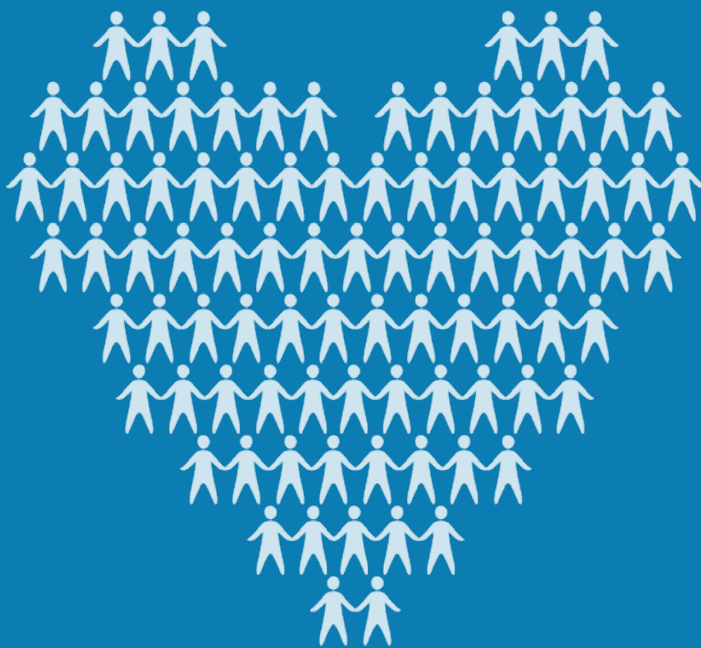


Preventing hospital admissions in heart failure

A European case study for building resilience
and sustainability of healthcare systems



The Heart Failure Policy Network is an independent, multidisciplinary platform made possible with financial support from AstraZeneca, Vifor Pharma and Novartis Pharma. The content produced by the Network is not biased to any specific treatment or therapy. All outputs are guided and endorsed by the Network's members. All members provide their time for free.



**The Heart
Failure Policy
Network**

March 2021

About this case study

This report was produced by the Heart Failure Policy Network (HFPN), which works to achieve meaningful improvements in heart failure policy and care. It was written by Ed Harding, Stephanie Whelan and Marissa Mes, and edited by Madeleine Murphy and Kasia Trojanowska.

Please cite as: Heart Failure Policy Network. 2021. *Preventing hospital admissions in heart failure: A European case study for building resilience and sustainability of healthcare systems*. London: HFPN.

To view our work so far, please visit: www.hfpolicynetwork.org

Key HFPN publications include:

- [Heart failure policy and practice in Europe](#) (2020) – a pan-European report and standalone country profiles investigating heart failure policy, system performance and care delivery in 11 European countries.
- [The handbook of multidisciplinary and integrated heart failure care](#) (2018) – a report making the case for best-practice multidisciplinary and integrated care throughout the care journey for the person with heart failure. It identifies key components of quality in heart failure care and barriers to implementing best-practice care across Europe.

In this report, we have made links to existing HFPN materials where relevant. Although material published by the HFPN is predominantly European in scope, our synthesis of key findings and models of best-practice heart failure care is likely to be of high relevance to a global audience.

About the Heart Failure Policy Network

The HFPN is an independent, multidisciplinary platform which has been active since 2015, made possible with financial support from AstraZeneca, Vifor Pharma and Novartis Pharma. The content produced by the Network is not biased to any specific treatment or therapy.

The HFPN Secretariat maintains core capacity to react to policy awareness and engagement opportunities initiated by third parties. This report was initiated in response to an invitation from the Partnership for Health System Sustainability and Resilience (PHSSR), founded by the World Economic Forum, the London School of Economics and Political Science and AstraZeneca, and constitutes part of the 2020–21 HFPN general programme of activity.

Contact

The HFPN is hosted by The Health Policy Partnership, 68–69 St Martin's Lane, London WC2N 4JS, UK. For more details, please see www.healthpolicypartnership.com

Contents

Introduction	4
What is heart failure?	4
What is the burden of heart failure?	4
Heart failure and the policy agenda	5
Reducing hospitalisations in heart failure: an offer policymakers cannot refuse	7
The comprehensive model of heart failure care	9
Building resilience and sustainability in heart failure: what does it mean?	12
Health system governance	13
Health system financing	14
Service delivery	15
Medications and technology	16
Political support and public acceptability	17

Introduction

What is heart failure?

Heart failure (HF) is a highly prevalent syndrome, which occurs when the heart becomes too weak or stiff to pump enough blood to meet the body's needs.¹

People with HF experience various physical and emotional symptoms such as shortness of breath, extreme fatigue, swelling (especially of the lower limbs and abdomen), sleeping difficulties, chest pain and depression.² Symptoms are often severe and people with HF describe it as life-changing, with a huge physical and psychological burden limiting routine aspects of everyday tasks such as climbing stairs, showering, shopping and cooking.³⁻⁵

Consequently, many people with HF report a poor quality of life, which is associated with high hospitalisation and mortality rates.² Quality of life and survival in HF are worse than in many common forms of cancer.^{6,7}

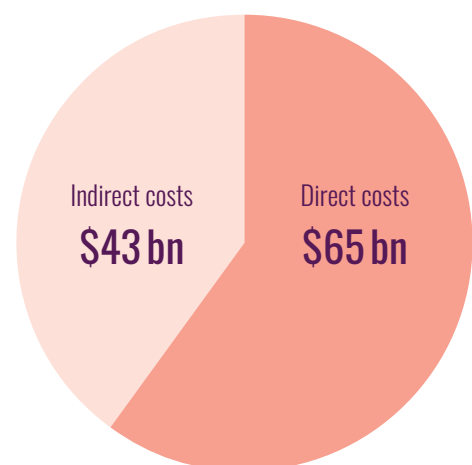
What is the burden of heart failure?

