

## Multiprofessional heart failure self-development framework

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# openheart Multiprofessional heart failure self-development framework

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## ABSTRACT

**Objective** Heart failure remains a key public health priority across the globe. The median age of people with heart failure admitted to hospital in the UK is 81 years old. Many such patients transcend the standard interventions that are well characterised and evidenced in guidelines, into holistic aspects surrounding frailty, rehabilitation and social care. Previous published competency frameworks in heart failure have focused on the value of doctors, nurses and pharmacists. We aimed to provide an expert consensus on the minimum heart failure-specific competencies necessary for multiple different healthcare professionals, including physiotherapists, occupational therapists, dietitians and cardiac physiologists.

**Methods** The document has been developed focussing on four main parts, (1) establishing a project working group of expert professionals, (2) a literature review of previously existing published curricula and competency frameworks, (3) consensus building, which included developing a structure to the framework with ongoing review of the contents to adapt and be inclusive for each specialty and (4) write up and dissemination to widen the impact of the project.

**Results** The final competency framework displays competencies across seven sections; knowledge (including subheadings on heart failure syndrome, diagnosis and clinical management); general skills; heart failure-specific skills; clinical autonomy; multidisciplinary team working; teaching and education; and research and development.

**Conclusion** People with heart failure can be complex and have needs that require input from a broad range of specialties. This publication focuses on the vital impact of wider multidisciplinary groups and should help define the generic core heart failure-specific competencies needed to support future pipelines of professionals, who regularly interact with and deliver care for patients with heart failure.

## INTRODUCTION

Over 60 million people are estimated to live with heart failure across the world.<sup>1</sup> Its prevalence is rising and the burden of heart failure on healthcare systems worldwide is also growing.<sup>2</sup> Although the incidence of heart failure hospitalisation trends are decreasing in some countries, total heart failure hospital

admissions are generally on the increase.<sup>2</sup> To reduce the system burden of hospitalisations and related costs, appropriate services and strategies are needed.<sup>3</sup>

National audit figures from England and Wales show that over 83 000 patients were admitted to hospital in 2021/2022 with acute heart failure, with a 1-year mortality in those that survived to discharge of 32%.<sup>4</sup> Data from Scotland and Northern Ireland also show that the burden of heart failure hospitalisations is growing over time.<sup>5 6</sup> The prevalence of heart failure in the UK is increasing and is now similar to the four most common causes of cancer combined.<sup>7</sup>

Multidisciplinary team (MDT) care is not a novel concept in heart failure.<sup>8</sup> Meta-analysis has shown that such models of care reduce heart failure hospitalisations.<sup>8</sup> As such, multidisciplinary care is now a recognised key cornerstone of treatment strategies in international heart failure guidelines.<sup>9 10</sup>

The median age of people with heart failure admitted to hospital in the UK is 81 years.<sup>4</sup> Many such patients transcend the standard pharmacological or advanced therapy interventions which are well characterised and evidenced in guidelines, into holistic aspects surrounding frailty, rehabilitation and social care. As a consequence, true holistic care needs to be provided by a wide and varied group of different health and social care professionals, including specialists and generalists and involving those working in primary, secondary and tertiary care settings.

Published curricula, competency frameworks and/or guidance already exist for cardiologists,<sup>11</sup> general physicians,<sup>12</sup> heart failure specialist nurses<sup>13</sup> and pharmacists with an expertise in heart failure<sup>14</sup> and therefore this paper will not discuss the development needs of these groups. Instead, we will focus on the vital impact of the other multidisciplinary professional groups.



