Heart Failure: what is the new national guidance?

What changes have been made to NICE's Chronic Heart Failure guideline in the new update, published in September 2018, and how are these likely to affect primary care and specialist heart failure services?

Members of the NICE Chronic Heart Failure Guideline Committee brought their unique insights to answer these questions – and many more – at a packed, one-day meeting for physicians, GPs, specialist nurses and pharmacists. In addition, the current Chair of the British Society for Heart Failure contributed his external perspective on whether the Committee got it right.

The new guideline: what has changed?

Key changes in the newly updated NICE guideline for Chronic Heart Failure focus on more patient-centric care, underpinned by the latest evidence-based approaches to diagnosis and treatment. In his opening presentation, Dr Abdallah Al-Mohammad, Consultant Cardiologist at South Yorkshire Cardiothoracic Centre in Sheffield, highlighted:

- NT-proBNP testing for all patients with suspected heart failure (HF)
- An extended first consultation with patients to discuss the diagnosis
- Inclusion of mineralocorticoid receptor antagonists (MRAs) as first-line disease-modifying therapy for patients with heart failure with reduced ejection fraction (HFrEF)
- No change to the earlier sacubitril/valsartan and ivabradine NICE technology appraisal recommendations
- Greater emphasis on the importance of cardiac rehabilitation
- The importance of improved collaboration between the HF multidisciplinary team (MDT) and the primary care team
- Implementation and sharing of HF and social care plans with patients and care teams at all levels

In the guidelines, clinicians are being urged not only to diagnose a patient's HF, but also to understand its causes, and new diagnosis and treatment algorithms distinguish between HF with reduced ejection fraction (HFrEF) and preserved ejection fraction (HFpEF). However, unlike European HF guidance, there is no new category for patients with mid-range ejection fraction (HFmrEF) with EF of 40-49%.

Dr Al-Mohammad pointed out that the diagnostic algorithm has been simplified: myocardial infarction (MI) has been removed as an indicator for direct referral to echocardiography if a new diagnosis of HF is suspected, and all patients with a suspected diagnosis should have NTproBNP measured (Figure 1).

"For all patients with raised NT-proBNP levels, referral should be immediate, with specialist assessment and echo achieved within two or six weeks, depending on the NT-proBNP result," he said.

The NT-proBNP thresholds in the guidelines are valid for all patients with suspected HF, though research has been recommended to investigate whether they should be different for patients with atrial fibrillation (AF) or advanced kidney disease.

Just a minute: what is NICE and how important is it?

The National Institute for Health and Care Excellence (NICE) provides authoritative, evidence-based guidance on health and social care to help health, public health and social care professionals deliver the best possible care within the resources available.

"NICE's role is to say what 'good' looks like, what should be delivered and, if we have choices, what should be supported. It promotes and encourages successful innovation, while protecting patients from interventions that do not work," explained Professor Martin Cowie, Professor of Cardiology at Imperial College London and a Non-Executive Director of NICE.

The first NICE guidelines on Chronic Heart Failure were published in 2003 and updated in 2010. Reflecting the accumulation of new evidence, a further update was published in September 2018.[1]

NICE guidelines have no statutory authority, though local commissioners and healthcare providers have a responsibility to enable a guideline to be applied when individual professionals and people using services wish to use it.

"At NICE, we're very concerned about the slow implementation of guidelines in the UK. Producing guidelines is not sufficient and the postcode lottery is still alive and well," said Professor Cowie.