One in five people can expect to be diagnosed with HF at some point in their lives.⁸ There are currently around 64 million people living with HF worldwide,⁹ with a prevalence in Europe and North America (US and Canada) estimated at about 2% of the population.^{1,10-12} Patterns of population ageing and lifestyle and behavioural risk factors suggest that the number of people living with HF will rise.^{11,13}

Despite significant medical advances in the diagnosis and management of HF, it remains a leading global healthcare challenge. The total global economic cost of HF was estimated in 2012 to be USD \$108 billion every year, of which direct costs accounted for approximately \$65 billion and indirect costs \$43 billion (*Figure 1*).¹⁴ Hospitalisations and inpatient care account for up to 87% of spending associated with HF,¹⁵ and the syndrome is a leading cause of hospitalisation in the US and Europe, accounting for 1–2% of all admissions.¹⁶

Yet general awareness of HF and its impact remains low. Understanding of HF must therefore be improved among the public, healthcare professionals and decision-makers to overcome long-standing policy inertia.

Figure 1. Global economic cost of heart failure, 2012¹⁴



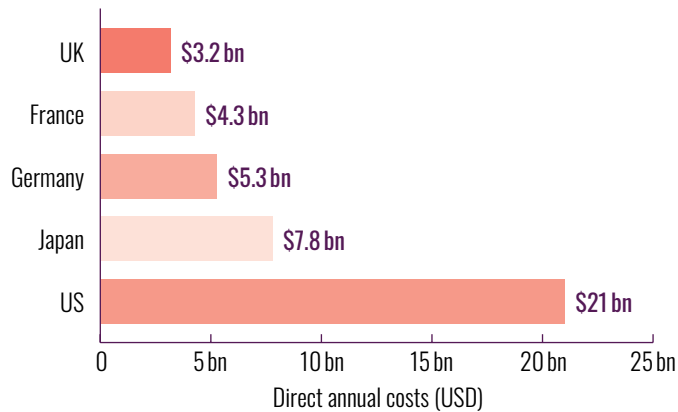
Heart failure and the policy agenda

In 2011, the United Nations (UN) held a meeting on the prevention and control of non-communicable diseases (NCDs), which included cardiovascular diseases.

This meeting led to the development of the NCD Global Monitoring Framework, which would enable global tracking of progress in preventing and controlling NCDs. The framework set out an overarching target of achieving a 25% relative reduction in overall mortality from NCDs by 2025.¹⁷ In 2013, in the wake of the first UN Global Summit on NCDs, governments around the world committed to reducing premature mortality due to NCDs by one third by 2030.¹⁸ This goal was later integrated into the UN Agenda for Sustainable Development, with Sustainable Development Goal 3.4 focusing on reducing mortality from NCDs and achieving universal health insurance for all.¹⁹

Reducing the burden of HF is essential to achieving these goals. Despite improvements in treatment and care in the past two decades, the burden of HF remains high. HF is the most common cause of hospital admission in people over the age of 65 and the most common cause of unplanned admissions for all age groups.^{13,20} In some European countries, mortality from HF is higher than from several common cancers in both men (prostate and bladder cancer) and women (breast cancer).⁶ In 2014, a study in France found that the survival rate for people after hospitalisation with HF was 89% at one month, 71% at one year and 60% at two years.²¹

Indirect societal costs and productivity losses from HF are substantial. Direct annual costs for HF have been estimated as USD \$21 billion in the US, \$7.8 billion in Japan, \$5.3 billion in Germany, \$4.3 billion in France and \$3.2 billion in the UK (*Figure 2*).¹⁴ The economic impact of HF is compounded by significant indirect costs, mostly owing to the demands on partners or other family members to provide care.^{22,23} Indirect costs also relate to lost productivity of people with HF, and use of sickness benefits or welfare schemes. Working-age people with HF may struggle to return to employment, for example where there is stress, a requirement to stand for long periods or heavy physical work.²⁴ In Denmark, data from 1997–2012 show that one in four people did not return to work in the year following their first hospitalisation for HF.²⁵ HF is more likely to reduce people's workforce participation than asthma, diabetes, coronary heart disease or osteoarthritis.¹¹

Figure 2. Estimated direct annual costs of heart failure in five countries, 2014¹⁴

Awareness and recognition of HF are still too low among decision-makers and the wider public. Few members of the general public appear to understand the symptoms and seriousness of HF: a recent survey across several countries found that more than half of respondents were unable to correctly identify the definition of HF among a list of definitions of cardiovascular diseases, and only 11% recognised that half of people with HF die within five years of their diagnosis.⁹ Of particular concern is that many policymakers may not grasp the scale of mortality arising from HF in their societies, nor the major role of HF in driving hospital admissions. Roughly one third of policymakers believed accidents were the number one reason for avoidable hospital admissions in their country; only 12% correctly identified the number one reason as HF.⁹ Only 4% of policymakers recognised that as much as 87% of government spending on HF is associated with hospitalisations.

To date, HF has received little strategic attention from governments. Poor recognition of HF among decision-makers and the wider public appears to translate into its low prioritisation in long-term national healthcare plans and policies, and few countries have generated strategic plans to better manage HF and improve patient outcomes.²⁶ In addition, other cardiovascular or NCD policy initiatives typically neglect HF, despite its relevance.²⁷⁻³⁰ Partly as a result, HF care typically remains beset by chronic shortages of specialists, diagnostics, rehabilitation and other services, and people living with HF experience significant barriers to achieving guideline-based care and management.^{11 26}

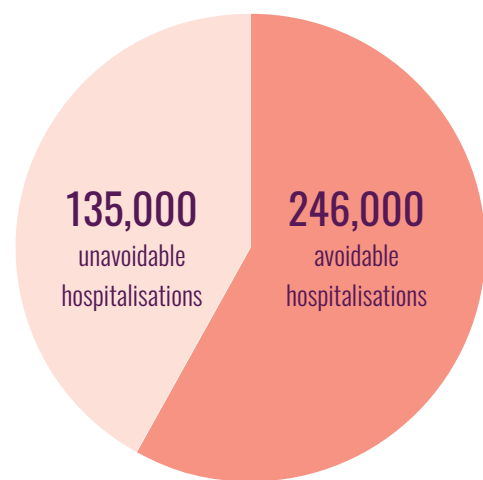
Now is the time to act – we have effective, evidence-based care models in HF, suitable for long-term mainstream implementation, which must be applied without delay. High-level government strategies and plans should commit to delivering on clear goals to reduce avoidable hospitalisations and improve outcomes for people living with HF, not least by readying workforce and organisational structures to consistently provide HF disease management approaches in the non-acute setting. Improving knowledge of HF among national officials and the public is likely to be a vital first step in prioritising this population in decision-making.