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## Heart failure MDT: beyond doctors, nurses and pharmacists

### Physiotherapists

Physiotherapists are registered health professionals who help people affected by injury, illness or disability through physical treatment modalities such as movement and exercise. They use a 'whole person' approach, taking into account a patient's general health and lifestyle. At the core is the patient's involvement in their own care through education, awareness, empowerment and participation in their treatment.<sup>15</sup>

Reduced exercise tolerance is commonly seen in people living with heart failure and can adversely affect daily activities and quality of life.<sup>16</sup> Often delivered within the context of a comprehensive programme of rehabilitation, national and international guidelines have long recommended structured physical training and exercise programmes for patients living with heart failure.<sup>10 11</sup> Randomised controlled trials and systematic review show that such programmes are both safe and beneficial for these individuals.<sup>16 17</sup> Physiotherapists, with specialist skills in assessment; exercise prescription, delivery and monitoring; and competence in adapting exercise to suit different abilities, comorbidities and varying clinical presentations, are well placed to deliver this intervention. Physiotherapists will also flexibly adapt their interventions to align with patient-directed preference and goals where needed (eg, provide home-based interventions). Their advanced skills in health behaviour change are also recognised as an integral component of cardiovascular disease management by the British Association for Cardiovascular Prevention and Rehabilitation (BACPR).<sup>18</sup>

In addition to tailored exercise training, additional physiotherapy adjuncts that may be employed when working in heart failure settings include inspiratory muscle training<sup>19</sup> along with techniques to aid management of dyspnoea, such as diaphragmatic breathing and positioning; energy conservation techniques, provision of aids and adaptations and guidance on pacing; and postural/core strength training.<sup>20</sup> An emerging role for physiotherapists working at an advanced practice level may include independent prescribing.<sup>21</sup> Healthcare professionals trained with prescribing rights are well placed to ease the pressure of stretched medical services and support service innovation.<sup>22</sup> The BACPR recognises the value of independent prescribers within MDTs supporting individuals with cardiovascular disease.<sup>18</sup>

### Dietitians

Dietitians are regulated health professionals who assess, diagnose and treat dietary and nutritional problems at an individual and wider public health level. They use the most up-to-date public health and scientific research on food, health and disease which they translate into practical guidance to enable people to make appropriate lifestyle and food choices.<sup>23</sup>

Guidelines recommend individuals with heart failure are educated on fluid restriction, avoiding excess salt and alcohol intake and ensuring a healthy diet to avoid

malnutrition and obesity.<sup>9 10</sup> Dietitians are best placed to deliver this education due to their behaviour change skills to empower patients to make these lifestyle changes and aid compliance by creating patient-centred plans. The prevalence of malnutrition and cardiac cachexia varies in the literature,<sup>24</sup> but it is widely agreed they are associated with a higher risk of mortality, increased length of stay and a decreased chance of being discharged home.<sup>25</sup> It is therefore encouraged that individuals with heart failure are screened for malnutrition/cachexia and appropriate intervention is provided.<sup>9</sup> Individualised dietetic input has been shown to reduce these risks, highlighting the need to include dietitians in heart failure MDTs.<sup>26</sup>

### Occupational therapists

Participation in occupations is an integral part of daily life, and a change in health can impact an individual's engagement in meaningful occupations.<sup>27</sup> Occupational therapists are regulated healthcare professionals who advocate the use of occupation to facilitate health, promoting growth, change and/or adaption with the goal of participation in meaningful occupations that support positive condition management, self-actualisation, occupational balance and quality of life.<sup>28</sup> The role of occupational therapy in heart failure is to enable individuals following diagnosis to maintain their independence, quality of life and patient experience, by enabling them to participate in occupations of importance to them.<sup>29 30</sup>

Occupational therapists are suited to encompass the whole heart failure pathway: from enabling individuals with heart failure to develop strategies to maintain their independence with their activities of daily living and their quality of life, to supporting with the experience of end of life care.<sup>31 32</sup> A rich evidence base exists across many chronic diseases<sup>33</sup> to show that input from an occupational therapist significantly improves many aspects of normal activities of daily living, including occupational balance,<sup>34</sup> functional self-efficacy, social or work activities and quality of life.<sup>35 36</sup>

