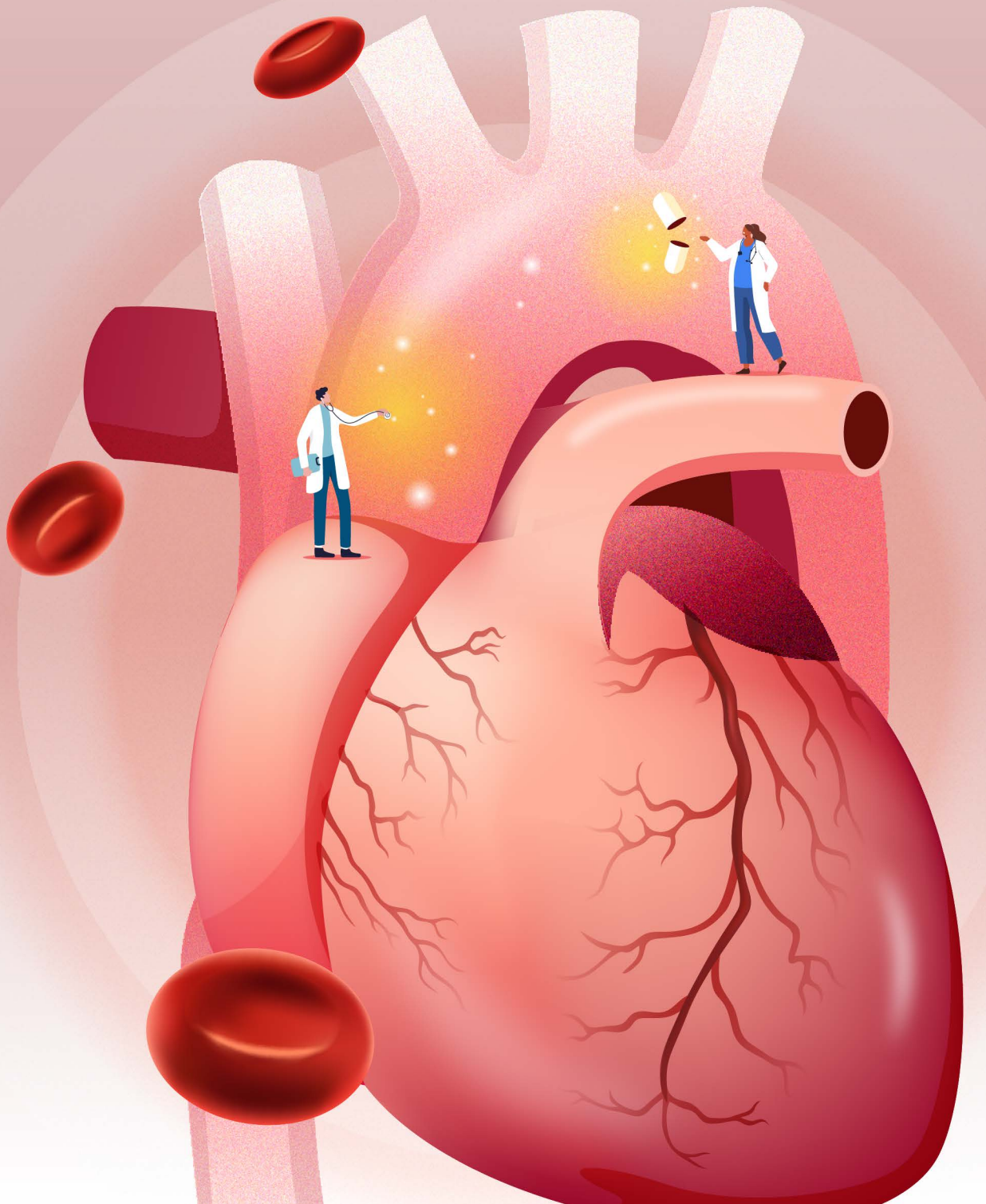
Deloitte.

ASIA-PACIFIC CARDIOVASCULAR DISEASE ALLIANCE

TACD 台灣基層糖尿病學會 Taiwan Association of Clinical Diabetes

Policy Memo: Taiwan Heart Failure Policy

March 2026



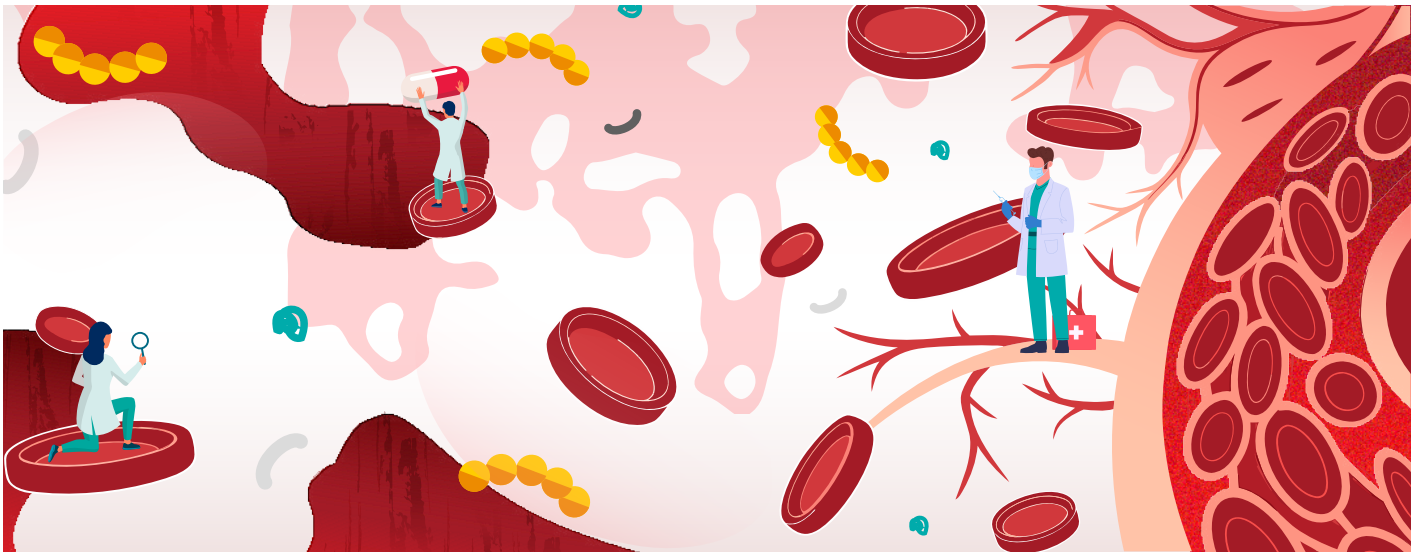
Supported by

Roche

Table of contents

1.

Executive summary



Overview

Heart failure (HF) is a growing public health challenge in Taiwan, with an age standardised prevalence of 1.40%, the highest reported in Asia Pacific. The burden is driven by an ageing population, high rates of hypertension, diabetes and coronary artery disease, and increasing survival from acute cardiovascular events, which transitions more patients into chronic HF care. Taiwan's National Health Insurance (NHI) provides broad coverage, yet gaps remain in early detection, primary care integration and long term management.

Taiwan has established one of the most comprehensive HF policy frameworks in the region, anchored by a national post acute care programme (HF–PAC) under NHI. Evidence from registries and NHIA programmes shows improving outcomes and strong momentum to integrate primary care risk screening (NT proBNP) for high risk type 2 diabetes (T2DM) cohorts, strengthen hospital to community handovers and advance value based, digitally enabled care.

Policy momentum is strong: the NHIA has outlined Family Physician Programme 2.0, the '888' chronic care goals (80% enrolment, lifestyle counselling and control), and a digital primary care platform integrated with My Health Bank. Clinically, TSOC registries show rising uptake of guideline directed medical therapy (GDMT) with improved 1 year outcomes, while HF PAC analyses demonstrate approximately 48% mortality risk reduction versus matched controls and around 90% functional improvement at programme closure. Yet key gaps persist in Taiwan's delivery system, limited NT proBNP adoption and reimbursement in primary care, fragmented hospital to community transitions, uneven rural access to diagnostics and multidisciplinary care, and the absence of codified HF quality indicators (e.g., screening rates, GDMT adherence, readmission and mortality) embedded in value based contracts and routine dashboards.

2.