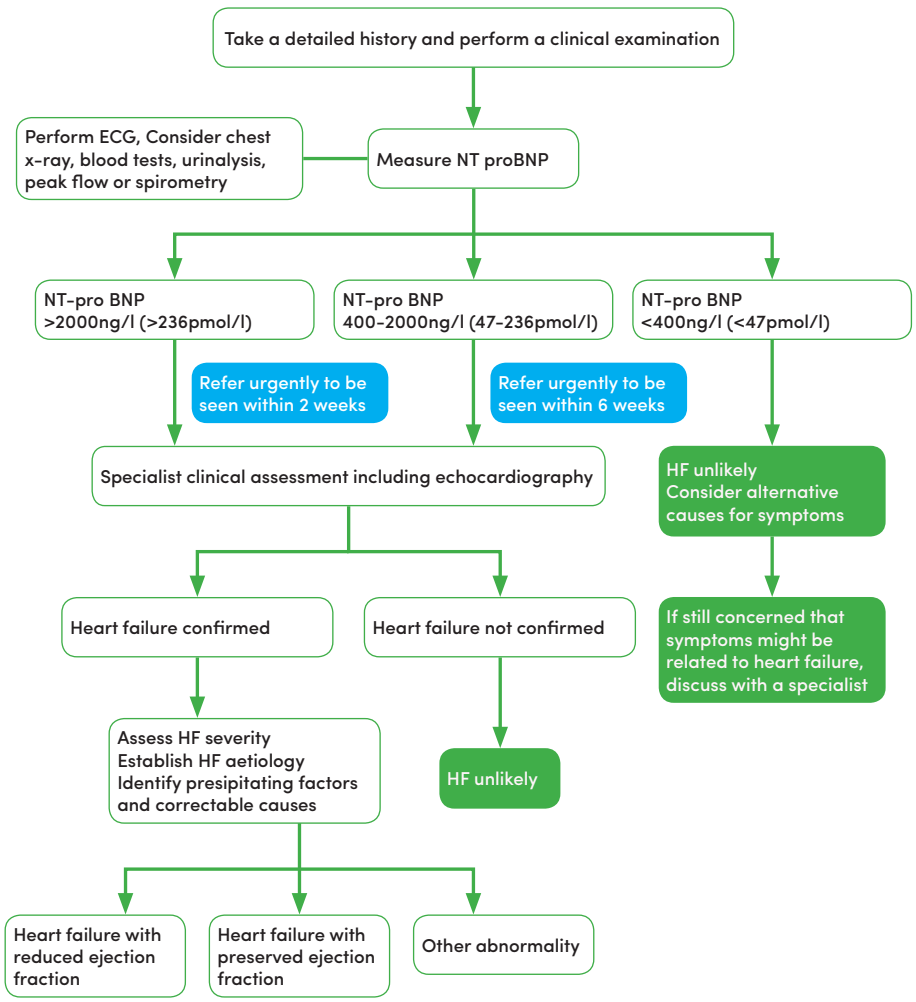
In contrast to NICE guidelines, NICE technology appraisals (TAs) which review the clinical and cost effectiveness of new medicines, medical technologies and diagnostics have statutory authority and there should be easy access to recommended therapies if clinicians consider that patients may benefit from them and they fulfil the indications.

As part of the latest update of Chronic Heart Failure guidelines, TA recommendations for ivabradine published in 2012,[2] implantable cardioverter defibrillators (ICDs) published in 2014,[3] and sacubitril/valsartan published in 2016[4] have been included.

Despite the legal status of TAs, there can still be delays in implementation. An analysis of implementations of TAs between July 2016 and June 2017 showed that uptake of new medicines was lower than expected in six out of 10 cases.[5] In the case of sacubitril/valsartan, the most recently approved treatment for HF, observed use was 20% of the lower level of expected use, six months after the TA was published.

"This is embarrassing – we have a national body that says yes to innovation but a system that cannot ensure implementation. With the new heart failure guidelines, we have an opportunity to drive things forward, to raise awareness and to work as champions of heart failure to make things happen," concluded Professor Cowie.

Figure 1 Suggested approach for diagnosing heart failure[7]



On diet and general advice, the new guidelines aim to remove the tendency for clinicians to routinely advise patients to restrict their salt and water content. Such advice is only needed for patients with dilutional hyponatraemia or high salt and/or fluid consumption.

For patients with HFrEF, angiotensin converting enzyme (ACE) inhibitors/angiotensin receptor blockers (ARBs) and beta blockers (BBs) remain the cornerstone of treatment (Figure 2). However, safety recommendations have been introduced for measuring blood pressure before and after every dose increment of ACEIs and ARBs, and research has been recommended to investigate the clinical and cost effectiveness of BBs in patients with HF and AF.

Dr Al-Mohammad explained that the decision to move MRAs to first line therapy was based largely on the results of the EMPHASIS-HF study which showed a reduction in all cause mortality with eplerenone in patients with HFrEF but mild symptoms.[6] NICE has recommended that patients with HFrEF who continue to have symptoms should be offered an MRA in addition to an ACEI/ARB and BB, with accompanying monitoring for renal function and blood pressure.