Reducing hospitalisations in heart failure: an offer policymakers cannot refuse

HF is not only a major driver of hospitalisation and bed days, but also a leading opportunity to reduce preventable admissions.

It has been identified by the Organisation for Economic Co-operation and Development (OECD) as the leading cause of preventable hospitalisations in Europe, followed by chronic airway diseases, diabetes and hypertension (*Table 1*).³¹ The scale of opportunity is compelling. For example, a World Health Organization (WHO) expert panel in Germany estimated that of 381,000 annual admissions for HF, 64% were preventable, equivalent to 246,000 hospitalisations per year in Germany alone (*Figure 3*).³² Similar findings were generated in an expert panel exercise undertaken by the WHO in Portugal.³³

Figure 3. Heart failure hospitalisations in Germany³²



Hospitalisations are the dominant driver of healthcare costs in HF. The financial burden of HF is significant,^{34,35} and hospitalisations and inpatient care account for up to 87% of HF health costs.^{9,15} In 2015, there were over 1.7 million hospital admissions for HF in the European Union alone, with a mean duration of 9.5 days (*Table 1*).³¹ The average length of stay for a person with HF is longer than that for people with chronic airway diseases, diabetes or hypertension.³¹ Political urgency also arises from the need to mitigate expected future increases in demand. In the UK, for example, HF hospital admissions have been projected to rise by 50% between 2010 and 2035,^{13,36} making HF one of the fastest-growing causes of hospitalisation.³⁷

Table 1. Hospital admissions in the European Union for five chronic conditions, 2015³¹

	Heart failure	Diabetes	Hypertension	Chronic airway diseases*	Total
Admissions/discharges	1,749,384	800,303	665,396	1,438,841	4,653,924
% of all admissions	2.1%	1.0%	0.8%	1.7%	5.6%
Mean length of stay	9.5 days	8.5 days	6.9 days	6.6–8.9 days	8.1 days (avg.)
Total bed days	16,619,148	6,794,572	4,597,886	12,033,422	37,603,706
Proportion of all bed days	2.7%	1.1%	0.7%	2.0%	6.5%

* Chronic obstructive pulmonary disease, bronchiectasis and asthma

Source: OECD/EU 2018. *Health at a Glance: 2018: State of Health in the EU cycle*

Many hospitalisations can be avoided through proven models of best-practice care. Leading models have been shown to reduce mortality and improve quality of life,³⁸⁻⁴¹ with studies showing reductions in hospital admissions and costs by as much as 30%.⁴² For example, the introduction of a multidisciplinary heart failure service spanning primary and secondary care in Barcelona, Spain reduced the risk of HF-related readmissions by 14%.³⁹ Similarly, in the Midlands region of England, the rate of hospital readmission within three months was 67% lower among people seen in a rapid-access specialist HF service than among those receiving standard care.⁴³

The comprehensive model of heart failure care

The challenge in addressing HF is not a lack of best-practice models or proof of their impact, but limits to their wider implementation. Several local models have demonstrated a positive impact via the integration of care and more efficient use of resources.¹¹ Wider roll-out of these currently isolated best-practice care models would improve care delivery and would benefit people with HF, healthcare systems and society.

Multidisciplinary care is the cornerstone of effective HF management. People living with HF require an integrated package of care and support, including patient therapeutic education and regular consultations to monitor symptoms, adjust medication and assess the need for cardiac devices.^{1 44} Healthcare professionals are expected to work in close coordination with one another and with the person with HF, with mutual respect, effective communication and a clear division of responsibilities.^{45 46} This is especially important when a person with HF transitions between care settings – for example, on discharge from hospital, when ongoing cardiac risk and the lack of close medical supervision may make them more vulnerable.^{11 47} Hospital readmission remains a significant issue in HF, and the period of high vulnerability following hospital discharge is a missed opportunity in terms of improving care and reducing the burden of HF.²⁶ Person-centred discharge planning and discharge checklists are examples of best practice in HF, with evidence of benefit in safely reducing length of stay.^{48 49}

HF management programmes are widely recognised as the ‘gold standard’ care delivery model.^{1 11} They typically aim to follow people with HF across phases of care, from discharge planning through to long-term monitoring and patient support. They should span primary and secondary care settings, as well as home-based follow-up.¹ HF clinics are well-established hosts to HF programmes, often in an outpatient capacity, and may integrate other key services such as diagnostics.^{41 50} For example, the Cardiauvergne model in France coordinates HF care and education with the aim of improving quality of life for people living with the syndrome, while reducing hospitalisation rates and healthcare costs.⁵¹ Similarly, the Catalan Health Service and Barcelona Litoral Mar Integrated Healthcare Area developed a nurse-led multidisciplinary HF care model that integrated care and reduced the risk of readmission and death.⁵² Many more examples exist across Europe, with excellent prospects for mainstream application. These include programmes to identify cardiac patients at high risk of developing HF to prevent onset, such as the widely acknowledged STOP-HF programme in Ireland.⁵³

Adaptations to HF programmes and clinics have also proven effective in terms of clinical benefit and diversification of access across communities. These models include part-time clinics, home visits, structured telephone calls and telemedicine platforms.^{38,54} For example, adding a telemedicine component to the nurse-led multidisciplinary HF care model in Spain has further reduced hospital readmission, length of hospital stay at readmission, and cost per patient.³⁸ In Denmark, telemedicine models have reduced total healthcare costs by as much as 35% within one year, primarily driven by a reduction in costs associated with hospitalisation.⁵⁴ In Portugal, the Centro Hospitalar Universitário Lisboa Norte in Lisbon has operated a telemonitoring programme since 2017 for people with chronic HF who are considered at high risk of hospitalisation. The programme has been shown to significantly reduce 12-month hospitalisation, average number of days lost due to unplanned hospitalisation, and mortality.⁵⁵