### Multi-profession cardiovascular rehabilitation models

In 2023 the BACPR updated their Standards and Core Components for Cardiovascular Disease Prevention and Rehabilitation<sup>18</sup> and individuals with heart failure are identified as one of the patient groups known to benefit. With an emphasis on a person-centred approach, including giving the individual choice with respect to how cardiovascular rehabilitation is accessed, attaining the BACPR's standards and delivering an individualised and comprehensive programme of cardiovascular rehabilitation requires an MDT approach. Widely established cardiovascular rehabilitation programmes in the UK routinely offer input from physiotherapy, occupational therapy and dietetics and such models are proven to improve quality of life scores, New York Heart Association classifications and 6-min walking test performance in individuals with heart failure.<sup>35 36</sup>

## Cardiac physiologists

Cardiac physiologists are accredited healthcare scientists who provide cardiac diagnostic testing. The role of a cardiac physiologist is varied; however, the major specialisms are echocardiography, intervention and cardiac rhythm management, including the programming and optimisation of implantable devices. Cardiac physiologists are involved in the diagnosis, treatment, monitoring and follow-up of patients with heart failure who often attend for serial appointments. Echocardiography is the first-line imaging modality for the diagnosis of heart failure. It is recommended for the assessment of both acute and chronic heart failure.<sup>9 10</sup> Cardiac resynchronisation therapy and implantable cardioverter defibrillators are recommended treatments in patients with heart failure and severe left ventricular systolic dysfunction.<sup>9 10</sup> These patients are monitored regularly by cardiac physiologists in clinic. As a professional group, cardiac physiologists form a key part of the MDT caring for individuals with heart failure. Examples of cardiac physiologist-led heart failure diagnosis clinics<sup>37</sup> and device clinics are now appearing in the literature.<sup>38</sup>

## METHODS

The development of this document involved four parts: (1) establishing an expert project working group, (2) a literature review of previously existing published curricula and competency frameworks for cardiologists, general physicians, heart failure nurses and pharmacists, as well as gaining an understanding of existing sub specialty materials available for each specialty, (3) consensus building, which included developing a structure to the framework with ongoing review of the contents to adapt and be inclusive for each specialty and (4) write-up and dissemination to widen the impact of the project.

### Establishing project working group

Following on from the development of the British Society for Heart Failure (BSH) nurse specialty competency document<sup>39</sup> and the competency framework for clinical pharmacists,<sup>14</sup> the BSH education committee was tasked with developing a framework of practice for wider healthcare professional groups. The aim of the structure was to produce a final framework that would be widely applicable within the scope of practice for multiple professions within the UK, including physiotherapists, dietitians, occupational therapists and cardiac physiologists.

The lead and senior authors (PF and SD, respectively), who had already led the development of educational programmes and competency documents within their spheres of practice, were asked to lead the new framework development. They were tasked with putting together an expert working group from across the UK to develop the framework. This core working group was formed after an open call for volunteers to the entire BSH membership.

## Literature review

A review of current competency documents for healthcare professionals was performed; this included the BSH heart failure specialist nurse competency framework, as well as the recently published pharmacist heart failure competency framework.<sup>14</sup> Also, current heart failure educational programmes for nurses and healthcare professionals were reviewed; these included the Glasgow Caledonian University<sup>40</sup> and the Keele university heart failure masters-level modules.<sup>41</sup> The specialty members of the working group also brought the current expected scope of practise within heart failure that their members would be expected to know.

### Framework development and sign off

The working group developed both the structure and the content of the framework from 2020 to 2021. Following initial agreements on the structure of the framework and how the framework would be used by each healthcare professional group, meetings focused on what should be included within the framework. International heart failure guidelines were used to inform clinical competencies, and ongoing discussion within the core working group determined where the specific knowledge and skills should sit within the document. An iterative process was used to develop the framework, over multiple drafts, frequent reviews and virtual meetings, to agree the content and structure. Finally, the individual competencies were refined for clarity and consistency at a final virtual meeting. The framework was then sent to the BSH education committee for final feedback, sign off and formal launch in October 2021.

