

# Heart failure

The vision of the British Heart Foundation is of a world in which people do not die prematurely of heart disease. The charity, which was created in 1961, hopes to achieve this through pioneering research, vital prevention activity and by ensuring quality care and support for people living with heart disease. This article reviews its work on heart failure.

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**M**any definitions of heart failure have been put forward over the past 50 years. These highlight one or several features of this complex syndrome such as haemodynamics, oxygen consumption, or exercise capacity. In recent years most definitions have emphasised the need for both the presence of symptoms of heart failure and physical signs of fluid retention.<sup>1</sup>

Heart failure is a syndrome in which the patients should have the following features: typically shortness of breath at rest or during exertion, and/or fatigue; signs of fluid retention such as pulmonary congestion or ankle oedema and objective evidence of an abnormality of the structure or function of the heart at rest. A clinical response to treatment directed at heart failure alone is not sufficient for the diagnosis, but is helpful when the diagnosis remains unclear after appropriate diagnostic investigations.<sup>1</sup>

An estimated 700,000 people in the UK live with heart failure, with around 63,000 new cases each year being diagnosed.<sup>2,3</sup> Myocardial infarction and hypertension are two of the main contributing factors. Improvements in treatments have led to an increased number of people living with both who subsequently develop heart failure. However, the aetiology of heart failure is multi-factorial and complex and is also influenced by diabetes mellitus, obesity, smoking, sedentary lifestyles and valvular heart disease.<sup>4</sup>

As the prevalence of heart failure increases with longevity, the number of people living with it is likely to increase due to the ageing population.<sup>5</sup> Whilst the diagnosis and treatment of heart failure has improved, the associated mortality rates remain high, with 30–40% dying within 1 year of diagnosis.<sup>6</sup> Those who survive can experience a significant reduction in quality of life at a cost of 2% of the NHS annual budget.<sup>7</sup>

## British Heart Foundation

### Health care professionals

The British Heart Foundation currently funds 271 heart failure specialist nurses across the UK. These specialist nurses manage heart failure patients in their homes or local clinics, monitor their condition, optimise medication where appropriate, advise patients on lifestyle changes (especially diet and exercise) and provide emotional support to patients and their families. They appear to have a positive impact on the health-related quality of life of patients and carers.<sup>8</sup>

An example of their essential work can be seen in a joint project between Marie Curie Cancer Care and the British Heart Foundation (Better Together).<sup>9</sup> Specialist nurses highlighted that hospital admissions could be avoided by administration of IV diuretic therapy outside the acute hospital in-patients setting. As a result guidelines have been developed for specialist heart failure nurses to enable administration of IV diuretic therapy in settings such as day care, hospices and the patient's home.

The British Heart Foundation has also funded training posts for 51 echo technicians to have dedicated training and become accredited by the British Society of Echo (BSE). These posts aim to improve the specialist diagnosis and treatment of heart failure. The British Heart Foundation also funds essential diagnostic equipment for cardiac patients such as ECGs, echocardiograms and cardiac ultrasounds.

### Research

The British Heart Foundation is currently spending over £20 million on research into heart failure. There are over 60 live British Heart Foundation research grants on heart failure that include studies of basic cell biology of the failing heart (to identify new

targets for better treatment); studies on the role of exercise and rehabilitation to help the quality of life in patients with heart failure and clinical trials for new treatments.

Seven of our 27 British Heart Foundation professors work on aspects of heart failure. In the last 4 years we have also helped to fund four clinical MRI machines that can be used to diagnose heart failure in patients and to help monitor their response to treatment.

### Resources and services

There are a number of resources available for patients, carers and healthcare individuals. These include:

- **User Involvement**, which is going from strength to strength, and patients and carers are increasingly being encouraged to share their views on issues around service development and improvement.
- **Hearty Voices**, which is a British Heart Foundation programme that aims to create a network of heart patients and carers who are able to use their stories to do just that.
- **Heart Matters**, which is a free service designed for anyone who has, or is at risk of developing, a heart condition, and their carers. There are approximately 140,000 members who receive personalised information, regular issues of the heart health magazine and specialist support from cardiac nurses or heart health advisers.<sup>10</sup>
- **Heart Helpline**, which can provide individuals with information to help support any medical advice already received from a GP or consultant.

### Heart failure palliative care

In recognition of national strategies and guidelines on palliative care provision for chronic life threatening illnesses, and reports from heart failure specialist nurses on the palliative care needs of patients, the British Heart Foundation has become involved in a number of initiatives to improve palliative and supportive care services available to end-stage heart failure patients, and their carers.

These include funding nine palliative care heart failure specialist nurses at eight sites across the UK, to undertake pioneering roles in the provision of palliative care to patients in the advanced stages of the disease.

The British Heart Foundation has also collaborated

with Marie Curie Cancer Care on two projects for patients in the advanced stages of heart failure: Delivering Choice project in Lincolnshire<sup>11</sup> and the Better Together project in Poole and Bradford.

### Innovations and future projects

A new collaboration is underway in Glasgow with Marie Curie Cancer Care over the next 5 years through the Caring Together Project. This will explore innovative models of palliative care for patients in advanced stages of heart failure.

The British Heart Foundation is also keeping a close eye on telemonitoring. This has mainly featured in research trials<sup>12-15</sup> but is increasingly becoming integrated into every day heart failure practice, enabling a higher proportion of people with heart failure to be monitored by specialist services. It is particularly helpful for those living in remote and rural areas, the elderly and frail who are housebound and those at high risk of clinical deterioration. A number of heart failure specialist nurses are using this intervention, and report that it is beneficial to the overall management of heart failure patients. These interventions are in their early stages and yet to be fully evaluated before research may translate into routine healthcare delivery.

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