Current standing of Taiwan's HF management

Prevalence, Incidence, Mortality Rate

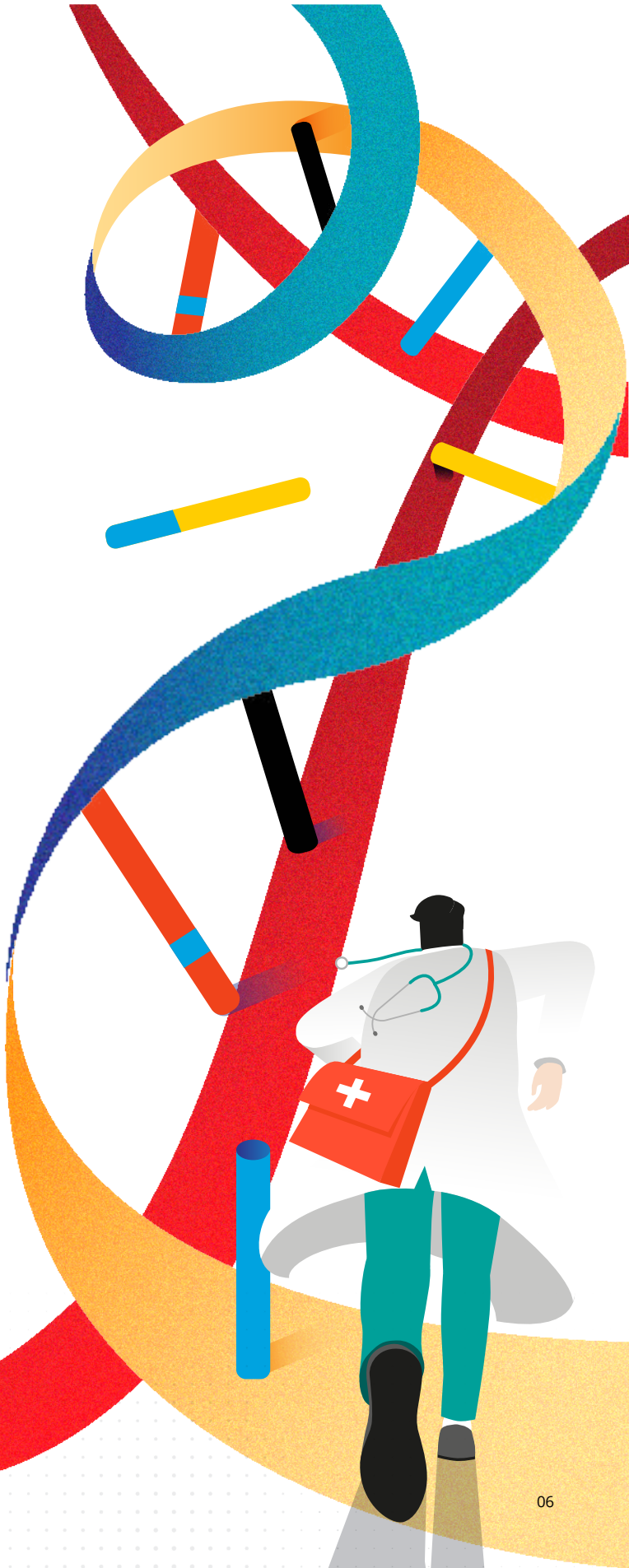
Metrics	Taiwan
Age-standardised prevalence rate (%, 2016)	1.40%
Age-standardised incidence rate (per 100,000 population, 2016)	219
Crude mortality rate at 1 year (%, 2010-2015)	8.5%

With an age standardised prevalence of 1.40%, Taiwan sits at the top of the Asia Pacific range. Continued inflow of new cases (incidence 219 per 100,000) underscores the need to move upstream, tightening control of hypertension, diabetes and coronary disease, while institutionalising early HF risk detection in primary care for high risk T2DM cohorts using NT proBNP. A crude 1 year mortality of 8.5% highlights the importance of timely diagnosis and optimisation of GDMT. Taiwan's registry gains and the HF–PAC pathway aim to bend this curve by standardising discharge, accelerating titration and ensuring community follow up, thereby reducing rehospitalisation and mortality.

Economics Burdens

Metrics	Taiwan
Total cost per patient per year (USD, 2014-2015)	$4,513
Inpatient cost per patient per year (USD, 2016)	$2,388
Length of stay (days, 2016)	9-12.5

Hospital episodes consume a substantial share of spend (USD $4,513 total annual cost per patient; USD $2,388 inpatient cost), with an average length of stay of 9–12.5 days, amplifying bed day utilisation, particularly in tertiary centres. Compressing length of stay and preventing avoidable readmissions will deliver savings and relieve capacity constraints. Policy instruments already in motion, HF–PAC, Family Physician Programme 2.0 and the digital primary care platform integrated with My Health Bank—shift care towards outpatient optimisation and continuity. Embedding clear NT proBNP SOPs and codifying HF quality indicators (screening rate, GDMT adherence, readmission, mortality) in value-based contracts will accelerate this shift.



Heart failure territory snapshot

Domains	Overall national CVD policy and planning landscape	Heart failure policy and planning landscape	Heart failure prevention & screening	Heart failure diagnosis & healthcare system capacity	Heart failure treatment monitoring and access	Heart failure advocacy, awareness and education
Taiwan						

High | Moderately high | Moderately low | Low

01. Domain 1a: Overall nationa; CVD policy & planning

- **Status:** Moderately High
- **Working:** National CVD strategy and chronic-disease plans; broad NHI coverage; digital enablement via Family Physician Programme 2.0 and My Health Bank.
- **Gaps:** Financing and adoption vary by setting; HF specific indicators not yet embedded across contracts; rural equity and workforce distribution need attention.
- **Actions:** Integrate HF screening and follow up indicators into national dashboards and value-based contracts; strengthen rural enablement using digital platforms and teleconsultations.

02. Domain 1b: HF prevention & screening

- **Status:** High
- **Working:** National HF policy implemented via HF–PAC with standardised post acute pathways; active registry culture and governance.
- **Gaps:** Translate HF–PAC learnings into primary care SOPs and indicators; improve provider confidence in biomarker cadence and documentation.
- **Actions:** Publish national SOPs for NT proBNP screening (thresholds, cadence, documentation, referral); define HF quality metrics and monitor quarterly.

03. Domain 3: HF diagnosis & system capacity

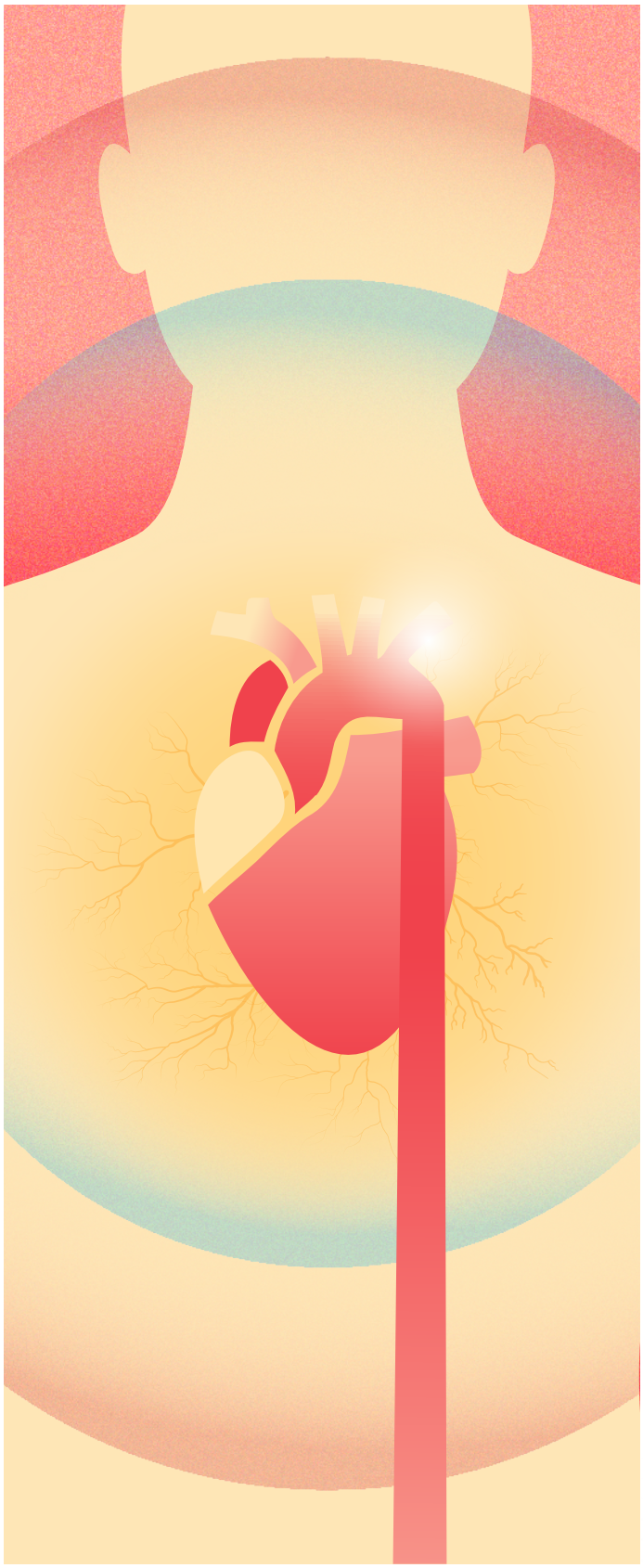
- **Status:** Moderately high
- **Working:** Guidelines endorse ECG, echocardiography, NT proBNP and high sensitivity troponin; diagnostics largely reimbursed; multidisciplinary HF teams and growing teleconsults.
- **Gaps:** Primary care biomarker use is below potential; rural access to advanced diagnostics is uneven; need for standardised PAC to primary handover kits and scheduling.
- **Actions:** Deploy PAC–primary handover tools; use digital platforms to share labs, risk flags and follow up plans across teams.

04. HF treatment monitioring & access

- **Status:** High
- **Working:** Increased GDMT uptake with improved 1 year outcomes; HF–PAC associated with ~48% mortality risk reduction and ~90% functional improvement; reimbursement expanded for SGLT2 inhibitors (LVEF ≤49%).
- **Gaps:** Periodic NT proBNP monitoring protocols are not uniformly embedded; emergency protocol timeliness and rural access to advanced therapies vary.
- **Actions:** Align monitoring protocols with NT proBNP-supported titration and STRONG HF principles where appropriate; track GDMT adherence, readmission and mortality in dashboards to drive contracting and improvement.

05. Advocacy, awareness & education

- **Status:** Moderately high
- **Working:** Active professional societies (TSOC, DAROC, TADE, TACD) drive provider education and policy dialogue; growing outreach via city hospitals and community health workers.
- **Gaps:** Limited HF specific patient organisations; public recognition of HF symptoms is suboptimal; provider awareness of screening pathways needs reinforcement.
- **Actions:** Launch provider CPD/CME and public awareness on HF symptoms and the diabetes–HF link; pilot nurse-led HF clinics and tele-GDMT for community care.