Although recommendations for first line triple therapy include patients with chronic kidney disease (CKD), lower dose and slower titration are recommended for those with an eGFR ≤45ml/min/1.73 m^2. It is suggested that specialist MDTs should consider consulting a renal specialist if eGFR is <30 ml/min/1.73 m^2.

Following specialist assessment in patients with HFrEF who remain symptomatic after optimal treatment, sacubitril/valsartan is recommended to replace ACEIs or ARBs in accordance with NICE TA 388.[4] For those in sinus rhythm with a heart rate ≥75 beats per minute, ivabradine is recommended in line with TA267.[2] Specialist assessment is also recommended before the use of hydralazine and nitrates, or digoxin – a new stipulation for digoxin.

Regular monitoring is essential for all patients with HF, with a minimum of six-monthly monitoring in primary care, but the MDT may consider serial measurement of NT-proBNP as part of a treatment optimisation protocol for people aged under 75 who have HFrEF and an eGFR > 60 ml/min/1.73 m^2.

MDTs should work in collaboration with primary care teams and include:

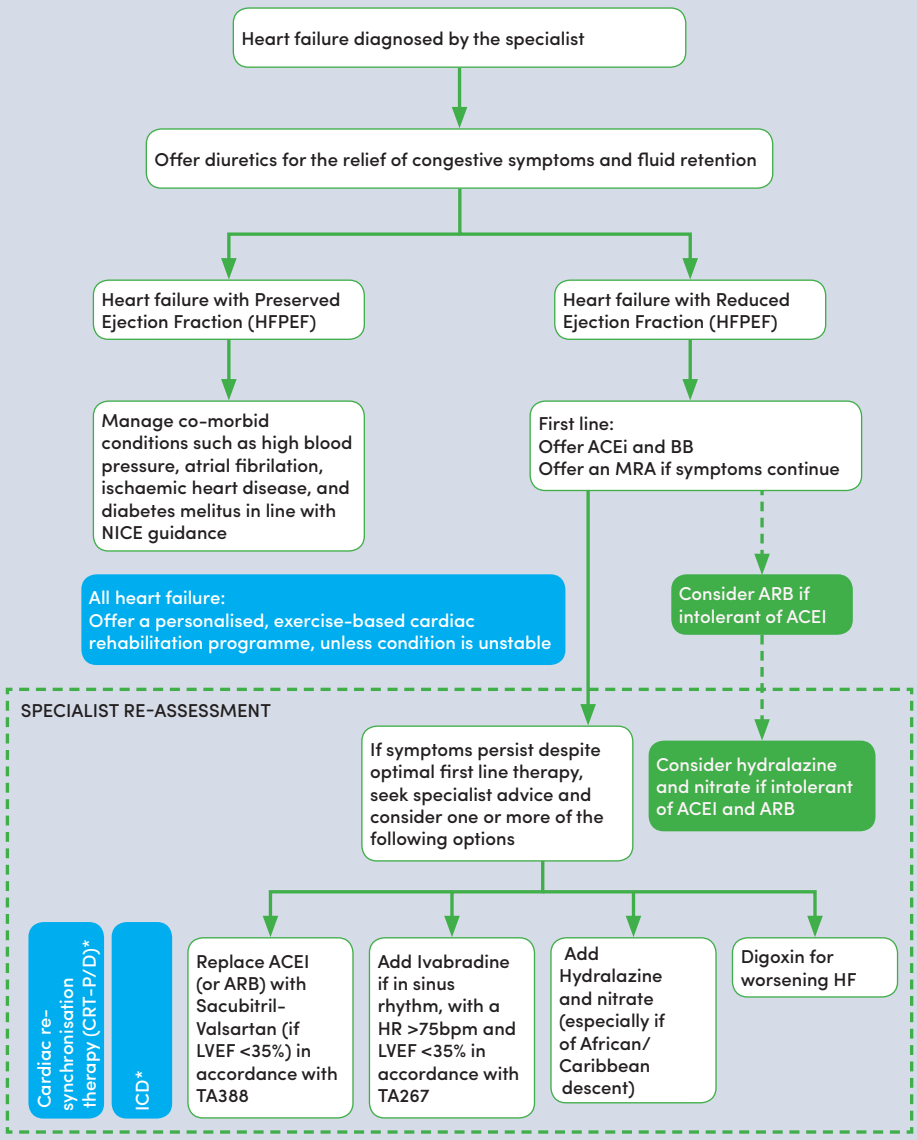
- A lead physician with a subspecialty interest in HF (usually a consultant cardiologist) who is responsible for making the clinical diagnosis
- A specialist HF nurse
- A healthcare professional with expertise in specialist prescribing for HF

The primary care team working within the specialist HF MDT should take over routine management of HF as soon as it has been stabilised and its management optimised, and should carry out 6-monthly reviews.