### Write-up and dissemination

To widen the impact of the project, we planned to disseminate the framework via grey literature publication through the BSH, via publication in an appropriate peer-reviewed journal and presentation at the British Society for Heart Failure Annual Autumn Meeting 2021.

## RESULTS

### Working group characteristics

A final core working group included two physiotherapists (SY and KH), one dietitian (RJo), one occupational therapist (RJa), two cardiac physiologists (CO and RK), one cardiologist (SD), one specialist heart failure nurse (SBr) and one pharmacist (PF). Seven were women and two were men. The median length of experience working with patients with heart failure was 10 years. See [table 1](#) for full characteristics.

Senior clinical review and final sign off was provided by BSH Education and Training committee members, which included one cardiologist (SP), one cardiologist trainee (SBe), two heart failure specialist nurses (YM and MS), one general practitioner (CT) and the BSH Chief Executive (LM).

**Table 1** Characteristics of core working group

|   | n=9               |
|---|-------------------|
| Female  | 7                 |
| Years qualified, median (IQR 1 and IQR 3)                   | 19 (14 and 26.5)  |
| Years experience in heart failure, median (IQR 1 and IQR 3) | 10 (6.5 and 16.5) |
| Profession  |                   |
| Physiotherapist   | 2                 |
| Cardiac physiologist  | 2                 |
| Dietitian   | 1                 |
| Occupational therapist                                      | 1                 |
| Doctor  | 1                 |
| Nurse   | 1                 |
| Pharmacist  | 1                 |
| Geographic location   |                   |
| England   | 4                 |
| Scotland  | 3                 |
| Wales   | 2                 |
| Area of practice  |                   |
| Secondary care  | 3                 |
| Tertiary care   | 4                 |
| Primary care  | 2                 |

### Framework structure

Initial discussions focused on developing a two tier structure to the framework:

- ▶ Core heart failure competencies for all professionals, regardless of role.
- ▶ Additional heart failure competencies for specialist professionals working within the heart failure MDT.

The rationale for this decision was related to the public challenge of recognising the signs and symptoms of heart failure early and facilitating patient access to diagnostic pathway. Its scale necessitates that the solutions to both prevention and management cannot be delivered by specialists alone. Patients with heart failure often seek initial assessment from generalist members of the healthcare workforce. The working group agreed that all healthcare professions regardless of role, or formal specialist involvement with the heart failure MDT, should have key fundamental competencies relevant to heart failure. The group then defined the additional competencies needed for a deeper involvement in heart failure care in specialist roles. The competencies in both tiers focused only on the generic holistic components of knowledge and skills that should be common to any professional group. A decision was made to exclude competencies only relevant to one professional group (eg, complex specialist exercise programme methods/techniques for physiotherapists). The development of such profession-specific competencies may form a second future phase to this work.

Given the multiprofessional nature of the document, the framework has been designed for individual

professionals to interpret and use according to their own needs, role and circumstance.

### Final framework

Table 2 displays the final competency framework, which is presented in seven sections; knowledge (including subheadings on heart failure syndrome, diagnosis and clinical management); general skills; heart failure-specific skills; clinical autonomy; MDT working; teaching and education; and research and development.

### DISCUSSION

The needs of heart failure populations are complex and the approach to care must be multidisciplinary in nature. American and European heart failure guidelines emphasise the importance in a multidisciplinary approach.<sup>9 10</sup> This competency framework (table 2) should help guide development of the core underpinning generic competencies of the family of professional groups that are now involved in our modern healthcare system. It is vitally important that professionals delivering such care are appropriately trained. Such a skilled workforce is crucial in every making every patient contact count and helping to deliver the UK's aspirational target of reducing heart failure deaths by 25% over the next 25 years.<sup>42</sup>

### Strengths

The framework has been collaboratively developed by a national UK-wide expert working group, involving multiple different healthcare professional groups. This document aims to fill this gap and to provide an inclusive framework for other vital healthcare professionals that are part of the heart failure MDT.

