

# NICE guidelines on heart failure

Martin R Cowie

Guidance on the management of chronic heart failure was issued to the NHS in England and Wales by the National Institute for Clinical Excellence (NICE) in July 2003.<sup>1</sup> Recommendations were made covering all aspects of the care pathway, from first suspicion of the diagnosis, through chronic disease management, to end-of-life issues.

The guidance is timely. Heart failure is a major problem for the NHS.<sup>2</sup> There are at least 900,000 people living with heart failure in the UK, although the prevalence is steadily increasing due to ageing of the population and improved survival from acute cardiac disease such as myocardial infarction. The average age at diagnosis is 76 years, and considerable comorbidity is common. Despite advances in therapy many patients remain symptomatic, with breathlessness and fluid retention impairing their ability to do all they want. The prognosis of heart failure is serious – 40% of people with a new diagnosis die within a year, with the annual mortality then dropping to 10% per year.<sup>3</sup> This prognosis is worse than for many cancers, but it is rarely discussed with patients and their families.

Heart failure is responsible for 1–2% of healthcare expenditure in most developed countries, and the UK is no exception. Around 70% of this cost relates to hospitalisations, which may be recurrent and prolonged.<sup>2</sup> Around 5% of medical emergency admissions are due to heart failure. Most people with heart failure will be seen in primary care 11 to 14 times per year, and are often prescribed many medications.<sup>2</sup> Recent pan-European surveys suggest that the quality of care for patients with heart failure in the UK lags behind that of many of our continental neighbours.<sup>4,5</sup>

The NICE guideline builds on the National Service Framework for Coronary Heart Disease,<sup>6</sup> which included heart failure as a short ‘chapter’. However, progress on achieving the goals in that chapter has been considerably slower than for other chapters such as acute myocardial infarction or coronary revascularisation. Accordingly, the Department of Health has identified heart failure as a key priority.

## The key recommendations

There have been many advances in the management of heart failure in recent years – in terms of both diagnosis and treatment. The ‘long form’ of the

guideline, published by the National Collaborating Centre for Chronic Conditions (NCC-CC) at the Royal College of Physicians in London, summarises the evidence on which the 94 recommendations in the NICE guideline are based.<sup>7</sup> Eight recommendations have been identified as ‘key’ in that they are likely to have a major impact on the outcome of care for patients. The Department of Health considers these to be priorities for implementation, and will be producing advice on how to do this. The guideline has also suggested audit criteria based on the key recommendations. The key recommendations are:

- The basis for a historical diagnosis of heart failure should be reviewed, and only patients whose diagnosis is confirmed should be managed in accordance with the guideline.
- Doppler 2D echocardiographic examination should be performed to exclude important valve disease, assess the systolic (and diastolic) function of the left ventricle and detect intra-cardiac shunts.
- All patients with heart failure due to left ventricular systolic dysfunction should be considered for treatment with an angiotensin-converting enzyme (ACE) inhibitor.
- Beta-blockers licensed for heart failure should be initiated in patients with heart failure due to left ventricular systolic dysfunction after diuretic and ACE inhibitor therapy (regardless of whether or not symptoms persist after such therapy).
- All patients with chronic heart failure require monitoring, which should include:
  - clinical assessment of functional capacity, fluid status, cardiac rhythm, and cognitive and nutritional status

**Martin R Cowie**  
MD MSc(Epid) FRCP,  
Professor of  
Cardiology,  
National Heart and  
Lung Institute,  
Imperial College,  
London

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- review of medication, including need for changes and possible side-effects
- serum urea, electrolytes and creatinine.
- Patients with heart failure should generally be discharged from hospital only when their clinical condition is stable and the management plan is optimised.
- The primary care team, patient and carer must be aware of the management plan.
- Management of heart failure should be seen as a shared responsibility between patient and healthcare professional.

One of the key issues for the NHS is using the limited resource of echocardiography appropriately. The guideline suggests that a normal 12-lead electrocardiogram or plasma concentration of natriuretic peptides (BNP or NTproBNP) may be used to ‘rule out’ heart failure in patients with new symptoms. In such patients, alternative diagnoses should be considered first. If either test is abnormal there are good grounds for suspecting heart failure, and an echocardiogram should be requested. If the echocardiogram is abnormal, then the diagnosis is usually secure, although in cases of doubt specialist input may be required. Diastolic dysfunction remains a difficult area, for which referral to a specialist is advised. Other tests (including chest radiograph, full blood count, thyroid function, and peak flow and spirometry) are also recommended, chiefly to detect comorbidity or exacerbating factors. A one-page diagnostic algorithm is provided in the guideline. The location and timing of the various investigations will vary from one healthcare community to another – and it is beyond the remit of NICE to make recommendations on the configuration of such services.

The evidence base for the treatment of heart failure is enormous. The guideline group reviewed thousands of papers, and has made reference to several hundred in the full version of the guideline. A simplified algorithm for drug treatment of left ventricular systolic dysfunction is given, along with practical recommendations on how to titrate drug therapy and monitor for adverse effects. Recommendations are also made on lifestyle management, and when more invasive procedures such as surgery or implantation of pacemakers or defibrillators should be considered.