The specialist HF MDT should write a summary of care for each person with HF, and this should form the basis of a care plan to be be given to patients with HF, their family or carer if appropriate, and all health and social care professionals involved in their care.

Dr Al-Mohammad concluded his review with a summary of NICE recommendations for care for patients with late stage HF. These include a recommendation against offering long-

Figure 2 Suggested approach for managing heart failure[7]



*In accordance with TA314

term home oxygen therapy for advanced HF, though patients may have this for other comorbidities. If a patient is nearing the end of their life, consideration should be given to NICE guidance on care in the last few days of life.

Getting the diagnosis right

HF is common, costly and treatable, but diagnosis can be challenging, Dr Clare Taylor, a West Midlands GP involved in academic research, told delegates. She explained that, in her 10,000 patient, eight-GP practice, clinicians have approximately 100 patients living with HF, and diagnose 20 new patients per year. Based on her research, four are likely to have advanced disease at diagnosis and die within a year, 10 will be on a slower trajectory and die within five years while six will still be alive at 10 years.

"Ten years is a long time, and those patients have got a lot of living to do, so we need to be enabling people to be in this group and to be able to get on with their lives after their diagnosis," said Dr Taylor.

Too many people assume that being unable to walk as far as they used to without getting breathless is an inevitable part of getting older, so it is important to raise awareness that the three core HF symptoms – shortness of breath, ankle swelling and fatigue – are not 'normal'. However, the challenge is to differentiate HF from other causes of shortness of breath, such as chronic obstructive pulmonary disease (COPD).

"Two thirds of patients with heart failure have at least three comorbidities and 50% have six, so patients are often on lots of drugs, making it very confusing. But when a patient comes in with breathlessness, we need to have heart failure on our radar," said Dr Taylor.

She explained that patients with HF may report they are breathless lying down and gasp when they get up. If they also have swollen ankles and fatigue, this makes HF easier to diagnose. Taking a good medical history and checking risk factors and vital signs are essential. Taking a patient's pulse can give a surprising amount of information.

When HF is suspected, NT-proBNP testing is recommended in guidelines (Figure 1)[1,7] but, if this is not available, BNP testing should be done. There is a four-fold difference in results, so an NT-proBNP of 400 ng/L equates to a BNP of 100 ng/L.

Dr Taylor pointed out that patients with an NT-proBNP less that 400 ng/L are unlikely to have HF but a number of factors can affect a patient's level (Table 1).

"As with any blood result, we need to look at it within the bigger picture. If a patient has an NT-proBNP of 390 and they're on ramipril, and you think it could be heart failure, ask a cardiologist and

don't just rely on the test result," said Dr Taylor.

Patients with a raised NT-proBNP should be referred for specialist assessment and echo and seen within two weeks if their NT-proBNP is above 2000 ng/L and within six weeks if it's above 400 ng/L.

"We virtually never get an echo assessment within two weeks and it's something we need to push commissioners on because the two-week cancer pathway has been very successful, so why shouldn't the two-week heart failure pathway?" said Dr Taylor.

Other diagnostic tests are important for ruling out other conditions or identifying comorbidities. These include chest X-ray, ECG, spirometry and blood tests (full blood count, renal, liver, fasting glucose and lipids).

The updated guideline states that echocardiography should be interpreted by someone with the expertise to differentiate HFrEF from HFpEF or valvular heart disease. The cause of the heart failure should be mentioned in the patient's care plan.