3.

Recommendations

Recommendations

A. Early detection & primary care integration

Objective: Identify high-risk individduals earlier and route them promptly to definitive diagnosis and optimised therapy.

- Embed NT proBNP screening within NHI for defined high risk T2DM cohorts (clinic POCT for triage; hospital lab confirmation).
- Issue national SOPs covering inclusion criteria, thresholds, cadence, workflow and documentation, with obesity caveats.
- Make annual NT proBNP screening a contracted quality indicator within chronic care programmes for high risk T2DM.

KPIs (0–12 months): ≤18% 30 day readmission in pilot hospitals; ≥75% follow up within 7 days; ≥90% handovers include medication reconciliation and titration plan.

B. Transitions of care & PAC-primary handover

Objective: Eliminate fragmentation between hospital discharge and community follow-up.

- Adopt a standardised PAC-primary handover toolkit with pre-booked clinic and virtual follow-ups.
- Use 30-day readmission and 6-month mortality as core outcomes in dashboards; trigger targeted case review where thresholds are exceeded.
- Scale multidisciplinary follow-up via shared digital plans and teleconsultations, prioritising rural settings.

KPIs (0–12 months): ≤18% 30 day readmission in pilot hospitals; ≥75% follow up within 7 days; ≥90% handovers include medication reconciliation and titration plan.

C. Team-based care, workforce & tele-support

Objective: Expand capacity to initiate and up-titrate GDMT, deliver education and improve adherence.

- Establish nurse led HF clinics and diabetes educator partnerships for GDMT initiation/titration and self care coaching.
- Enable tele GDMT to support rural and high volume clinics with clear escalation rules and documentation.

KPIs (0–12 months): GDMT initiated in ≥70% of eligible patients within 30 days of discharge; ≥2 tele touchpoints within 60 days post discharge.

D. Value-based payment & quality metrics

Objective: Pay for outcomes and continuous improvement.

- Define HF indicators (screening rate, GDMT adherence, 30 day readmission, 6 month mortality) and align NHIA contracts and governance dashboards.
- Introduce quality bonuses/gain sharing and recalibrate thresholds quarterly based on registry and claims data.

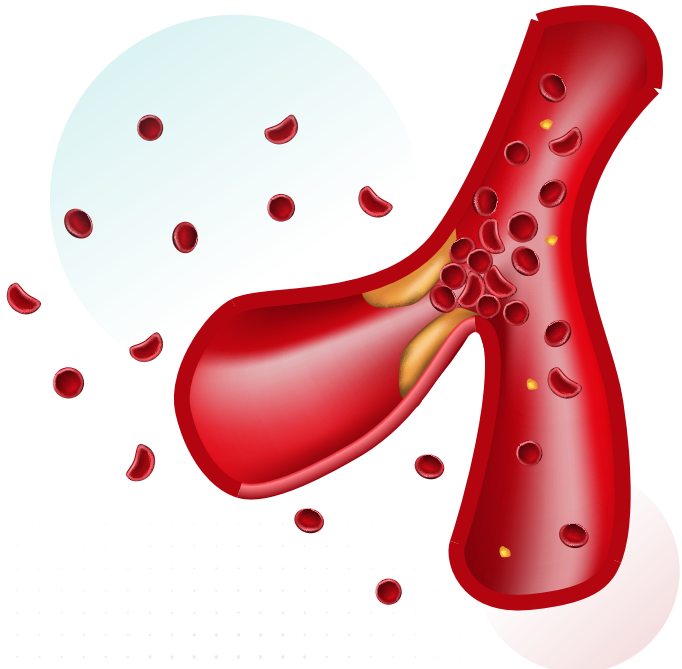
KPIs: Dashboards live by Q2 and reviewed quarterly; ≥10 percentage point improvement in GDMT adherence in pilot networks by 12 months.

E. Digital enablement & rural access

Objective: Make data flow and speacialist support available everywhere.

- Use the Family Physician Platform with My Health Bank to share labs, risk flags, handover kits and follow up plans.
- Provide teleconsultations for rural clinics; equip sites with rapid NT proBNP and clear echo referral pathways.

KPIs: Data sharing compliance in ≥85% of discharges; ≥50 rural clinics participating in teleconsultations within 12 months.



F. Education & public awareness

Objective: Raise recognition of HF symptoms and the HF–diabetes link among providers and the public.

- Run provider CPD/CME on screening SOPs, GDMT titration and PAC handovers using society toolkits.
- Launch public awareness via community health workers and city hospitals; standardise patient leaflets and SMS prompts.
- Establish a national HF patient organisation by 2028; train 2,000 community health workers by 2028.

KPIs: CPD/CME completion ≥1,000 primary care providers within 6 months; campaign reach ≥1 million impressions and ≥10,000 enquiries annually.

G. Clinical standards: Emergency

Objective: Close protocal gaps across the continuum of care.

- Update emergency protocols (diuretic and anticoagulation standards) by 2026.
- Incorporate 24 hour care protocols to reduce readmissions, leveraging HF–PAC.
- Strengthen palliative referral pathways and reimburse consultations.

KPIs: Guideline updates published by 2026 and adopted across tertiary networks; palliative referral documentation in ≥30% of advanced HF cases within 12 months.

H. Tertiary hub & national registry integration

Objective: Coordinate standards, training, complex case management and data flows.

- Establish a tertiary hub (centre of excellence) to coordinate SOPs, training, case management and data across networks.
- Integrate with a national HF registry capturing phenotype, therapy and outcomes; publish annual reports.

KPIs: Hub operational with curriculum by Q3 2026 and ≥200 clinicians trained in 12 months; registry coverage ≥60% of HF discharges in year 1.

Implementation Timeline (at-a-glance)

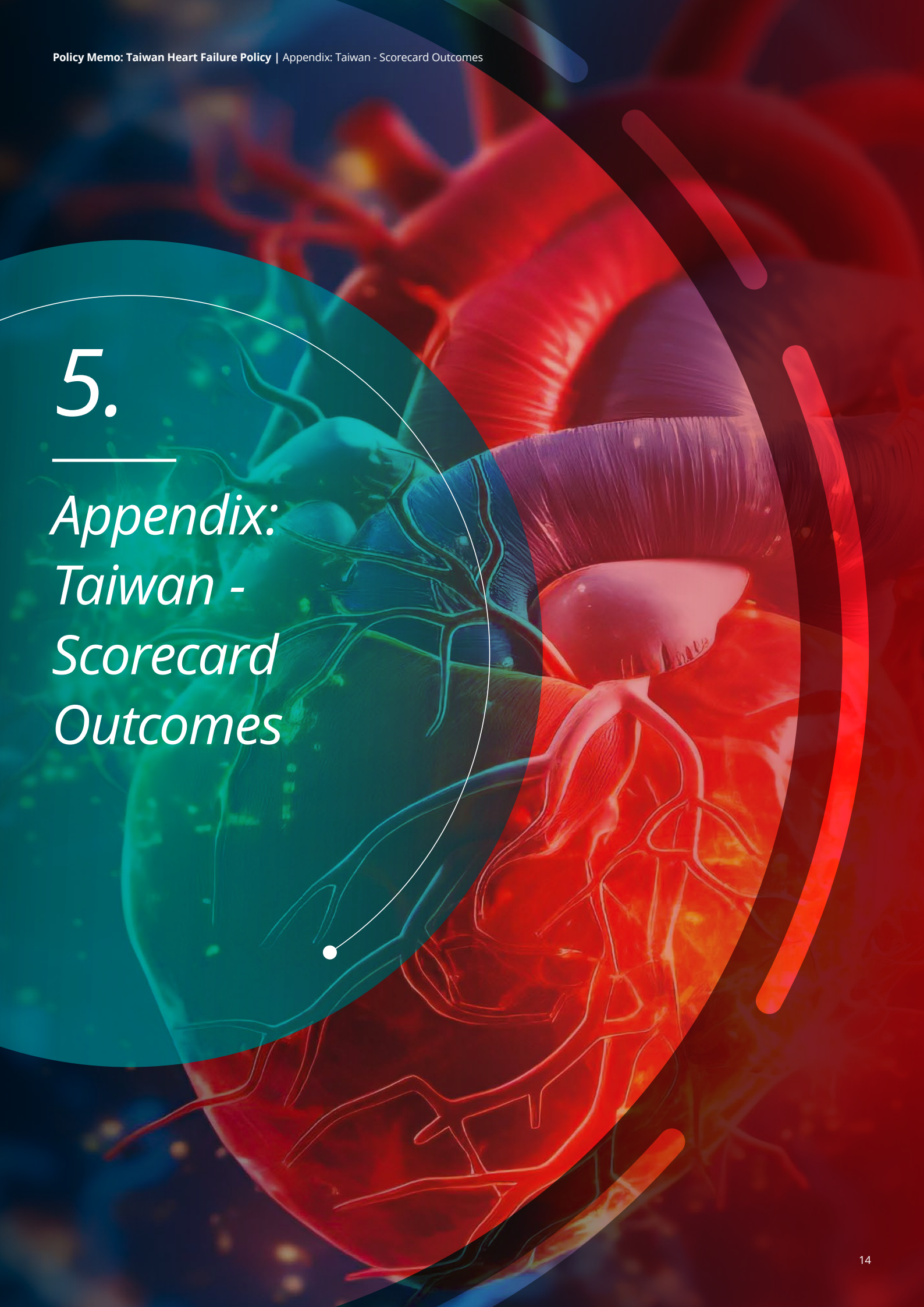
Phase	0-6 months	6-12 months	12-24 months
Policy & SOPs	Finalise NT proBNP SOPs; define quality indicators; issue reimbursement guidance.	Expand SOP adoption; refine thresholds based on pilot data.	Annual SOP review and national updates.
Pilots & handover	Launch PAC–primary handover pilots; baseline dashboards v1.	Scale pilots to additional regions; dashboards v2 with benchmarking.	National scale; continuous improvement cycles.
Workforce & telehealth	Stand-up nurse-led clinics; start tele-GDMT in pilot sites.	Expand to rural clinics; add weekend tele touchpoints.	Sustainment, credentialling and CPD refreshers.
Digital & registry	Enable platform data sharing; registry design approved.	Registry onboarding; automated indicator feeds.	National registry reports; open data extracts for research.
Payment & governance	Align NHIA contracts; cross-agency governance meets quarterly.	Introduce quality bonuses/gain sharing in pilots.	Mature value-based contracts linked to outcomes.