### Limitations

There are no previous heart failure-specific competency frameworks for the professional groups included in this project. Although we performed a scoping review of other professional frameworks, this did not conform to structured systemic review methodology.

It was challenging to develop a competency document for a wide range of healthcare professionals. Although there was eventual agreement within the working group, it is clear that some of the competencies may not be required for every individual staff member and that some personal interpretation is needed when using the framework to identify individual educational needs. As this was a pragmatic professional body working group, our methods used to reach group agreement also did not conform to academic consensus methodology (eg, Delphi, Nominal Group Technique).

### Practical implications

With the development of the framework document comes the challenge of how it is implemented and used to support professional development. At the practitioner level, professionals will have to evidence knowledge and clinical competency based on the framework and be able

**Table 2** Fundamental HF competencies for allied health professionals (AHPs) and cardiac physiologists regardless of professional background/role and additional competencies for those directly working with the HF MDT

|           | <b>Core HF competencies for all AHP staff regardless of role</b>  | <b>Additional HF competencies for specialist AHPs working with the HF MDT</b>  |
|-----------|---|--|
| Knowledge | <p>HF syndrome</p> <ul style="list-style-type: none"> <li>▶ Understanding of basic normal cardiac anatomy, including physiological and electrical functionality</li> <li>▶ Awareness of definition of HF</li> <li>▶ Awareness of guidelines on defining HF by ejection fraction</li> <li>▶ Awareness that HF commonly develops as a consequence of the treatment of other illnesses or other health conditions</li> </ul>   | <p>HF syndrome</p> <ul style="list-style-type: none"> <li>▶ Understanding of HF epidemiology</li> <li>▶ Understanding of the physiological response to left ventricular dysfunction and/or HF</li> <li>▶ Understanding of different underlying aetiologies, including: <ul style="list-style-type: none"> <li>– Diseases of the myocardium</li> <li>– Abnormal loading conditions</li> <li>– Arrhythmias</li> <li>– Structural heart disease</li> </ul> </li> <li>▶ Understanding of the natural history of HF and prognosis: disease progression and trajectory</li> <li>▶ Understanding the psychological impact from a patient's point of view of the HF diagnosis</li> <li>▶ Understanding the physical, social and psychological impact of the HF diagnosis on a patient and their family</li> </ul>  |
|           | <p>Diagnosis of HF</p> <ul style="list-style-type: none"> <li>▶ Understanding of what typical symptoms HF patients present with</li> <li>▶ Awareness of the standard routine diagnostic investigations in HF, including: <ul style="list-style-type: none"> <li>– Natriuretic peptides</li> <li>– ECG</li> <li>– Echo</li> </ul> </li> <li>▶ Awareness of suspected HF assessment pathways in local area</li> </ul>   | <p>Diagnosis of HF</p> <ul style="list-style-type: none"> <li>▶ Understanding of the routine results of standard routine diagnostic investigations in HF, including: <ul style="list-style-type: none"> <li>– Natriuretic peptides</li> <li>– ECG</li> <li>– Echo</li> </ul> </li> <li>▶ Understanding of strengths and weaknesses of