Table 1 Factors which may affect NT-proBNP or BNP levels

INCREASE LEVELS	DECREASE LEVELS
Tachycardia	Obesity
Hypoxia	Diuretics
Diabetes	ACE inhibitors
Renal impairment (GFR<60ml/min)	Beta blockers

Getting treatment right: across the HF spectrum

Although an ejection fraction (EF) under 40% is specified for the first time within the recent NICE guideline as the trigger for initiating most disease modifying HF treatment, Dr Suzanna Hardman, Consultant Cardiologist at Whittington Health NHS Trust, London, urged delegates to ensure optimal care for patients with HF, irrespective of EF.

"There is a massive amount we can do for patients with HFpEF, as well as for those with HFrEF. They don't all need to see a heart failure nurse but, if we re-engage with primary care, we can ensure that all our heart failure patients receive optimal care," she explained.

As the majority of patients with HF present with some fluid retention, diuretics are usually the first therapy for both HFpEF and HFrEF (Figure 2),[1,7] and the dose should be tailored to individual needs. In both groups, patients are likely to have comorbidities such as high blood pressure, AF, ischaemic heart disease and diabetes, and these all need to be actively managed according to NICE guidance.

"If a patient with HFpEF has high blood pressure, it's not good enough to measure it once every 18 months for QOF, it needs to be measured every time we see that patient and controlled with drugs that also address other comorbidities," said Dr Hardman.

Similarly, a significant proportion of patients with HFpEF and HFrEF have AF, and good care of this comorbidity, including anticoagulation therapy, can affect overall outcomes. All patients with HF should be offered a personalised, exercise-based cardiac rehabilitation programme, which should include psychological support and education.

"We have underplayed the needs of patients with HFpEF. Some will need specialist care for example for aortic valve disease, but a lot do very well with the kind of care and support they can get in general practice," said Dr Hardman.

For patients with HFrEF, there is now good evidence to support first-line, triple therapy (ACEI/ARB, BB and MRA). Dr Hardman pointed out that, although survival data from the EMPHASIS-HF[6] and RALES[8] studies were available when the 2010 guidelines were being written, publication of the EMPHASIS-HF results did not occur until after the 2010 guidelines were released.[6] Hence the delay in moving MRAs to first line therapy, as one of the three key disease- modifying drugs with overwhelming evidence of benefit for all cause mortality, reduced readmissions, and improved patient wellbeing.

The 2018 options for second line therapy are also supported by evidence that has emerged since 2010. Thus, following optimal first line treatment, patients who remain symptomatic should be referred back to the specialist to consider replacing ACEI with sacubitril/valsartan, in those with a persistent EF ≤35%, based on TA388,[4] and/or the addition of ivabradine in patients in sinus rhythm with a heart rate ≥75 bpm and an EF ≤35%, based on TA267.[2] The specialist may also consider other drug interventions alongside resynchronisation or other devices, depending upon individual characteristics.

Dr Hardman presented data from the PARADIGM HF study, published in 2014,[9] in which sacubitril/valsartan was shown to improve the primary endpoint of cardiovascular (CV) death or HF hospitalisation by 20% compared to enalapril (hazard ratio = 0.80 [95% CI: 0.73–0.87], p<0.001), and all cause death by 16% (HR= 0.84 [95% CI: 0.76–0.93], p<0.001.[9]

Dr Hardman also discussed data from the SHIFT study, published in 2011, which showed that addition of ivabradine to standard HF treatment including a BB, in patients with HF LVEF ≤35% in sinus rhythm with heart rate ≥70 beats per minute improved CV death or hospital

admission for worsening heart failure by 18% (HR 0.82, 95% CI 0.75–0.90, p<0.0001).[10] Hospital admissions for worsening HF were improved by 26% (HR 0.74, 0.66–0.83; p<0.0001) and CV deaths by 9% (HR 0.91, 0.8–1.03, p=0.128), but there was no impact on all cause mortality.

"There has been a sea-change in the language used in the new guidelines and it is clear that we can now do something for all our patients with heart failure, and we need to engage with them from the outset and communicate with each other. We live in an increasingly fragmented NHS and we need to go against that trend in order to help our patients live longer, healthier lives," concluded Dr Hardman.

The patient organisation's perspective

Recommendations in the new HF guidelines are addressing the key needs that patients have identified as important, according to an analysis presented by Nick Hartshorne-Evans, CEO of the Pumping Marvellous Foundation, which manages the world's largest online community of patients with HF.