4.

Call to Action

Call to action

Translating these steps into funded pilots, codified SOPs and measurable value based contracts, underpinned by digital platforms (Family Physician Programme 2.0 and My Health Bank) and transparent governance dashboards, will cut late-stage HF costs, improve survival and functional outcomes, and advance equity across Taiwan. Over the next six months, the immediate priorities are to: finalise national NT proBNP SOPs and performance indicators (clear inclusion criteria, thresholds, screening cadence, workflow, documentation and obesity caveats) and issue NHIA reimbursement guidance; initiate PAC to primary handover pilots across urban and rural networks using a standardised discharge kit (medication list, GDMT titration plan, red flag guide, and pre booked clinic/virtual follow ups); define HF quality metrics (screening rate, GDMT adherence, 30 day readmission and 6 month mortality) and embed them in NHIA contracts with quarterly reporting and variance management; launch provider CPD/CME and public awareness campaigns aligned to clinic workflows; and publish the first national governance dashboard within six months, establishing baseline targets and accountability. Initial pilot targets should include ≥60% NT proBNP coverage in defined high risk T2DM cohorts, ≥80% of NT proBNP positive patients receiving echocardiography plus cardiology review within 14 days, ≤18% 30 day readmission, and demonstrable reductions in 6 month mortality versus baseline—creating the momentum for wider scale up in months 6–24.



5.

Appendix: Taiwan - Scorecard Outcomes

Scorecard results

No.	Sub-domains		Indicators		Justifications
Domain 1a: Overall national CVD policy and planning landscape					
1	Existence and operational status of a national CVD policies/ strategies/plans	**0-3** **3**	Existence and operational status of a national CVD policies/strategies/plans	**+2**	Operational national CVD policies/strategies/plans exist • National chronic disease strategy: Aims to manage multiple chronic diseases simultaneously through collaboration among clinical departments, with a focus on strengthening prevention, diagnosis, and early treatment to reduce long-term health burdens. • Adult preventive care "Health Plus" plan: Targets early detection and prevention of chronic diseases among middle-aged and elderly individuals through subsidised health examinations every three years (or annually for high-risk groups), emphasising the identification of key risk factors such as HT, hyperlipidaemia, and diabetes. • CVD roadmap: Provides a national framework to reduce the overall burden of CVD by enhancing screening and early intervention among high-risk populations, including patients with CKD, chronic inflammatory diseases, familial hypercholesterolemia, and a family history of premature MI. • Post-acute integrated care plan (HF-PAC): Establishes a comprehensive outpatient model for heart failure patients transitioning from acute treatment to rehabilitation and long-term care, involving structured follow-ups by multidisciplinary teams, proactive home monitoring, and support to reduce readmission risk.

No.	Sub-domains			Indicators		Justifications
Domain 1a: Overall national CVD policy and planning landscape						
1	Existence and operational status of a national CVD policies/ strategies/plans	**0-3**	**3**	Currency of the national CVD policies/strategies/plans	**+1**	The latest relevant one was last updated within the last 5 years (National chronic disease strategy (2023)).
2	Scope and specificity of the national CVD policies/ strategies/plans	**0-2**	**2**	Specific CVD reduction targets	**+1**	In line with global health initiatives, Taiwan has also pursued the "25 by 25" goal, which aims for a 25% reduction in premature mortality from non-communicable diseases, including CVD, by 2025[7].
				Objectives or strategies for management of acute and chronic CVD	**+1**	Strategies in place for management of acute & chronic CVD, e.g., national chronic disease strategy; Post-acute integrated care plan.
3	Coordinating mechanism for implementation	**0-2**	**1**	Dedicated national CVD progammes/initiatives	**+1**	Policies/strategies/plans have national CVD progammes/ initiatives. E.g., To mark World Heart Day, Taiwan's NHIA partnered with nine major associations to roll out clinical pathways for Atherosclerotic Cardiovascular Disease (ASCVD) risk classification and lipid management, aiming to improve CVD prevention and treatment nationwide[8].
				Joint national and regional CVD coordination mechanisms	**+0**	There is no coordination between state and subnational governments specific to CVD.
4	CVD financing	**0-4**	**3**	Dedicated budget to CVD progammes	**+0**	There's no dedicated budget to CVD progammes. (Source: Expert interview)
				Universal coverage for screening for CVD	**+1**	There's a universal coverage for screening for CVD. While specific reimbursement amount is unavailable, NHI covers preventive care, including adult health checkups, and basic screening tools. (Source: Expert interview)

No.	Sub-domains			Indicators		Justifications
Domain 1a: Overall national CVD policy and planning landscape						
4	CVD financing	**0-4**	**3**	Universal coverage for diagnostic tests and imaging for CVDs	**+1**	There's a universal coverage for diagnostic tests and imaging for CVDs. Tests =/tools e.g., Treadmill exercise test, myocardial perfusion imaging, stress echocardiography, invasive coronary angiography, cardiac biomarkers are covered by NHI (inpatient & outpatient, both primary and specialty care). (Source: Expert interview)
				Universal coverage for CVD essential medicines	**+1**	There's a universal coverage for CVD essential medicines. The NHI provides comprehensive coverage except for advanced drugs and procedures[9].
5	Existence of a population based registry	**0-1**	**0**	Existence of national registries established for CVD	**+1**	Nationwide CVD registry exists.
6	Inclusivity and equitable policy formulation	**0-1**	**1**	Policies/strategies/plans/ progammes addressing equitable access to care to CVD	**+1**	Progammes and policies addressing equitable access to care to CVD are included in nationwide insurance system. (Source: Expert interview)
Domain 1b: Heart failure policy and planning landscape						
7	Heart failure dedicated policies/strategies/plans	**0-1**	**1**	Heart failure dedicated policies/strategies/plans	**+1**	The heart failure post-acute care (HF-PAC) programme in Taiwan was founded and initiated since 2017[10].
8	Priority & specificity of heart failure in the national CVD/NCD policies/strategies/plans	**0-3**	**2**	Priority & specificity of heart failure in the national CVD/NCD policies/strategies/plans	**+1**	The heart failure post-acute care (HF-PAC) programme in Taiwan provides relevant criteria for specific policies and plans of HF care. (Source: Expert interview)
				Inclusion of desired outcomes/ targets for heart failure control	**+1**	The Joint Commission of Taiwan (JCT) provides a resource sharing platform for healthcare partners through institutional accreditation for HF care[11].

No.	Sub-domains			Indicators		Justifications
Domain 1b: Heart failure policy and planning landscape						
9	National heart failure strategy implementation	**0-2**	**2**	Percentage of healthcare regions or facilities implementing national heart failure care guidelines, such as standardised treatment protocols and follow-up care	**+2**	≥50% healthcare regions or facilities implementing national heart failure care guidelines. (Source: Expert interview)
10	Policy support for preventive care	**0-2**	**2**	National policies focused on primary prevention of heart failure (e.g., salt reduction, improved diabetes care, HT management)	**+1**	First national cardiovascular disease prevention programme (2018-2022). This programme sets control targets for hyperlipidaemia, HT, and hyperglycaemia for both the general population and high-risk groups[12].
				National policies focused on secondary prevention of heart failure (biomarkers etc.)	**+1**	Policies/strategies/plans have strategy on screening for HF risk factors e.g., First national cardiovascular disease prevention programme (2018-2022).
11	HF research and innovation	**0-4**	**4**	Funding for heart failure research: Annual investment in heart failure-specific clinical trials, basic science research, and public health research	**+1**	Annual investment is made in heart failure-specific clinical trials, basic science research, and public health research. Examples: • The national Health Research Institute (NHRI) offers integrated research grants in health and medical sciences, with CVD as one of the key focus areas. Similarly, Taipei Medical University provides research funding progammes that support studies primarily aimed at cardiovascular risk management.
				Clinical trial participation: Eligible heart failure patients enrolled in clinical trials e.g., for new therapies or medical devices	**+1**	Eligible heart failure patients are enrolled in clinical trials for new therapies or medical devices. E.g., Fusion pacing in HFpEF: This study evaluates the safety and effects of a new Fusion Pacing method in HFpEF patients (EF >50%) over 4 months, aiming to improve cardiac efficiency; participation lasts around 8 months[13].

No.	Sub-domains			Indicators		Justifications
Domain 1b: Heart failure policy and planning landscape						
11	HF research and innovation	**0-4**	**4**	Translation of research into practice: Time-to-adoption for new guidelines, therapies, and technologies from clinical trials to everyday practice	**+2**	Typical time-to-adoption for new guidelines, therapies, and technologies from clinical trials to everyday practice is from 1 to 3 years. (Source: Expert interview)
12	HF financing	**0-4**	**2**	Insurance coverage for heart failure care (Public)	**+1**	• National Health Insurance (NHI): Funded by individuals, employers, and government through premiums (incl. nonpayroll income), tobacco taxes, and lottery taxes: – Government subsidies: Offered to civil servants, union members, teachers, low-income households, military personnel, veterans, and dependents. – Financial assistance: Available for low-income individuals or those facing temporary financial hardship (e.g., relief fund loans, installment plans). – Catastrophic illness certificates: Co-payment exemptions for 30 conditions, including certain CVDs (e.g., type 1 diabetes, acute stroke), for eligible vulnerable groups. • Occupational injury/disease scheme: Labor-insured patients receive full co-pay exemption and 50% inpatient cost coverage (up to 30 days).