additional aetiological investigations in HF, including: <ul style="list-style-type: none"> <li>– Cardiac MRI</li> <li>– Cardiac CT</li> <li>– Invasive coronary angiography/right heart catheter</li> </ul> </li> <li>▶ Understanding of routine additional serum blood tests relevant to HF, including: <ul style="list-style-type: none"> <li>– Renal function</li> <li>– Liver function</li> <li>– Thyroid function</li> <li>– Lipids</li> <li>– Full blood count</li> <li>– Iron studies</li> <li>– Glucose</li> <li>– Glycosylated haemoglobin</li> </ul> </li> </ul>  |
|           | <p>Clinical/HF management</p> <ul style="list-style-type: none"> <li>▶ Understanding of generic lifestyle factors leading to or affecting HF, including smoking, alcohol diet and exercise</li> <li>▶ Awareness of national treatment guidelines of HF (eg, NICE, SIGN)</li> <li>▶ Awareness of treatment guidelines of the major clinical conditions which lead to HF, including: <ul style="list-style-type: none"> <li>– Coronary heart disease (stable and acute)</li> <li>– AF</li> <li>– Hypertension</li> <li>– Diabetes</li> <li>– Obesity</li> </ul> </li> </ul> | <p>Clinical/HF management</p> <ul style="list-style-type: none"> <li>▶ Understanding of the national (eg, NICE and SIGN) and international (eg, ESC, AHA, etc) HF guidelines</li> <li>▶ Understanding of treatment guidelines of the major clinical conditions which lead to HF</li> <li>▶ Understanding of the pharmacological treatment of patients with HF, including: <ul style="list-style-type: none"> <li>– ACEI/ARB/ARNI</li> <li>– Beta-blocker</li> <li>– MRA</li> <li>– SGLT2 inhibitors</li> <li>– Ivabradine</li> <li>– Diuretics</li> </ul> </li> <li>▶ Understanding of the different approach to management based on aetiology as well as ejection fraction</li> <li>▶ Understanding of the different approach to management based on co-morbidity, including: <ul style="list-style-type: none"> <li>– AF</li> <li>– Acute coronary syndrome</li> <li>– Renal impairment</li> <li>– Iron deficiency/anaemia</li> <li>– Diabetes</li> <li>– Obesity</li> <li>– Obstructive sleep apnoea</li> <li>– Frailty syndrome</li> </ul> </li> <li>▶ Awareness of the management strategies for treating fluid overload</li> <li>▶ Understanding of the importance of influenza, pneumococcal and COVID-19 vaccination in HF patients</li> <li>▶ Understanding of self-care strategies for HF patients (eg, nutrition, physical activity, medication adherence, psychological status, sleep, leisure and travel, smoking, symptom monitoring and symptom management, etc)</li> <li>▶ Awareness of the haemodynamic burden of pregnancy and can relate this to the women with HF</li> <li>▶ Awareness of non-pharmacological treatment options for HF, including: <ul style="list-style-type: none"> <li>– CRT</li> <li>– ICD</li> <li>– LVAD/cardiac transplant</li> </ul> </li> <li>▶ Understanding of the advantages and limitations of different methods of monitoring including: face to face, remote with external equipment and remote using implantable devices</li> <li>▶ Awareness of when additional specific tests may be warranted, including <ul style="list-style-type: none"> <li>– Ambulatory ECG/BP monitors</li> <li>– Device interrogation</li> </ul> </li> <li>▶ Understanding of the prognosis of HF, including the relevance of independent predictors of prognosis</li> <li>▶ Understanding of the approach to palliative care and end of life care in HF and can liaise with specialist palliative care MDT where necessary</li> </ul> |