Specialist nurses are fundamental to the success of most HF management programmes. European guidelines recommend that HF specialists play a key role in the management of HF from the point of hospital admission.¹ However, continual case leadership by cardiologists or HF specialist internists is usually unworkable due to resource constraints, while general practitioners (GPs) typically face significant pressures that may obstruct close observation of specialist guidelines.^{26,56} HF specialist nurses are thus central to many of the leading clinic-based HF management programmes with demonstrably improved outcomes.⁵⁷⁻⁶⁰ They can provide routine monitoring, management and patient therapeutic education, and can run longer and more individualised consultations than other healthcare professionals.^{26,45} Unfortunately, most countries do not have HF specialist nurses.²⁶ Barriers include limited funding for advanced nursing roles and a lack of formal accreditation of HF specialism, mainly due to complex and lengthy national approval processes for new healthcare roles and a lack of degree programmes. Ultimately, the underdevelopment of this role relates to limited awareness among decision-makers of the benefits brought about by HF specialist nurses.²⁶

Timely access to guideline-recommended medications for HF is crucial to improve patient outcomes. Studies show that deferral of core medications (typically defined as angiotensin-converting enzyme inhibitors, beta blockers and aldosterone)¹ comes with a serious cost to patient survival. Deferring all three treatments, even in a person with low-risk HF, increases the risk of death by roughly 12% per year.⁶¹ Regrettably, despite promising evidence of high prescription of core medications in centres of excellence,⁶² performance in mainstream settings is more sobering. Here, core medications are commonly under-prescribed, with insufficient reviews and changes to dosage.¹³ For example, in England and Wales, just over a half of people seen by an HF specialist during hospital admission were prescribed all guideline-recommended medications before discharge, and this rate drops to just a third of people in general wards.⁶³

Leading organisational and process elements of HF prevention and care are often underused, despite having clear benefits. Essential elements of effective HF programmes (such as integrated HF care pathways, referral protocols and supportive IT systems) are often unavailable. Similarly, key diagnostics and telemedicine platforms are often lacking.^{11 26}

A recent analysis of 11 European countries identified the major policy barriers to HF care and management. These include limited financial investment, reimbursement restrictions outside of specialist settings, shortages of specialist staff and administrative hurdles.^{26 64} It is crucial to understand that failure to implement an effective system of HF care and management will test the limits of our healthcare systems, as well as social and economic sustainability.

For more examples of best practice in heart failure across Europe, explore the country reports from *Heart failure policy and practice in Europe*, available at www.hfpolicynetwork.org

Building resilience and sustainability in heart failure: what does it mean?

The COVID-19 pandemic has tested health system resilience for HF. The pandemic is known to exacerbate existing HF and is likely to drive an increase in the prevalence of cardiac risk factors and conditions overall.⁶⁵⁻⁶⁹ This is due to both the pathology of the infection itself and the massive disruption to services throughout the pandemic, which has created a backlog of missed or delayed diagnoses and care around the world.⁶⁷⁻⁷⁰⁻⁷⁵ In England, for example, a survey of cardiac patients by the British Heart Foundation found that the number of people who had to wait more than six weeks for a diagnostic echocardiogram was nearly 18 times higher than before the pandemic.⁷⁶ In addition, one third of people struggled to get the medications they needed, and 40% had an elective procedure or test postponed or cancelled. This is of serious concern, as patient outcomes in HF are highly sensitive to delays in diagnosis as well as uptake and adjustment of key medications to the dose of maximum benefit.⁶¹ Recent commentary thus points to significant growth in future demand on HF services, driven by a 'hidden' cohort of new cases as well as deterioration in people with pre-existing HF.⁷⁷⁻⁷⁸

Looking to the future, it will be important to ensure HF management programmes are expanded and protected from the impact of other possible crises. While the COVID-19 pandemic will continue to require significant political attention, governments must remember that HF remains a leading cause of hospital admissions in Europe. This has been the case for many years and will continue long after COVID-19 has been contained.

The recommendations laid out in this section build on existing recommendations made by the Heart Failure Policy Network to ensure the sustainability and effectiveness of HF care in the long term. They can be utilised by national as well as regional authorities and health experts to identify opportunities to improve the management of HF, with a focus on building the sustainability and resilience of HF services and the healthcare system as a whole.

Health system governance

Formal plans and strategies

All governments should have a formal strategy on HF and the changing impact it will have on healthcare systems and society. This should be developed in close consultation with patient and clinical advocates, and include the modelling of future demand and scenario planning for crisis adaptations. Strategies should set clear and measurable goals for success. In particular, the safe reduction of hospital readmissions should be a major strategic objective, indicating a sustainable approach to HF care. Formal plans should also map and address historical barriers to the reorganisation of care and points of failure in the care pathway, coordinating new central policy directives and guiding new investment, innovation and enhanced capacity as required. Low levels of awareness of HF among policymakers have, thus far, translated into low prioritisation of HF in long-term national healthcare plans and policies. Targeted messaging for decision-makers should include comparisons between the burden of HF and better-known conditions, such as cancer or type 2 diabetes.

Political oversight of performance

Governments will require centrally led, comprehensive audits if they are to fully identify gaps, inequalities and opportunities for improvement. Comparable performance data between localities are important for many reasons, including transparency in reporting of performance, local feedback, accreditation or certification of institutions, evaluation of new care models, determination of value-based pricing and development of financial incentives. Decision-makers should commission robust and public national audits of performance to ensure accountability to citizens on a range of standardised indicators and to guide investment and incentives. Indicators should include patient survival, hospitalisation, quality of life and experience. The Danish Heart Failure Registry is a notable example: since its introduction in 2003, there have been significant improvements in the delivery of guideline-based HF practice, which has helped to reduce mortality within one year of diagnosis.^{79 80}

Health system financing

Reimbursement frameworks must encourage a shift in HF care from acute to community settings, and from units or outputs of care to desired patient outcomes.

