arrhythmias noted on device / ECG

### **Blood pressure alerts:**

- SBP >180 mmHg or <90 mmHg with symptoms
- Hypertensive emergency symptoms (vision changes, confusion)

### **Device emergencies:**

- ICD shock delivered
- Pacemaker malfunction alerts

### **Laboratory/clinical triggers:**

- Sudden eGFR decline or severe hyperkalemia on ACEi/spironolactone
- Troponin elevation (suspected ACS)

### **Hospitalisations:**

- Previous hospital admissions for MI, heart failure, arrhythmias, stroke, hypertensive crisis