Continued

Table 2 Continued

|   | Core HF competencies for all AHP staff regardless of role   | Additional HF competencies for specialist AHPs working with the HF MDT  |
|---|---|---|
| General skills  | <ul style="list-style-type: none"> <li>▶ Ability to communicate effectively with patients, carers and MDT</li> <li>▶ Involves the patients' relatives/cares appropriately in shared decision-making</li> <li>▶ Ability to deliver a holistic individualised care plan (based on profession and specialty), after exploring all patient problems and complaints</li> <li>▶ Ability to recognise own limitations and seek advice and support where appropriate</li> <li>▶ Ability to document findings and consultations in a legible and structured manner and in a form accessible to other members of the MDT</li> <li>▶ Ability to identify treatment plan non-adherence (intentional or non-intentional) and plan interventions to support improved adherence</li> <li>▶ Ability to provide suitable and timely follow-up based on findings</li> </ul> | <ul style="list-style-type: none"> <li>▶ Ability to communicate compassionately and effectively with patients and carers about all aspects of HF, including difficult discussions surrounding diagnosis and prognosis</li> <li>▶ Ability to provide patients and carers with information in a manner/language understood by patient/carers, including providing or signposting to key resources</li> <li>▶ Ability to interpret routine heart diagnostic test results</li> <li>▶ Ability to screen and document patients for psychological distress at various points in their journey using a validated tool</li> <li>▶ Ability to provide psychological support and support self-management for people with less complex psychological needs</li> <li>▶ Ability to identify patients who require more complex psychological intervention and refer them to appropriate services</li> <li>▶ Ability to facilitate patient empowerment and self-management</li> </ul>   |
| HF-specific skills (including examination/history taking) | <ul style="list-style-type: none"> <li>▶ Ability to undertake a basic clinical history from an HF patient.</li> <li>▶ Understanding of the importance of fluid balance</li> <li>▶ Ability to recognise when patients require escalation in care and liaise with the MDT, including urgent/emergency transfer to hospital if required</li> </ul>   | <ul style="list-style-type: none"> <li>▶ Ability to perform physical examination of HF patients relevant to individual role within the MDT, including:               <ul style="list-style-type: none"> <li>– BP</li> <li>– Pulses (rate and rhythm)</li> <li>– Oedema assessment</li> <li>– Chest auscultation</li> <li>– Jugular venous pressure assessment</li> </ul> </li> <li>▶ Ability to undertake a focused clinical history from an HF patient and assess the common HF signs and symptoms, including:               <ul style="list-style-type: none"> <li>– NYHA</li> <li>– Paroxysmal nocturnal dyspnoea / orthopnoea</li> </ul> </li> <li>▶ Ability to recognise common triggers of decompensation in HF patients</li> <li>▶ Ability to support patients about living with a device</li> <li>▶ Ability to recognise complications of complex devices and seek review</li> <li>▶ Ability to sensitively discuss the concepts of ICD deactivation to patients and carers, both at implantation and end of life.</li> <li>▶ Ability to recognise when patients require a palliative care review/approach.</li> <li>▶ Ability to identify the common signs and symptoms of other forms of CVD including               <ul style="list-style-type: none"> <li>– Ischaemia</li> <li>– Syncope</li> <li>– Palpitations</li> </ul> </li> </ul> |
| Clinical autonomy   | <ul style="list-style-type: none"> <li>▶ Ability to use knowledge and skills to follow guidelines and protocols</li> <li>▶ Ability to use knowledge and skills to help deliver aspects of an HF management plan produced by a more experienced member of the MDT</li> </ul>   | <ul style="list-style-type: none"> <li>▶ Ability to use knowledge and skills to autonomously make complex decisions in HF patients where there are several potential treatment/ intervention options (with the support of the wider HF MDT where appropriate)</li> </ul>  |
| MDT working   | <ul style="list-style-type: none"> <li>▶ Is a fully integrated member of local healthcare MDT</li> <li>▶ Ability to work with the wider healthcare MDT in order to provide the most appropriate care for the patient</li> </ul>   | <ul style="list-style-type: none"> <li>▶ Is a fully integrated member of local established HF MDT</li> <li>▶ Is a member of key national HF associations (eg, British Society for Heart Failure)</li> <li>▶ Ability to represent their profession on key local or national HF service committees (where appropriate)</li> <li>▶ Ability to aid in the production of local HF guidelines and protocols (where appropriate)</li> </ul>  |
| Teaching/education  | <p>For themselves</p> <ul style="list-style-type: none"> <li>▶ Fulfills all relevant mandatory professional standards of practice</li> <li>▶ Fulfills all relevant mandatory professional requirements for continuing professional development and revalidation</li> </ul> <p>For others</p> <ul style="list-style-type: none"> <li>▶ Ability to deliver basic education to patients at a level required to promote understanding of their condition and rationale for treatment</li> </ul>   | <p>For themselves</p> <ul style="list-style-type: none"> <li>▶ Undertakes additional accredited HF education and training necessary for their role</li> <li>▶ Takes responsibility for keeping up to date with the evolving evidence base in HF</li> <li>▶ Protects time for HF-specific continuing professional development through accredited providers</li> </ul> <p>For others</p> <ul style="list-style-type: none"> <li>▶ Ability to deliver aspects of local HF clinical teaching (according to a learning plan developed by others and with support from more senior colleagues)</li> <li>▶ Ability to deliver advanced HF education relevant to their individual role to patients and colleagues</li> </ul>  |
| Research and development                                  | <ul style="list-style-type: none"> <li>▶ Understanding of how to critically appraise research papers, to a sufficient level to apply the evidence-base into routine practice</li> <li>▶ Understanding of the basic core features of research</li> <li>▶ Ability to support local quality improvement programmes and audits</li> </ul>   | <ul style="list-style-type: none"> <li>▶ Understanding of landmark HF trials and evidence base</li> <li>▶ Understanding of the National Heart Failure Audit</li> <li>▶ Ability to deliver defined tasks for a local research team (under the supervision of more senior members of the MDT where needed)</li> <li>▶ Understanding of quality improvement methodology and understands how to influence change</li> <li>▶ Understanding of ongoing HF research trials with local recruitment and has ability to identify patients who fit eligibility criteria for these trials</li> </ul>  |