No.	Sub-domains			Indicators		Justifications
Domain 1b: Heart failure policy and planning landscape						
12	HF financing	**0-4**	**2**	Insurance coverage for heart failure Care (Private & Alternatives)	**+1**	• Private health insurance: For-profit insurers offer policies with disease-specific cash benefits and coverage for non-publicly funded devices, mainly for those who can afford it. • Charities & patient support progammes (PSPs): Pharmaceutical companies may assist users of their products; low-income patients may be referred to charities by the NHI administration for premium support.
13	Presence of heart failure registries	**0-1**	**1**	Presence of heart failure registries	**+1**	Nationwide registries on HF had been conducted. The Taiwan society of cardiology heart failure registry 2020 is a comprehensive and meticulous effort to demonstrate the epidemiology, adherence to guidelines, clinical outcomes, and disease progression of Taiwanese patients with HF in contemporary clinical practice[14]. The TSOC-HFrEF registry provides important insights into the current clinical characteristics and management of hospitalized decompensated systolic HF patients in Taiwan[15].

No.	Sub-domains			Indicators		Justifications
Domain 1b: Heart failure policy and planning landscape						
14	Existence of heart failure clinical guidelines	**0-3**	**3**	Existence of clinical guidelines	**+1**	Taiwan society of cardiology guideline for diagnosis & treatment of heart failure (2019, 2023, 2024)[16,17]. Guidelines of the Taiwan society of cardiology on the diagnosis and management of chronic coronary syndrome (2023).
				Currency of clinical guidelines	**+2**	The HF clinical guideline was updated till 2024 covering full spectrum of HF (both HFrEF and HFpEF).
15	HF health equity	**0-2**	**2**	Patient navigation progammes: Heart failure patients from underserved backgrounds enrolled in patient navigation progammes to improve access to care and follow-up.	**+1**	Patient navigation progammes exist for underserved communities e.g., Heart failure patients from underserved backgrounds are enrolled in patient navigation progammes to improve access to care and follow-up. E.g., The Integrated Delivery System (IDS), launched by the NHI, enhances healthcare access in rural and offshore areas by fostering collaboration between hospitals, public health centers, and clinics, ensuring regular primary care[18].
				Community-based care progammes: Community-based heart failure management progammes designed to support at-risk groups (e.g., community health workers, peer support groups)	**+1**	Community-based care progammes exist for risk groups. E.g., To mark World Heart Day, NHIA partnered with nine major associations to implement clinical pathways for ASCVD risk and lipid management. It also launched the 888 Plan to include 80% of patients with HT, hyperglycaemia, or hyperlipidaemia in shared care, ensure 80% receive lifestyle guidance, and achieve 80% control rates for these conditions[19].

No.	Sub-domains			Indicators		Justifications
Domain 2: Heart failure prevention & screening						
16	Heart failure screening guidelines	**0-7**	**7**	National heart failure clinical guidelines coverage	**+1**	National heart failure clinical guidelines cover screening for heart failure. Taiwan society of cardiology guideline for diagnosis & treatment of heart failure (2019) has no specific guideline for screening. However, guidelines of the Taiwan society of cardiology on the diagnosis and management of chronic coronary syndrome (2023) – including HF: Resting ECG and chest X-ray are recommended for screening; the biomarker-based "ABC-CCS" prediction model utilises NT-proBNP, hs-TnI or hs-TnT, and LDL-C to predict CV death and other CV outcomes[20].
				# of biomarkers included in heart failure screening guidelines (e.g. BNP/ NT-proBNP, Troponin, Soluble ST2, Galectin-3, MR-proANP)	**+2**	NT-proBNP, Hs-TnI or Hs-TnT, LDL-C.
				Inclusion of biomarker testing in screening guidelines	**+1**	Biomarkers (e.g., Natriuretic peptide-BNP or NT pro BNP) are mentioned or recommended as screening tools in the national heart failure screening guidelines.
				Inclusion of HT management	**+1**	National heart failure clinical guidelines cover HT management.
				Inclusion of diabetes control in HF	**+1**	National heart failure clinical guidelines cover diabetes control.
				Inclusion of screening for high-risk populations (e.g., older adults, patients with CAD, diabetes, or HT) for early signs of HF or related risk factors	**+1**	National heart failure clinical guidelines cover screening for high-risk populations.

No.	Sub-domains			Indicators		Justifications
Domain 2: Heart failure prevention & screening						
17	Heart failure screening funding	**0-4**	**3**	Existence of publicly funded/ reimbursed screening test for heart failure	**+1**	Heart failure screening is partially funded/reimbursed. (Source: Expert interview)
				Funding for HF screening for T2DM patients	**+1**	Screening for T2DM patients is funded/reimbursed. In Taiwan, all medical expenses from outpatient or inpatient services are covered under a nationwide insurance system with a global budget. Screening for heart failure using BNP, NT-proBNP, or hs-Troponins is reimbursed across clinical settings, unless done as part of a self-paid health check-up without medical indications. (Source: Expert interview)
				Financing mechanism for biomarkers in HF screening	**+1**	Tests using HF biomarkers (e.g., Natriuretic peptide-BNP or NT pro BNP) are reimbursed.

No.	Sub-domains			Indicators		Justifications
Domain 3: Heart failure diagnosis & healthcare system capacity						
18	Heart failure diagnosis guidelines	**0-4**	**4**	National heart failure clinical guidelines coverage	**+1**	• Taiwan society of cardiology guideline for diagnosis & treatment of heart failure (2019): For severe HF, 3D echocardiography is recommended. Routine evaluations should include HF biomarkers (BNP/ proBNP) for diagnosis and prognosis. Cardiac troponins are also recommended for suspected or newly diagnosed HF. Biomarkers are more convenient than echocardiography for initial diagnosis in outpatient or ED settings. • Taiwan society of cardiology guidelines on diagnosis and management of chronic coronary syndrome (2023): First-line diagnostic tests include coronary CT angiography (CCTA). Troponin is essential for diagnosing myocardial injury or infarction.
				# of biomarkers included in heart failure diagnosis guidelines (e.g. BNP/ NT-proBNP, Troponin, Soluble ST2, Galectin-3, MR-proANP)	**+2**	BNP, NT-proBNP, High sensitivity troponin, ST-2, Galectin-3.
				Inclusion of biomarker testing in diagnostic guidelines	**+1**	NT-proBNP tests are highly recommended for diagnosis by local guidelines in Taiwan.
19	Capacity of/availability of/access to diagnostic services	**0-8**	**2**	MRI	**+1**	Low. (0-0.14 machines per ten thousands of population)
				CT	**+1**	Low. (0-0.30 machines per ten thousands of population)

20	HF biomarker testing rate (Percentage of patients with suspected heart failure undergoing biomarkers (e.g., BNP, NT-proBNP) to confirm diagnosis)	**0-12**	**8**	Use of HF biomarkers in emergency care in public institutions	**+3**	≥ 80% of patients with suspected HF get a test using HF biomarkers (e.g., Natriuretic peptide - BNP or NT pro BNP) (Source: Expert Interview)
				Use of HF biomarkers in emergency care in private institutions	**+3**	≥ 80% of patients with suspected HF get a test using HF biomarkers (e.g., Natriuretic peptide - BNP or NT pro BNP) (Source: Expert Interview)
				Use of HF biomarkers at primary care centres in public institutions	**+1**	≤ 20% of patients with suspected HF get a test using HF biomarkers (e.g., Natriuretic peptide - BNP or NT pro BNP) (Source: Expert Interview)
				Use of HF biomarkers at primary care centers in private institutions	**+1**	≤ 20% of patients with suspected HF get a test using HF biomarkers (e.g., Natriuretic peptide - BNP or NT pro BNP) (Source: Expert Interview)
21	Capacity of workforce/availability of HF specialists (adjusted for regional distribution)	**0-4**	**3**	Cardiologists	**+3**	Moderately high (>0.66-0.90 staffs per ten thousands of population).
22	Multidisciplinary heart failure care team availability	**0-1**	**1**	Hospitals and clinics offering care from a multidisciplinary team, including cardiologists, dietitians, psychologists, and rehabilitation specialists	**+1**	Hospitals and clinics offering care from a multidisciplinary team, including cardiologists, dietitians, psychologists, and rehabilitation specialists
23	Heart failure diagnostics funding coverage	**0-3**	**2**	Existence of publicly funded/ reimbursed diagnostics test for heart failure	**+1**	Heart failure diagnostics is partially funded/ reimbursed (Source: Expert Interview)
				Financing mechanism for biomarkers in HF diagnostics	**+1**	Diagnostic tests using HF biomarkers (e.g., Natriuretic peptide - BNP or NT pro BNP) are reimbursed (Source: Expert Interview)