Decision-makers should incentivise providers to adopt best practices across the whole care pathway. This should include rewarding acute providers for key patient outcomes – such as reduced rehospitalisation rates – and high standards in guideline-recommended elements of care, such as comprehensive discharge planning and specialist-led review post-discharge. In England, for example, national pay-for-performance schemes incentivise optimal HF care in hospital and community settings.⁸¹ Hospitals receive incentive payments from the Best Practice Tariff scheme, a pay-for-performance initiative aimed at acute care, when they meet two criteria: they must submit at least 70% of their relevant data to the National Heart Failure Audit, and at least 60% of patients recorded in the audit must receive specialist care.⁸²

Reimbursement models should also seek to enable earlier diagnosis and more robust ongoing care delivered in primary care settings. For example, testing of natriuretic peptide (NP) levels, recommended in clinical guidelines to assist in the diagnosis of HF, should be consistently reimbursed in primary care. This low-cost test offers a valuable triage and patient assessment tool to HF care teams, not least in an environment of social distancing and shortages of specialists. Equally, direct referral by GPs to echocardiography can greatly speed up HF diagnosis and, therefore, initiation of key treatments and interventions. Currently, however, variation in policies for the reimbursement of NP testing across Europe forces significant deviation from best-practice recommendations.²⁶ Overall, primary care providers could be better incentivised to coordinate and deliver comprehensive HF care in the community. This should involve HF specialists, such as cardiologists and nurses, as well as pharmacists, dietitians, physiotherapists, psychologists, palliative care providers and social workers.

Service delivery

HF specialist workforce accreditation

Governments should formally accredit and expand the HF specialist nurse role.

Several countries across Europe are facing a shortfall in the healthcare professionals required for HF care, including specialists and primary care professionals. This may act as a major brake on innovation, not least given the importance of such roles to HF management programmes. In particular, HF specialist nurses can provide the therapeutic education and close patient support that is central to many leading models of self-management and telemedicine. Healthcare systems should therefore invest in professional HF training for all healthcare professionals, and in building up clinical delegation and specialism in the outpatient setting.

Formal accreditation of nurse specialism is crucial to the expansion of the HF

workforce. This greatly enables consistent and transferable skill sets, certifiable professional development, and incentivisation via enhanced professional status, which in turn support the policy case for higher remuneration. In an analysis of 11 European countries, the role of HF specialist nurse via accreditation programme was only recognised in three countries: England, Germany and Ireland.²⁶ Accreditation criteria can be incorporated into postgraduate training programmes, which should be formally recognised by regional and national healthcare systems and professional societies. Accreditation of HF-specific centres (such as HF units) can also help deliver high-quality HF care, as demonstrated in Denmark.⁸⁰

National and regional guidance and care pathways

Governments should ensure each country and region has formally approved clinical guidelines for HF and clear templates to guide local organisation of care.

While international guidelines are often adopted at the national level, translations and formal approvals by relevant authorities can give vital clarity to local practitioners, as well as allowing the option of adaptations for relevant national and regional differences. Local HF pathways and decision-making protocols can help to operationalise guidelines by setting out transparent clinical and procedural standards to clinicians, patients and decision-makers, clarifying where roles and responsibilities lie. This should span the whole diagnostic and care pathway, including interactions among all settings. In addition, non-specialists such as GPs should receive accessible summaries of key principles and standards relevant to their role, in recognition of the pressures and realities of that setting.

Medications and technology

Medications

Governments must ensure that core, guideline-based HF medications are routinely prescribed and reviewed, and that people with HF are supported in understanding and adhering to their medication. Success in this endeavour is essential to any efforts aiming to reduce hospitalisations and improve patient outcomes.⁶¹ It is also interdependent with many of the system elements described previously, for example discharge and care planning with specialist input (in which prescription of guideline-based medications is higher) and national audits (which can reveal unwarranted variations in prescription practices). Of particular concern to medication adherence is that patient therapeutic education and support is sporadic,^{26 83} and care centres and patient groups are frequently left to develop their own education programmes and materials.^{84 85} In Germany, for example, structured and evaluated therapeutic educational programmes are not routinely available,⁸⁶ while in Italy, people with HF and their carers may lack the training to appropriately monitor their condition.⁶ In addition, in their approaches with people with HF, clinicians may routinely overestimate the burden of medication side effects and the balance of risk and benefit.⁶¹

Information systems and telemedicine

Governments must invest in integrated healthcare IT systems, ensuring that comprehensive patient data in HF can be routinely shared between settings.

IT systems that apply to a wide range of care settings are essential in multidisciplinary and integrated care. Such systems will offer much greater resilience and adaptability in the face of crises such as the COVID-19 pandemic. They can also become a foundation for national HF registries. Some European countries (such as Denmark and Belgium) are in more advanced stages of developing collaborative IT systems, including electronic health records.²⁶ Overall, however, there is a need to invest in IT platforms that collect key HF parameters, share information and enable collaboration and multidisciplinary working.

Telemedicine offers promise to expand outpatient services but will require adequate preparation and lead-in times to ensure patient safety and effectiveness. Before 2020, investment in telemedicine platforms for HF had not been a priority across Europe.⁸⁷ However, the pandemic has acted as a major catalyst for rapid uptake across whole systems,⁷⁸ potentially leading to greater political will for the reimbursement of these care models to continue. For telemedicine to reach its full potential, people living with HF will require basic home equipment such as smartphones, tablets and blood pressure monitors, and providers should promote (via principles of informed consent) the benefits of implantable devices with data collation and transmission capabilities. People living with HF will also require training and education to fulfil their role and give meaningful informed consent to remote monitoring – which, as noted previously, often depends on availability of clinical delegation in the non-acute setting, such as nurse specialism.

Political support and public acceptability

Governments should launch awareness-raising exercises in HF at all levels.

People living with HF commonly report low understanding and a lack of suitable information on the syndrome, its symptoms and risks.^{88 89} Awareness-raising efforts should involve working closely with HF and cardiovascular disease patient advocates, non-governmental organisations (NGOs) and professional groups to build awareness of key symptoms, principles of treatment, and challenges of living with HF, to address issues of fatalism and misunderstanding. This should include targeted messages for healthcare professionals, people living with HF and the wider public, reflecting their different concerns and interests.

FURTHER READING

[Heart failure policy and practice in Europe](#)²⁶ (2020) aims to better equip and empower national advocates across Europe with a clear picture of central leadership and overall performance in terms of major pillars of health services, treatment and care. It provides a comprehensive analysis of national policy issues in HF, key gaps in care and examples of best practice investigated in 11 European countries.

[The handbook of multidisciplinary and integrated heart failure care](#)¹¹ (2018) makes a case for best-practice multidisciplinary and integrated care throughout the care journey for the person living with HF. It identifies key components of quality in HF care and the barriers to implementing best-practice care across Europe.