ACEI, ACE inhibitor; AF, atrial fibrillation; AHA, American Heart Association; ARB, angiotensin receptor blocker; ARNI, angiotensin receptor and neprilysin inhibitor; BP, blood pressure; CRT, cardiac resynchronisation therapy; CVD, cardiovascular disease; ESC, European Society of Cardiology; HF, heart failure; ICD, implantable cardioverter defibrillator; LVAD, left ventricular assist device; MDT, multidisciplinary team; MRA, mineralocorticoid receptor antagonist; NICE, National Institute for Health and Care Excellence; NYHA, New York Heart Association; SGLT2, sodium–glucose cotransporter 2; SIGN, Scottish Intercollegiate Guideline Network.

to present this evidence for assessment to a mentor and/or undertake a postgraduate clinical qualification. There are tried and tested methods for evaluating competency, using clinical hours in practice and supervised learning events (eg, case-based discussions, miniclinical evaluation exercise) evidenced with a learning diary, as well as more formal assessments, structured essays, case presentations, portfolio submissions to professional bodies and formal viva.

'Advanced practice' type roles are becoming common across multiple health professions and across multiple countries.<sup>43 44</sup> Many of these roles are built on a premise that four professional pillars are needed to successfully deliver a role: clinical practice, leadership, education and research.<sup>45 46</sup> Our framework closely mirrors this approach. There is also a drive towards standardisation of the expectations of training and competency levels for heart failure specialists to ensure good and safe levels of care. This document offers a framework to support healthcare professional bodies to develop strategies to train and develop teams so they can meet the demands of the increasing heart failure patient population.

To move this forward in the UK, collaboration with various profession-specific bodies, recognising the needs of their members, is required. Ultimately, training programmes are required to be developed to support competency progression. This could be done in collaboration with specialist organisations like the BSH. It is important that professional bodies recognise the benefits to patients of their members getting subspecialty qualifications and accreditations in heart failure. Such achievements could be used as evidence during annual revalidation requirements.

## Research

Research into professional competence development in heart failure is limited. This is the first competency framework specifically aimed at multiple healthcare professional groups. By providing a document that helps structure specific training needs for healthcare professionals this leads into opportunities going forwards to investigate how improved training can impact on the care and outcomes for people with heart failure, thereby strengthening the case for greater multidisciplinary models of care.

## CONCLUSION

Heart failure is a syndrome associated with poor clinical outcomes and unmet clinical need. Patients with heart failure have complex needs that require input from multiple members of the MDT. This framework defines an expert consensus view on the necessary minimum generic knowledge and skills that healthcare professional requires and aims to standardise care expectations. It also provides a roadmap for career progression and continuing professional development for healthcare professionals who wish to subspecialise in heart failure.

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