No.	Sub-domains			Indicators		Justifications
Domain 4: Heart failure treatment monitoring and access						
24	Heart failure treatment monitoring guidelies	**0-8**	**5**	National heart failure clinical guidelines coverage	**+1**	Taiwan Society of Cardiology Guideline for Diagnosis & Treatment of Heart Failure (2019): The use of BNP/proBNP as a prognostic predictor is recommended to monitor the effectiveness of HF therapy before hospital discharge; For patients with newly diagnosed HF, troponins can be measured to evaluate the possible etiology and predict the prognosis
				Involvement of multi-disciplinary team	**+1**	Concept of shared decision making / treatment of a multidisciplinary HF team is proposed in local HF guidelines
				Linkage to supportive/ palliative care	**+1**	Guidelines include referral pathway to supportive / palliative care services
				# of biomarkers included in heart failure treatment/ monitoring guidelines (e.g. BNP/NT-proBNP, Troponin, Soluble ST2, Galectin-3, MR-proANP)	**+1**	BNP, NT-proBNP, High sensitivity troponin.
				Inclusion of biomarker testing in treatment monitoring guidelines	**+1**	The Taiwan Society of Cardiology suggests using BNP/proBNP to monitor HF therapy effectiveness before hospital discharge; Troponins are recommended for newly diagnosed HF patients to assess aetiology and prognosis

24	Heart failure treatment monitoring guidelies	**0-8**	**5**	Inclusion of Timeliness of Heart Failure Care in the national HF clinical guideline (e.g., Heart failure patients receiving care within 24 hours of hospital admission or referral for outpatient care (especially critical in emergency or exacerbation settings))	**+0**	National heart failure clinical guidelines cover the timeliness of Heart Failure Care
				Inclusion of Emergency Care Protocols (e.g., Availability and utilization of standardized heart failure care protocols in emergency departments (e.g., early use of diuretics, anticoagulation for arrhythmia))	**+0**	National heart failure clinical guidelines cover timeliness of Heart Failure Care
25	Availability of/ access to different types of drug therapy	**0-1**	**1**	Availability/ access to heart failure therapy	**+1**	All (100%) of the Heart Failure drugs listed on the WHO Essential HF Drug List of 2023 are included in the most current national essential drugs list (NEDL)
26	Prescription of Guideline-Directed Medical Therapy (GDMT): eligible heart failure patients (EF < 40%) prescribed key medications	**0-8**	**7**	ACE inhibitors/ARBs/ARNI	**+2**	The rate of HF patients being treated with the medication is ≥ 50%. (Source: Expert interview)
				beta-blockers	**+2**	The rate of HF patients being treated with the medication is ≥ 50%. (Source: Expert interview)
				MRAs	**+2**	The rate of HF patients being treated with the medication is ≥ 50%. (Source: Expert interview)
				SGLT2 inhibitors	**+1**	The rate of HF patients being treated with the medication is < 50% (Source: Expert Interview)
27	Implementation of new therapies	**0-1**	**1**	Adoption of newer heart failure therapies (e.g., SGLT2 inhibitors, ARNI)	**+1**	Adoption of adoption of newer heart failure therapies (e.g., SGLT2 inhibitors, ARNI) is observed in the territory. E.g., SGLT2 inhibitors were approved in Taiwan in 2016.

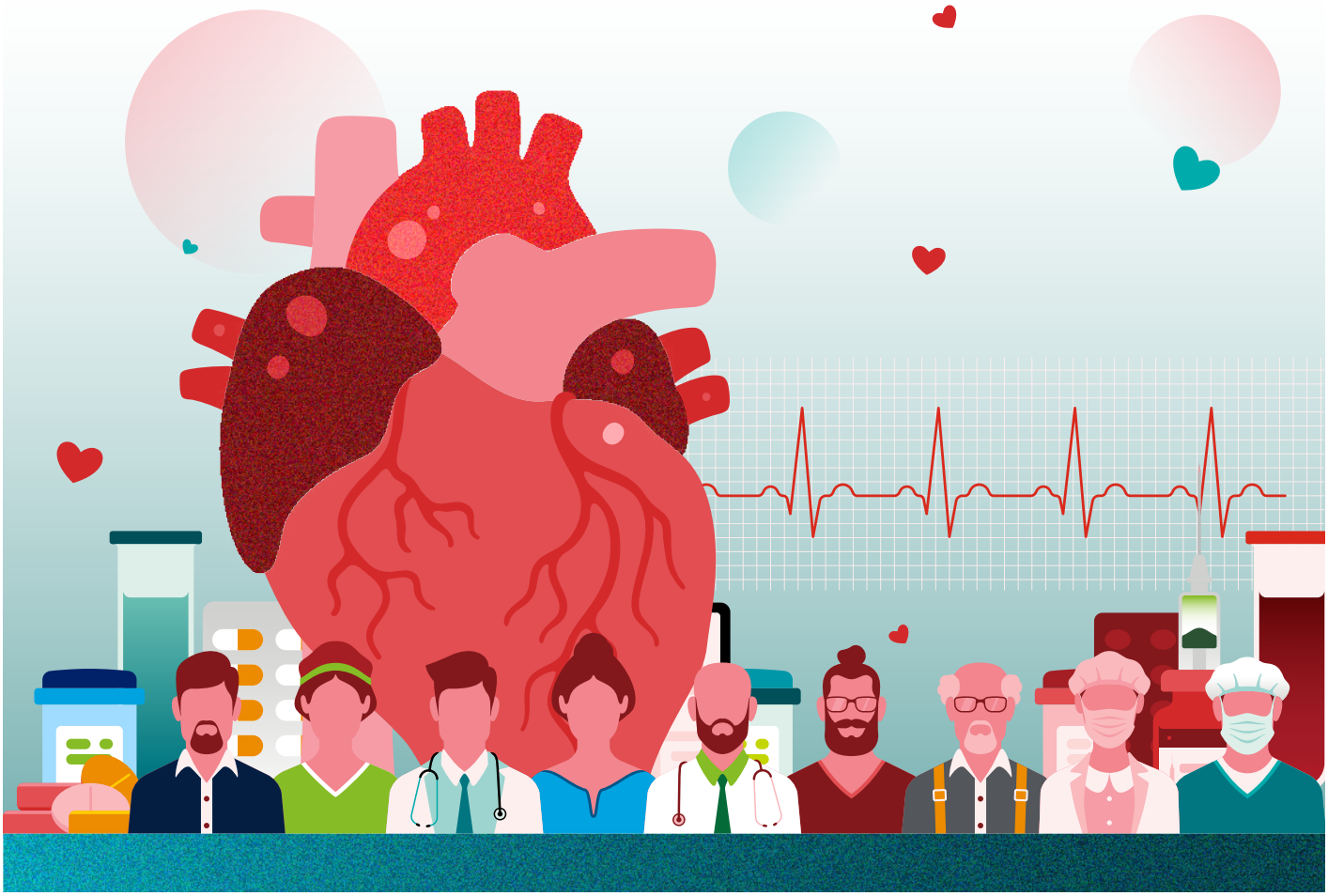
28	Use of implantable devices	**0-3**	**3**	ICDs	**+1**	The implantation is available and performed in the territory
				CRT	**+1**	The implantation is available and performed in the territory. The implantation rate of CRT was 1.9% in Taiwanese acute decompensated HF patients
				LVAD	**+1**	The implantation is available and performed in the territory. LVAD has been performed in major hospitals in Taiwan e.g., Taipei Veterans General Hospital (TPEVGH)
29	Home health medication monitoring: Heart failure patients in home health progammes receiving regular medication reviews and adjustments	**0-1**	**1**	Availability of home health medication monitoring/remote patient monitoring for people with HF	**1**	Home health medication monitoring / remote patient monitoring is available for people with HF. E.g., A study on elderly HF patients (age ≥65, LVEF <40%) from 2018 to 2019: The intervention group participated in outpatient cardiac rehabilitation and home exercise, with telemonitoring of exercise parameters. Results showed improved cardiac function, increased functional capacity, and reduced readmission rates after six months of post-acute HF management

30	Heart failure drugs funding coverage	**0-4**	**3**	Existence of publicly funded/ reimbursed drug therapy for heart failure	**+1**	Some drugs included in the WHO essential meds list for heart failure are funded/reimburse. (Source: Expert interview)
				Funding for HF management/ treatment using rapid optimisation, supported by NT-proBNP testing for HF therapies (STRONG HF)	**+1**	Funding for HF management/ treatment using rapid optimisation, supported by NT-proBNP testing for HF therapies (STRONG HF) is funded / reimbursed. HF patients follow-up testing can be conducted 1 to 3 months after treatment. Once the condition is stable, testing can be performed every 6 months. (Source: Expert Interview)
				Financing mechanism for biomarkers in HF treatment monitoring	**+1**	Tests using HF biomarkers in treatment monitoring (e.g., Natriuretic peptide-BNP or NT pro BNP) are reimbursed. (Source: Expert interview)

No.	Sub-domains			Indicators		Justifications
Domain 5: Heart failure advocacy, awareness and education						
31	Heart failure patient engagement and advocacy	**0-4**	**0**	Existence of patient organisations	**+0**	No patient organisation/ patient advocacy group which cover heart failure exist
				Participation in national heart failure policy & plan development	**+0**	No patient organisation/ patient advocacy group which cover heart failure exist
				Collaborations/participation in joint progammes with government	**+0**	No patient organisation/ patient advocacy group which cover heart failure exist
32	Heart failure civil society engagement and advocacy	**0-6**	**5**	Existence of civil society organisations (NGOs/advocacy associations etc.)	**+1**	Example: Taiwan Society of Cardiology (TSOC) promotes cardiology research, sponsors academic lectures and seminars, trains cardiology specialists and helps the government review policies and guidelines for the treatment of cardiac diseases
				Participation in national CVD/ HF policy & plan development	**+1**	TSOC contributes to the development of clinical guidelines and participates in HF/ CVD policy discussion
				Collaborations/participation in joint HF progammes with government	**+1**	Collaborations and joint programs/ initiatives, including lobbying efforts, exist between civil societies and policy groups/ ministries/government bodies. E.g., The National Health Insurance Administration (NHIA), in collaboration with nine major associations such as the Taiwan Heart Foundation and Taiwan Society of Cardiology, is implementing clinical pathways for ASCVD risk classification and lipid management to improve CVD prevention and treatment across Taiwan