The handbook is built around five 'pressure points' along the care journey, including the clinical management of HF. Each pressure point is summarised in the handbook and also has a dedicated short report containing an overview of the issue, best practice, and case studies and reproducible tools:

- [Pressure point 1: Presentation and diagnosis](#)
- [Pressure point 2: Discharge planning and early follow-up](#)
- [Pressure point 3: Clinical management](#)
- [Pressure point 4: Patient empowerment and self-care](#)
- [Pressure point 5: Advance care planning](#)

The [Spotlight series](#) (2020) features evidence-based reports on topics at the forefront of debates and challenges in the future of HF care. The reports highlight clinical challenges, policy issues, patient needs and best-practice case studies to support meaningful and sustainable improvements in care provision and research. The series covers five topics:

- [HFpEF: heart failure with preserved ejection fraction](#)
- [Iron deficiency in heart failure](#)
- [Telemedicine in ongoing heart failure care](#)
- [Quality assessment in heart failure care](#)
- [Hyperkalaemia in heart failure](#)

References

- Ponikowski P, Voors AA, Anker SD, et al. 2016. 2016 ESC guidelines for the diagnosis and treatment of acute and chronic heart failure. *Eur J Heart Fail* 18(8): 891-975
- Heo S, Lennie TA, Okoli C, et al. 2009. Quality of life in patients with heart failure: ask the patients. *Heart Lung* 38(2): 100-08
- Heart Failure Policy Network. HFPN videos: Nick's story. Available from: <https://www.youtube.com/watch?v=6nSZxMrCdkw> [Accessed 21/09/20]
- Heart Failure Policy Network. HFPN videos: Oberdan's story. Available from: <https://www.youtube.com/watch?v=jXNOgGQyDbw> [Accessed 21/09/20]
- Heart Failure Policy Network. HFPN videos: Jayne's story. Available from: <https://www.youtube.com/watch?v=MlQF1VLPP8U> [Accessed 21/09/20]
- Mamas MA, Sperrin M, Watson MC, et al. 2017. Do patients have worse outcomes in heart failure than in cancer? A primary care-based cohort study with 10-year follow-up in Scotland. *Eur J Heart Fail* 19(9): 1095-104
- Savarese G, Lund LH. 2017. Global public health burden of heart failure. *Card Fail Rev* 3(1): 7-11
- Lloyd-Jones DM, Larson MG, Leip EP, et al. 2002. Lifetime risk for developing congestive heart failure: the Framingham Heart Study. *Circulation* 106(24): 3068-72
- World Heart Federation. 2020. *Accelerate change together: heart failure gap review*. Geneva: WHF
- Dickstein K, Cohen-Solal A, Filippatos G, et al. 2008. ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2008. *Eur J Heart Fail* 10(10): 933-89
- Heart Failure Policy Network. 2018. *The handbook of multidisciplinary and integrated heart failure care*. London: HFPN
- Blair JEA, Huffman M, Shah SJ. 2013. Heart failure in North America. *Curr Cardiol Rev* 9(2): 128-46
- Cowie MR, Anker SD, Cleland JGF, et al. 2014. Improving care for patients with acute heart failure: before, during and after hospitalization. *ESC Heart Fail* 1(2): 110-45
- Cook C, Cole G, Asaria P, et al. 2014. The annual global economic burden of heart failure. *Int J Cardiol* 171(3): 368-76
- Giles L, Freeman C, Field P, et al. 2020. Humanistic burden and economic impact of heart failure - a systematic review of the literature. *F1000Research* 8(859): 10.12688/f1000research.19365.2
- Ambrosy AP, Fonarow GC, Butler J, et al. 2014. The global health and economic burden of hospitalizations for heart failure: lessons learned from hospitalized heart failure registries. *J Am Coll Cardiol* 63(12): 1123-33
- World Health Organisation. NCD Global Monitoring Framework. Available from: https://www.who.int/nmh/global_monitoring_framework/en/ [Accessed 26/11/20]
- World Health Organisation. 2015. Sustainable Development Goals (SDGs). Available from: https://www.who.int/mental_health/suicide-prevention/SDGs/en/ [Accessed 19/11/20]
- World Health Organization. 2020. Sustainable Development Goals. Available from: <https://www.who.int/global-coordination-mechanism/ncd-themes/sustainable-development-goals/en/> [Accessed 08/03/21]
- Gheorghiane M, Vaduganathan M, Fonarow GC, et al. 2013. Rehospitalization for heart failure: problems and perspectives. *J Am Coll Cardiol* 61(4): 391-403
- Tuppin P, Cuerq A, de Peretti C, et al. 2014. Two-year outcome of patients after a first hospitalization for heart failure: A national observational study. *Arch Cardiovasc Dis* 107(3): 158-68
- Strömberg A. 2013. The Situation of Caregivers in Heart Failure and Their Role in Improving Patient Outcomes. *Curr Heart Fail Rep* 10(3): 270-75
- The Heartbeat Trust, Irish Heart Foundation, NUI Galway. 2015. *The Cost of Heart Failure in Ireland: The social, economic and health implications of Heart Failure in Ireland*. Dublin: The Heartbeat Trust
- Jaarsma T, Stromberg A. 2014. Heart failure clinics are still useful (more than ever?). *Can J Cardiol* 30(3): 272-5
- Rørth R, Wong C, Kragholm K, et al. 2016. Return to the Workforce After First Hospitalization for Heart Failure: A Danish Nationwide Cohort Study. *Circulation* 134(14): 999-1009
- Heart Failure Policy Network. 2020. *Heart failure policy and practice in Europe*. London: HFPN
- Ministère des solidarités et de la santé. 2020. *Séjour de la santé : les conclusions*. Available from: <https://solidarites-sante.gouv.fr/systeme-de-sante-et-medico-social/segur-de-la-sante-les-conclusions/> [Accessed 11/10/20]
- Programa Nacional para as Doenças Cérebro-Cardiovasculares. 2017. *Programa Nacional para as Doenças Cérebro-Cardiovasculares*. Lisbon: Direção-Geral da Saúde
- Ministero della Salute. Piano nazionale della prevenzione [National prevention plan]. Available from: http://www.salute.gov.it/portale/temi/p2_4.jsp?lingua=italiano&tema=Prevenzione&area=prevenzione [Accessed 24/08/20]
- Integreo. 2015. Gemeenschappelijk plan voor chronisch zieken: Geïntegreerde zorg voor een betere gezondheid. Available from: https://www.integreo.be/sites/default/files/public/content/plan_nl.pdf [Accessed 27/09/20]
- Organisation for Economic Co-operation and Development. 2018. *Health at a glance: Europe 2018*. Paris: OECD/EU
- WHO Regional Office for Europe. 2015. *Ambulatory care sensitive conditions in Germany*. Copenhagen: WHO