The guideline also points to where specialist referral is likely to be necessary – particularly where the diagnosis is in doubt, or where the patient is very unwell, or failing to respond to ‘standard’ therapy. It is important to note that a ‘specialist’ in this instance does not necessarily refer to a consultant cardiologist, but to any healthcare professional with special knowledge and experience in the diagnosis and management of patients with heart failure. Increasingly, this may be a GP with a special interest, or a heart failure nurse specialist. Of particular importance is the recognition that heart failure nurses have a major role to play in the delivery of high quality care. Where such schemes are in operation, the education of patients and optimisation of therapy is likely to be much more rigorous than in the traditional model.

## Working with patients and carers

The need to improve communication between healthcare professionals and patients and their families was highlighted repeatedly by the patient representatives on the guideline group, and was corroborated by the patient focus group organised by the Patient Involvement Unit of NICE.<sup>8</sup> Often the term ‘heart failure’ is not used in clinical practice, leaving all concerned to use the type of euphemisms that were common in cancer practice 30 years ago. This is viewed as counterproductive and prevents collaborative working.

From the patient’s viewpoint, a high quality service that was easily accessible was seen as vital, with a clear management plan being communicated to patients and their carers. Increased knowledge about available therapies amongst GPs was also deemed important, with more frequent review of drug treatment. The ready availability of the public version of the guideline – unusual for professional guidelines in Europe – is also likely to encourage better awareness of the standards that should be expected. In modern healthcare, patients and clinicians should be working together in a constructive partnership to ensure the best possible outcome.

## Implementation

NICE is not charged with implementing the guideline, but categorically states that:

*local health communities should review their existing service provision for the management of heart failure against this guideline as they develop their Local Delivery Plans. The review should consider the resources required to implement fully the recommendations set out ... the people and processes involved, and the timelines over which full implementation is envisaged.*

It notes that it is in the best interests of patients that the implementation timeline is as rapid as possible. Physicians are likely to play an important role in this. Awareness of the guideline is essential, and several organisations, including the British Cardiac Society, the British Society of Heart Failure, and the British Cardiac Patients’ Association, will be working to ensure this guideline does not just gather dust on the overloaded shelves of doctors and managers.

Will resources be provided to aid implementation? Although no new funding has currently been allocated by the Department of Health, spending on cardiovascular disease has increased markedly in recent years. The National Director for Heart Disease, Dr Roger Boyle, has warmly endorsed the guideline and has identified the improvement of services for heart failure as a key priority in the delivery of the National Service Framework for Coronary Heart Disease (CHD). Furthermore, as NICE considers the recommendations to be ‘clinically and cost effective’ the message for providers is clear. Provision of better quality care is likely to require more healthcare resource, but for many healthcare communities the recommendations may be achieved (if they have not been already) by redesign of current services, as championed by the CHD Collaboratives.

The new General Medical Services contract for GPs includes a left ventricular dysfunction subset of CHD as one of the ten disease areas in the clinical 'domain'. Practices that have a register of patients with coronary heart disease and left ventricular dysfunction, and can demonstrate that the diagnosis is confirmed by echocardiography (target 90%), and that an ACE inhibitor (or angiotensin II antagonist) is prescribed (target 70%) will qualify for additional funding. This should facilitate a focus in primary care on at least two of the key recommendations of the NICE guidance.

### The NICE process of guideline development

The 'long form' of the guideline gives detail of the arduous process of guideline development. Based on international best practice in guideline development, the process involved a large guideline development group of methodologists, healthcare professionals, and patient representatives, who met many times over 18 months. The Patient Involvement Unit of NICE had a major role in the final wording of the guideline and its public version (available at [www.nice.org.uk](http://www.nice.org.uk)). An enormous amount of evidence was sifted through to enable summary statements to be agreed, upon which the specific recommendations were then based. A consensus reference group helped finalise the wording of the recommendations and, perhaps more importantly, drew up recommendations (good practice points) for those areas in which there is little evidence but which address important aspects of heart failure care. NICE demanded a rigorous and arduous process of consultation with 'stakeholders' regarding the content of the guideline. More than 50 stakeholders were registered – including professional bodies, medical charities, patient groups, and industry. Two rounds of consultation took place and it is to be hoped that this has led to a strong sense of ownership within the healthcare community.

Although there was a strict cut-off date for the inclusion of published evidence, the guideline group wisely decided to build in some degree of 'future proofing', with reference to ongoing clinical trials that may modify the recommendations.

### Call to action

Even the most rigorously developed guidelines make no difference to clinical practice if they just sit on the shelf. There is considerable goodwill for improving the standards of care for heart failure across the country. There is a broad international consensus on what needs to be done, and the NHS now has a single authoritative source of information that should improve uptake of appropriate diagnostic procedures and treatments, improve coordination and sharing of information between healthcare professionals and reduce regional variation in the quality of care that patients with heart failure receive. Many factors come into play in the translation of new evidence into changed practice – particularly in an organisation as large and as complex as the NHS. Physicians should be aware of the contents of the guideline, and help facilitate its implementation within their area of responsibility. Resource issues will arise, but not all

changes will necessarily require large additional financial resource. Greater patient and public awareness of what should be provided, and when, will also help drive improvement. It is time to put our house in order with respect to the management of heart failure. With this guidance, NICE has pointed the way.

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