32	Heart failure civil society engagement and advocacy	**0-6**	**5**	Collaborations/participation in joint progammes with the private sector	**+1**	Collaborations and joint progammes/initiatives, including lobbying efforts, exist between civil societies and the private sector. E.g., TSOC often works with private sector partners, such as pharmaceutical and medical device companies, to deliver conferences and educational progammes (e.g. Abbott, Sanofi).
				Contributions towards clinical guidelines development	**+1**	TSOC helps the government review policies and guidelines for the treatment of cardiac diseases. E.g., "2024 Guidelines of the Taiwan society of cardiology for the diagnosis and treatment of heart failure with preserved ejection fraction".
33	Heart failure educational initiatives	**0-8**	**5**	Availability of patient education progammes and support resources by the government	**+1**	Only general CVD educative program/ resource run by the government exist. E.g., Chronic Disease Risk Calculator: The Health Promotion Administration developed an online tool for individuals aged 35-70 to estimate their 10-year risk of coronary heart disease, stroke, and major cardiovascular events using health exam data
				Availability of patient education progammes and support resources by the civil society or patient organisations	**+2**	General CVD and HF educative programs/ resources run by the civil society or patient organisations exist. E.g., Organisations like the Taiwanese Association of Diabetes Educators and the Chinese Taipei Diabetes Association offer education and resources for patients managing diabetes, a significant risk factor for CVD
				Existence of community-based outreach progammes	**+0**	No programme exists.
				Educational progammes for healthcare providers	**+2**	Clinical general CVD and HF educational programs targeting towards healthcare providers exist

34	Continuous HF policy improvement progammes	**0-3**	**3**	Existence of HF continuous policy improvement progammes (policy committee meeting, pre-and post-campaign surveys, etc.)	**+1**	The Joint Commission of Taiwan (JCT) is an accreditation body in healthcare established in 1999 which aimed to provide HF continuous quality and policy improvement programs in Taiwan
				Frequency of HF continuous policy improvement progammes	**+2**	Continuous HF policy improvement progammes (policy committee meeting, pre- and post-campaign surveys, etc.) are available with a well-defined schedule.



6.

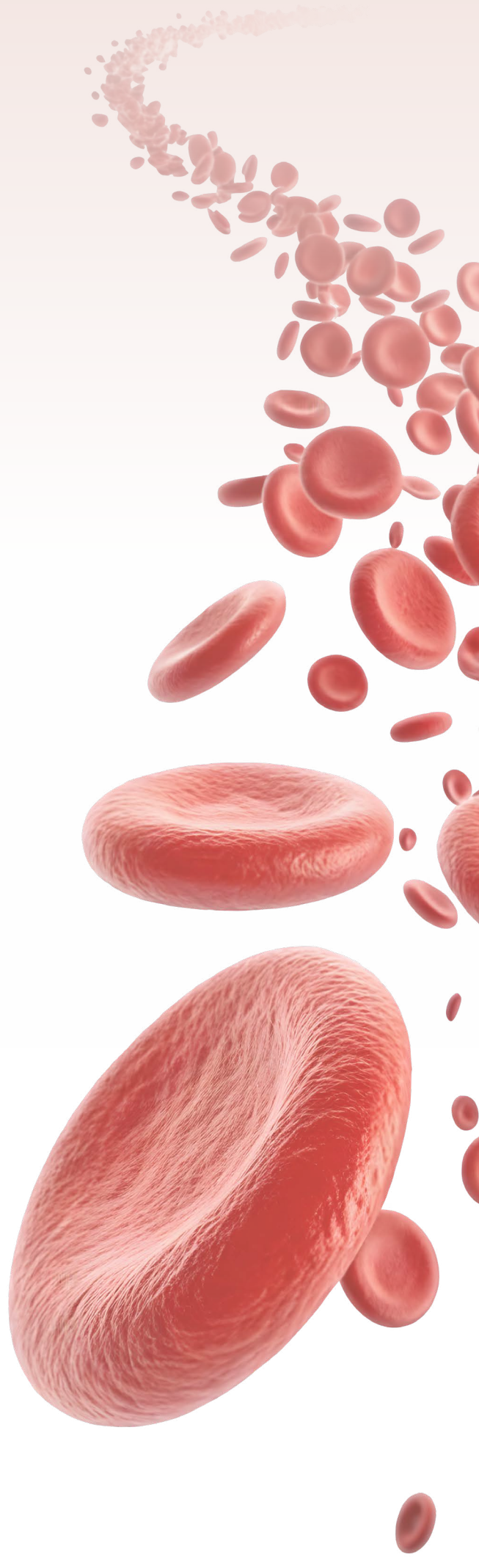
References

References

1	Chang, H.-Y., Hung, P.-L., Liao, C.-T., Hsu, C.-Y., Liao, Y.-C., Lu, K.-H. and Wang, C.-C. (2021) 'Assessing the facilities and healthcare services for heart failure: Taiwan versus European countries', Journal of the Formosan Medical Association, accepted 22 March 2021. Available at: https://heartcenter.org.tw/wp-content/uploads/2023/01/Assessing-the-facilities-and-healthcare-services-for-heart-failure-Taiwan-versus-European-countries.pdf
2	Chang, H.-Y., Wang, C.-C., Wu, Y.-W., Chu, P.-H., Wu, C.-C., Hsu, C.-H., et al. (2017) 'One-year outcomes of acute decompensated systolic heart failure in Taiwan: lessons from TSOC-HFrEF registry', Acta Cardiologica Sinica, 33(2), pp. 127–138. doi:10.6515/ACS20170202A. Available at: https://heartcenter.org.tw/wp-content/uploads/2018/04/One-Year-Outcomes-of-Acute-Decompensated-Systolic-Heart-Failure-in-Taiwan-Lessons-from-TSOC-HFrEF-Registry.-.pdf
3	Chen, L Y. (2025) 'The current situation of HF policy and management in Taiwan'. Presentation at Taiwan Heart Failure Policy Forum, Taipei, 6 December 2025. NHIA
4	Chiang, C.-E., Hung, C.-L., Wu, Y.-W., Lin, T.-H., Ueng, K.-C., Sung, S.-H., et al. (2023) '2023 Consensus of Taiwan Society of Cardiology on the pharmacological treatment of chronic heart failure', Acta Cardiologica Sinica, 39(3), pp. 361–390. doi:10.6515/acs.202305_39(3).20230301a. Available at: https://europepmc.org/article/MED/37229331
5	Cho, M.-C., Choi, D.-J., Wu, T.-C., Yingchoncharoen, T., Ong, T.-K. and Liew, H.-B. (2017) 'Burden of disease of heart failure in Asian countries: a retrospective non-interventional study (Pan-Asia BOD)', European Heart Journal, 38(suppl_1), ehx502.P1495. doi:10.1093/eurheartj/ehx502.P1495. Available at: https://academic.oup.com/eurheartj/article/38/suppl_1/ehx502.P1495/4088637
6	Figure 9 Annual patient numbers of device and ablation procedures of. . . (n.d.). ResearchGate. Available at: https://www.researchgate.net/figure/Annual-patient-numbers-of-device-and-ablation-procedures-of-Taiwan-in-2020-Top_fig4_374238705.
7	Hung-Yu Chang, Chia-Te Liao, An-Ning Feng & Kuan-Hung Yeh, 2020, 'Underutilization of cardiac resynchronization therapy in Taiwanese heart failure patients with reduced ejection fraction', Strait Circulation Journal (September), doi.org/10.6907/SCJ.202009_2(3).0001.
8	Hung, C L. (2025) 'Taiwan case study: Policy and dedicated resources for CVD and HF in Taiwan'. Presentation at Taiwan Heart Failure Policy Forum, Taipei, 6 December 2025. MacKay Medical University.
9	Hung, C.L., Chao, T.F., Tsai, C.T., Liao, J.N., Lim, S.S., Tuan, T.C., Chen, T.J., Chan, Y.H., Chen, S.A. and Chiang, C.E., 2023. Prevalence, incidence, lifetime risks, and outcomes of heart failure in Asia: a nationwide report. Heart Failure, 11(10), pp.1454-1456.
10	Hsieh, C.-L., Chung, C.-Y., Chen, H.-Y., Shieh, S.-H., Hsieh, M.-S. & Hsieh, V.C.-R., 2023b, 'Bridging geographical disparities across 368 townships with healthcare system and socioeconomic factors in Taiwan', Scientific Reports 13(1), doi.org/10.1038/s41598-023-42124-y.
11	Joint Commission of Taiwan. Available at: https://www.jct.org.tw/mp-2.html.
12	Journal of the American Medical Directors Association (2023) 'Policy-driven post-acute care program lowers mortality rate and medical expenditures after hospitalization for acute heart failure: a nationwide propensity score–matched study', 24(7), pp. 978–984.e4. Available at: https://www.jamda.com/article/S1525-8610(23)00323-7/fulltext
13	Joint Commission of Taiwan n.d., Mission, Vision, and Values. Available at: https://www.jct.org.tw/cp-1134-8350-8e49b-2.html.
14	Khicha, N. et al., 2021, Shaping the Cardiovascular Disease Access Policy Landscape Taiwan, White Paper. Available at: https://www.iqvia.com/-/media/iqvia/pdfs/asia-pacific/white-papers/cvd/taiwan_shaping-cvd-access-strategy-policy-landscape-_iqvia_veng.pdf.
15	Li, Y.-H., Wang, C.-C., Hung, C.-L., Wu, Y.-W., Hsu, C.-H., Tsou, Y.-L., et al. (2024) '2024 Guidelines of the Taiwan Society of Cardiology for the diagnosis and treatment of heart failure with preserved ejection fraction', Acta Cardiologica Sinica, 40(2), pp. 148–171. doi:10.6515/ACS.202403_40(2).20240206A. Available at: https://www.tsoc.org.tw/index_en.php?action=journal&do=list&cid=1&id=333
16	N.d., ClinicalTrials.gov. Available at: https://clinicaltrials.gov/study/NCT01045291?locStr=Taiwan&territory=Taiwan&cond=Heart%20Failure&page=2&rank=16.
17	National Health Insurance Administration Ministry of Health and Welfare, 2024c, 'Preventing Cardiovascular Diseases: A Healthy Taiwan Policy for heart health-', in National Health Insurance Administration Ministry of Health and Welfare. Available at: https://www.nhi.gov.tw/en/cp-15625-67226-8-2.html.