33. WHO Regional Office for Europe. 2016. *Ambulatory care sensitive conditions in Portugal*. Copenhagen: WHO
34. All-Party Parliamentary Group on Heart Disease. 2016. *Focus on Heart Failure: 10 recommendations to improve care and transform lives*. London: British Heart Foundation
35. Neumann T, Biermann J, Erbel R, et al. 2009. Heart failure: the commonest reason for hospital admission in Germany: medical and economic perspectives. *Deutsches Arzteblatt Intern* 106(16): 269-75
36. National Institute for Health and Care Excellence. 2015. *Chronic Heart Failure (update): Prioritised quality improvement areas for development*. London: NICE
37. Blake I. 2019. Heart failure hospital admissions rise by a third in five years. Available from: <https://www.bhf.org.uk/what-we-do/news-from-the-bhf/news-archive/2019/november/heart-failure-hospital-admissions-rise-by-a-third-in-five-years> [Accessed 15/10/20]
38. Comin-Colet J, Enjuanes C, Verdu-Rotellar JM, et al. 2016. Impact on clinical events and healthcare costs of adding telemedicine to multidisciplinary disease management programmes for heart failure: Results of a randomized controlled trial. *J Telemed Telecare* 22(5): 282-95
39. Comin-Colet J, Verdu-Rotellar J, Vela E, et al. 2014. Efficacy of an integrated hospital-primary care program for heart failure: a population-based analysis of 56,742 patients. *Rev Esp Cardiol (Engl Ed)* 67(4): 283-93
40. McAlister F, Stewart S, Ferrua S, et al. 2004. Multidisciplinary strategies for the management of heart failure patients at high risk for admission: a systematic review of randomized trials. *J Am Coll Cardiol* 44(4): 810-9
41. Moertl D, Altenberger J, Bauer N, et al. 2017. Disease management programs in chronic heart failure: Position statement of the Heart Failure Working Group and the Working Group of the Cardiologist Assistance and Care Personnel of the Austrian Society of Cardiology. *Wien Klin Wochenschr* 129(23-24): 869-78
42. Feltner C, Jones C, Cene C, et al. 2014. Transitional care interventions to prevent readmissions for persons with heart failure: a systematic review and meta-analysis. *Ann Intern Med* 160(11): 774-84
43. Tay K, Clayton L, D'Souza R, et al. 2020. P247: Audit of acute heart failure patients discharged within 24 hours: comparison of referral to ambulatory heart failure clinic (AHFC) versus standard care. *Eur J Heart Fail* 22(S1): 21
44. Cobretti MR, Page RL, Linnebur SA, et al. 2017. Medication regimen complexity in ambulatory older adults with heart failure. *Clin Interv Aging* 12: 679-86
45. Glogowska M, Simmonds R, McLachlan S, et al. 2015. Managing patients with heart failure: a qualitative study of multidisciplinary teams with specialist heart failure nurses. *Ann Fam Med* 13(5): 466-71
46. Ponikowski P, Anker SD, AlHabib KF, et al. 2014. Heart failure: preventing disease and death worldwide. *ESC Heart Fail* 1(1): 4-25
47. Heart Failure Policy Network. 2018. *Pressure point 2: Discharge planning and early follow-up*. London: HFPN
48. Ekman I, Wolf A, Olsson L-E, et al. 2012. Effects of person-centred care in patients with chronic heart failure: the PCC-HF study. *Eur Heart J* 33(9): 1112-19
49. Bodagh N, Farooqi F. 2017. Improving the quality of heart failure discharge summaries. *Br J Cardiol* 24: 75-8
50. McDonagh T, Blue L, Clark A, et al. 2011. European Society of Cardiology Heart Failure Association Standards for delivering heart failure care. *Eur J Heart Fail* 13(3): 235-41
51. Cardiauvergne. Notre vocation. Available from: <https://www.cardiauvergne.com/> [Accessed 26/11/20]
52. Comín-Colet J, Verdu-Rotellar J, Vela E, et al. 2014. Efficacy of an integrated hospital-primary care program for heart failure: a population-based analysis of 56,742 patients. *Rev Esp Cardiol (Engl Ed)* 67(4): 283-93
53. Heart Failure Policy Network. 2020. *Heart failure policy and practice in Europe: Ireland*. London: HFPN
54. Vestergaard AS, Hansen L, Sørensen SS, et al. 2020. Is telehealthcare for heart failure patients cost-effective? An economic evaluation alongside the Danish TeleCare North heart failure trial. *BMJ Open* 10(1): e031670
55. Nunes-Ferreira A, Agostinho JR, Rigueira J, et al. 2020. Non-invasive telemonitoring improves outcomes in heart failure with reduced ejection fraction: a study in high-risk patients. *ESC Heart Fail*: 10.1002/ehf2.12999
56. Heart Failure Policy Network. 2018. *Pressure point 3: Clinical management*. London: HFPN
57. Price A. 2012. Specialist nurses improve outcomes in heart failure. *Nurs Times* 108(40): 22-4
58. Riley J. 2015. The key roles for the nurse in acute heart failure management. *Card Fail Rev* 1(2): 123-27
59. Strömberg A, Mårtensson J, Fridlund B, et al. 2001. Nurse-led heart failure clinics in Sweden. *Eur J Heart Fail* 3(1): 139-44
60. Stromberg A, Martensson J, Fridlund B, et al. 2003. Nurse-led heart failure clinics improve survival and self-care behaviour in patients with heart failure: results from a prospective, randomised trial. *Eur Heart J* 24(11): 1014-23
61. Zaman S, Zaman SS, Scholtes T, et al. 2017. The mortality risk of deferring optimal medical therapy in heart failure: a systematic comparison against norms for surgical consent and patient information leaflets. *Eur J Heart Fail* 19(11): 1401-09
62. Crespo-Leiro MG, Anker SD, Maggioni AP, et al. 2016. European Society of Cardiology Heart Failure Long-Term Registry (ESC-HF-LT): 1-year follow-up outcomes and differences across regions. *Eur J Heart Fail* 18(6): 613-25
63. National Institute for Cardiovascular Outcomes Research. 2019. *National Heart Failure Audit: 2019 summary report (2017/18 data)*. London: NICOR
64. Bjarnason-Wehrens B, McGee H, Zwisler A-D, et al. 2010. Cardiac rehabilitation in Europe: results from the European Cardiac Rehabilitation Inventory Survey. *Eur J Cardiovasc Prev Rehabil* 17(4): 410-18