18	National Health Insurance Administration (NHIA) (2025) 'Make the most of the "Family Physician Platform" to stay on top of your patients' health!', NHIA News, 13 February 2025. Available at: https://www.nhi.gov.tw/en/cp-17915-54b51-8-2.html
19	National Health Insurance Administration Ministry of Health and Welfare (2024) Preventing Cardiovascular Diseases: A Healthy Taiwan Policy for heart health. Available at: https://www.nhi.gov.tw/en/cp-15625-67226-8-2.html.
20	NHIA (2024) 'NHI to expand coverage for new drugs, aligning with international standards from February 1, 2025', NHIA News, 19 December 2024. Available at: https://www.nhi.gov.tw/en/cp-17912-b65e4-8-2.html
21	NHIA (2024) 'NHIA collaborates with Google to usher in a new era of AI-powered healthcare in Taiwan', NHIA News, June 2024. Available at: https://www.nhi.gov.tw/en/cp-15274-e2281-8-2.html
22	*NHIA (2025) 'NHI's Family Physician Program 2.0 safeguards the health of patients with diabetes', NHIA News, 9 April 2025. Available at: https://www.nhi.gov.tw/en/cp-18110-45550-8-2.html*
23	NHIA (n.d.) 'My Health Bank'. Available at: https://www.nhi.gov.tw/en/cp-1062-cda7e-124-2.html
24	Reyes, E.B., Ha, J.W., Firdaus, I., Ghazi, A.M., Phrommintikul, A., Sim, D., Vu, Q.N., Siu, C.W., Yin, W.H. and Cowie, M.R., 2016. Heart failure across Asia: same healthcare burden but differences in organization of care. International journal of cardiology, 223, pp.163-167.
25	Shao, Y.-H.J., Chen, W.-T., Yu, S.M.-W., Tsou, L.L.-A., Hsu, Y.-H., Wu, M.-S., Kao, Y.-H., Chou, C.-L., et al., 2024, 'Investigation of cardiorenal outcomes and incidence of genitourinary tract infection after combined SGLT2 inhibitor and ACEI/ARB use in patients with chronic kidney disease stages 3-5: A real-world retrospective cohort study in Taiwan', International Journal of Medical Sciences 21(11), 2109–2118, doi.org/10.7150/ijms.96969.
26	Sundaram, V.A.R.U.N., Nagai, T., Chiang, C.E., Reddy, Y.N., Chao, T.F., Zakeri, R., Bloom, C., Nakai, M., Nishimura, K., Hung, C.L. and Miyamoto, Y., 2022. Hospitalization for heart failure in the United States, UK, Taiwan, and Japan: an international comparison of administrative health records on 413,385 individual patients. Journal of Cardiac Failure, 28(3), pp.353-366.
27	Su, S.-Y., Lee, W.-C., Chen, T.-T., Wang, H.-C., Su, T.-C., Jeng, J.-S., Tu, Y.-K., Liao, S.-F., et al., 2017, 'An evaluation of the 25 by 25 goal for premature cardiovascular disease mortality in Taiwan: an age-period-cohort analysis, population attributable fraction and national population-based study', Heart Asia 9(2), e010905, doi.org/10.1136/heartasia-2017-010905.
28	Taiwan Society of Cardiology. Available at: https://www.escardio.org/The-ESC/Affiliated-Cardiac-Societies/taiwan-society-of-cardiology.
29	Tsai, W.-J., Wen, Y.-K., Cheng, Y.-Y., Huang, J.-L. & Chen, Y.-W., 2022, 'Effectiveness of home-based telerehabilitation programs on functional capacity and cardiac function in elderly heart failure patients: A prospective longitudinal study', Medicine 101(28), e29799, doi.org/10.1097/md.0000000000029799.
30	Tsuei, S.H.-T., 2024, 'Reflection on 30 years of Taiwanese national health insurance: Analysis of Taiwanese health system progress, challenges, and opportunities', Journal of the Formosan Medical Association 123, S180–S187, doi.org/10.1016/j.jfma.2024.07.030.
31	Ueng, K.-C., Chiang, C.-E., Chao, T.-H., Wu, Y.-W., Lee, W.-L., Li, Y.-H., Ting, K.-H., Su, C.-H., et al., 2023, '2023 Guidelines of the Taiwan Society of Cardiology on the Diagnosis and Management of Chronic Coronary Syndrome.', PubMed 39(1), 4–96, doi.org/10.6515/acs.202301_39(1).20221103a.
32	Ueng, K.-C., Chiang, C.-E., Chao, T.-H., Wu, Y.-W., Lee, W.-L., Li, Y.-H., Ting, K.-H., Su, C.-H., et al., 2023, '2023 Guidelines of the Taiwan Society of Cardiology on the Diagnosis and Management of Chronic Coronary Syndrome.', PubMed 39(1), 4–96, doi.org/10.6515/acs.202301_39(1).20221103a.
33	Wang, C.-C., Chang, H.-Y., Yin, W.-H., Wu, Y.-W., Chu, P.-H., Wu, C.-C., et al. (2016) 'TSOC-HFrEF registry: A registry of hospitalised patients with decompensated systolic heart failure: description of population and management', Acta Cardiologica Sinica, 32, pp. 400–411. Available at: https://europepmc.org/articles/PMC4963416/
34	Wang, T., Huang, S., Wang, C., Lin, F., Chen, H. & Hsiao, F., 2020b, 'Nationwide trends in incidence, healthcare utilization, and mortality in hospitalized heart failure patients in Taiwan', ESC Heart Failure 7(6), 3653–3666, doi.org/10.1002/ehf2.12892.
35	Wang, C.-C., Wu, C.-K., Tsai, M.-L., Lee, C.-M., Huang, W.-C., Chou, H.-H., et al. (2019) '2019 Focused update of the guidelines of the Taiwan Society of Cardiology for the diagnosis and treatment of heart failure', Acta Cardiologica Sinica, 35, pp. 244–283. Available at: https://cghdpt.cgmh.org.tw/
36	Wang, C Y. (Steven) (2025) 'Taiwan's HF care model under national health insurance'. Presentation at Taiwan Heart Failure Policy Forum, Taipei, 6 December 2025. National Taiwan University Hospital.

37	Wang, P.-Y., Lin, W.-C., Hsieh, P.-C., Lin, S.-H., Liu, P.-Y., Chao, T.-H. and Hsu, C.-H. (2022) 'The effects of post-acute care in patients with heart failure in Taiwan: a single-centre experience', Acta Cardiologica Sinica (article record). Available at: https://researchoutput.ncku.edu.tw/en/publications/the-effects-of-post-acute-care-in-patients-with-heart-failure-in-/
38	*Wang, T.-D., Huang, S.-T., Wang, C.-Y., Lin, F.-J., Chen, H.-M. and Hsiao, F.-Y. (2020) 'Nationwide trends in incidence, healthcare utilization, and mortality in hospitalized heart failure patients in Taiwan', ESC Heart Failure, 7, pp. 3653–3666. doi:10.1002/ehf2.12892. Available at: https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/ehf2.12892?download=true*
39	Wang, T., Huang, S., Wang, C., Lin, F., Chen, H. & Hsiao, F., 2020b, 'Nationwide trends in incidence, healthcare utilization, and mortality in hospitalized heart failure patients in Taiwan', ESC Heart Failure 7(6), 3653–3666, doi.org/10.1002/ehf2.12892.
40	Yingchoncharoen, T., Wu, T.-C., Choi, D.-J., Ong, T.-K., Liew, H.-B. and Cho, M.-C. (2021) 'Economic burden of heart failure in Asian countries with different healthcare systems', Korean Circulation Journal, 51(8), pp. 681–693. doi:10.4070/kcj.2021.0029. Available at: https://e-kcj.org/pdf/10.4070/kcj.2021.0029
41	Yingchoncharoen, T., Wu, T.C., Choi, D.J., Ong, T.K., Liew, H.B. and Cho, M.C., 2021. Economic burden of heart failure in Asian countries with different healthcare systems. Korean circulation journal, 51(8), pp.681-693.
42	生福利部中央健康保險署, 114AD, '衛生福利部中央健康保險署',in 衛生福利部中央健康保險署. Available at: https://www.nhi.gov.tw/en/cp-15625-67226-8-2.html.
43	台北, 2023, NTUH introduces new heart procedure, Taipei Times, 11 January. Available at: https://www.taipeitimes.com/News/taiwan/archives/2023/01/12/2003792462.
44	日期: 103 年 10 月 4 日(週六) –5 日(週日) 地點：香格里拉 台南遠東國際大飯店 B1 ~B2, n.d. Available at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiS5cm4sp
45	台北時報, 2021, HPA urges use of risk calculator for heart disease, Taipei Times, 4 September. Available at: https://www.taipeitimes.com/News/taiwan/archives/2021/09/05/2003763833?utm_source=chatgpt.com.



Deloitte.

Designed by CoRe Creative Services. RITM2368799