65. Bader F, Manla Y, Atallah B, et al. 2020. Heart failure and COVID-19. *Heart Fail Rev*. 10.1007/s10741-020-10008-2
66. Ganatra S, Dani SS, Shah S, et al. 2020. Management of Cardiovascular Disease During Coronavirus Disease (COVID-19) Pandemic. *Trends Cardiovasc Med* 30(6): 315-25
67. Farmakis D, Mehra MR, Parissis J, et al. 2020. Heart failure in the course of a pandemic. *Eur J Heart Fail*: 10.1002/ejhf.1929
68. Tomasoni D, Italia L, Adamo M, et al. 2020. COVID-19 and heart failure: from infection to inflammation and angiotensin II stimulation. Searching for evidence from a new disease. *Eur J Heart Fail* 22(6): 957-66
69. Loungani RS, Rehorn MR, Newby LK, et al. 2020. A care pathway for the cardiovascular complications of COVID-19: Insights from an institutional response. *Am Heart J* 225: 3-9
70. Salzano A, D'Assante R, Stagnaro FM, et al. 2020. Heart failure management during the COVID-19 outbreak in Italy: a telemedicine experience from a heart failure university tertiary referral centre. *Eur J Heart Fail* 22(6): 1048-50
71. Blake I. Nearly half of heart patients find it harder to get medical treatment in lockdown. [Updated 05/06/20]. Available from: <https://www.bhf.org.uk/what-we-do/news-from-the-bhf/news-archive/2020/june/half-heart-patients-harder-get-medical-treatment-lockdown> [Accessed 13/10/20]
72. Hasan S, Ur Rahman H, Patil A, et al. 2020. Impact of COVID-19 on cardiology services in a district hospital and adapting to the new normal. *Postgrad Med J*: 10.1136/postgradmedj-2020-138228
73. Andersson C, Gerds T, Fosbøl E, et al. 2020. Incidence of New-Onset and Worsening Heart Failure Before and After the COVID-19 Epidemic Lockdown in Denmark. *Circ Heart Fail* 13(6): e007274
74. Shah N, Ahmed I, Nazir T. 2020. Heart failure-related hospitalisation and management during the COVID-19 pandemic: a reflection. *Eur J Heart Fail*: 10.1002/ejhf.1931
75. Bromage DI, Cannatà A, Rind IA, et al. 2020. The impact of COVID-19 on heart failure hospitalization and management: report from a Heart Failure Unit in London during the peak of the pandemic. *Eur J Heart Fail* 22(6): 978-84
76. British Heart Foundation. 2020. Coronavirus and heart and circulatory diseases factsheet. Available from: <https://www.bhf.org.uk/what-we-do/our-research/heart-statistics> [Accessed 2/11/20]
77. Oliveros E, Brailovsky Y, Scully P, et al. 2020. Coronavirus Disease 2019 and Heart Failure: A Multiparametric Approach. *Card Fail Rev* 6: e22-e22
78. Alliance for Heart Failure. 2020. *Written evidence submitted by the Alliance for Heart Failure (DEL0262)*. United Kingdom: Alliance for Heart Failure
79. Nakano A, Vinter N, Egstrup K, et al. 2019. Association between process performance measures and 1-year mortality among patients with incident heart failure: a Danish nationwide study. *Eur Heart J Qual Care Clin Outcomes* 5(1): 28-34
80. Heart Failure Policy Network. 2020. *Heart failure policy and practice in Europe: Denmark*. London: HFPN
81. Heart Failure Policy Network. 2020. *Heart failure policy and practice in Europe: England*. London: HFPN
82. NHS England and NHS Improvement. 2019. *2019/20 National tariff payment system - A consultation notice: Annex DtD. Guidance on best practice tariffs*. London: NHS
83. Jourdain P, Juillière Y, Steering, et al. 2011. Therapeutic education in patients with chronic heart failure: proposal for a multiprofessional structured programme, by a French Task Force under the auspices of the French Society of Cardiology. *Arch Cardiovasc Dis* 104(3): 189-201
84. Poyet L. 2013. Infirmière libérale: consultation d'éducation thérapeutique pour l'insuffisant cardiaque. Available from: <https://www.infirmiers.com/pdf/tfe-lucas-poyet.pdf> [Accessed 16/10/20]
85. Juillière Y, Jourdain P, Roncalli J, et al. 2009. Therapeutic education unit for heart failure: setting-up and difficulties. Initial evaluation of the I-CARE programme. *Arch Cardiovasc Dis* 102(1): 19-27
86. Muschalla B, Glatz J, Karger G. 2011. Kardiologische Rehabilitation mit strukturierter Schulung bei Herzinsuffizienz – Akzeptanz bei Patienten und Veränderungen in Krankheitswissen und Wohlbefinden. *Rehabilitation (Stuttg)* 50(02): 103-10
87. Heart Failure Policy Network. 2020. *Spotlight on telemedicine in ongoing heart failure care*. London: HFPN
88. Juárez-Vela R, Sarabia-Cobo CM, Antón-Solanas I, et al. 2019. Investigating self-care in a sample of patients with decompensated heart failure: A cross-sectional study. *Rev Clin Esp (English Edition)* 219(7): 351-59
89. Strömberg A. 2005. The crucial role of patient education in heart failure. *Eur J Heart Fail* 7(3): 363-69



The Heart Failure Policy Network

To find out more about the Heart Failure Policy Network,
please visit www.hfpolicynetwork.org

If you have any comments or questions, please get in touch
at info@hfpolicynetwork.org