"From the patient viewpoint, these guidelines are really important for the future of heart failure care. I think the most exciting part is the care plans that will enable patients to better understand their heart failure and their care, and help to stimulate discussion," said Mr Hartshorne-Evans.

In his presentation, he demonstrated where guideline recommendations meet the needs that have been identified by the Pumping Marvellous Foundation through the huge number of on-line conversations within the HF community. He explained that patients consistently say that they value rapid diagnosis and specialist input. They welcome a strong relationship with their HF nurse and MDT in helping them map out their current and future course of treatment. They may not want comprehensive information about HF at the outset and prefer this to be 'dialled in' when they feel ready for it.

Mr Hartshorne-Evans pointed out that patients frequently feel daunted by the transition from specialist to primary care, and need to know that they can re-access specialist care quickly and easily when required. They believe that better communication between specialist and primary care would help them access services such as cardiac rehabilitation which are undoubtedly beneficial. Some patients report that they don't feel they benefit from broad-based cardiac rehabilitation geared mainly to those after a heart attack and would like rehabilitation to be better tailored to HF.

Mr Hartshorne-Evans predicted that if care plans become more generally available, they will not only keep patients informed about their treatment, they will also show them how they can help themselves.

"What we create and build today will have a major impact on patient care for tomorrow. Few patients we talk to know about guidelines, but they all need hope – and that's what the new patient-centred recommendations can give them," he concluded.

Multiprofessional and cross-sector working: key to success?

The HF MDT plays a key role in diagnosing and managing HF, starting and optimising treatment and, just as importantly, ensuring that patients have all the information they need at all stages of their care. From the first extended consultation, MDT members can give patients the knowledge and confidence they need to understand their care and get on with their lives, Sue Simpson, Head of Cardiac Care, Bexley and Greenwich Adult Community Services, London, explained to delegates.

The guidelines recommend that people newly diagnosed with HF should be offered an extended first consultation, and Ms Simpson reported that her first appointments are always an hour – longer if carried out as a home visit. Ensuring that the second consultation takes place within two weeks – as proposed in the guidelines, can be harder to achieve, she said.

"We should certainly aspire to organising the second consultation at two weeks because patients are likely to have more questions at this stage because they've had time to think about their diagnosis," pointed out Ms Simpson.

In her experience, 50% of patients know little or nothing about the heart, so it is important to address misconceptions as well as providing information, for example about the risk of sudden death. Patients need to understand that there is no 'quick fix' for HF but, with a range of treatments and the support of their MDT, they can still lead the life they choose.

Ms Simpson explained that discussing a patient's prognosis is not easy, especially as it is very difficult to estimate at diagnosis, and she prefers to delay this discussion unless a patient asks direct questions about it.

"If newly diagnosed patients really want to know their prognosis, I tell them that modern drugs have been in use for 20 years and have improved the prognosis for people with heart failure. It's important to acknowledge the uncertainty that a patient feels, but to explain that we can't predict what will happen to them," said Ms Simpson.

Initiating cardiac rehabilitation is a vital part of the MDT role, and it may be possible to integrate HF patients into the general cardiac rehabilitation service or to access community rehabilitation with input from physiotherapists and

occupational therapies, Ms Simpson pointed out. Being able to access dietary and psychological support is also important, she added.

Turning to palliative care, she reported that the inclusion of palliative care nurses within her MDT had revolutionised the end of life care for her patients, though she stressed the importance of continuing involvement of HF nurses at this late stage in the care pathway.

Writing a good care plan is essential for ensuring good communication between all MDT participants and with patients, and can alleviate concerns of GPs when patients are discharged from specialist services. Patients should be given a copy of their care plan, and key elements to include are:

- Diagnosis and aetiology
- Medicines prescribed
- Monitoring of medicines, when medicines should be reviewed and any support the person needs to take the medicines
- Functional abilities and any social care needs
- Social circumstances, including carers' needs

On discharge from the specialist service, the summary should form the basis of a care plan for each person, including:

- Plans for managing the person's HF, including follow-up care, rehabilitation and access to social care
- Symptoms to look out for in case of deterioration
- A process for any subsequent access to the specialist heart failure MDT if needed
- Contact details for
  - a named healthcare coordinator (usually a specialist HF nurse)
  - alternative local HF specialist care providers, for urgent care or review
- Additional sources of information for people with HF

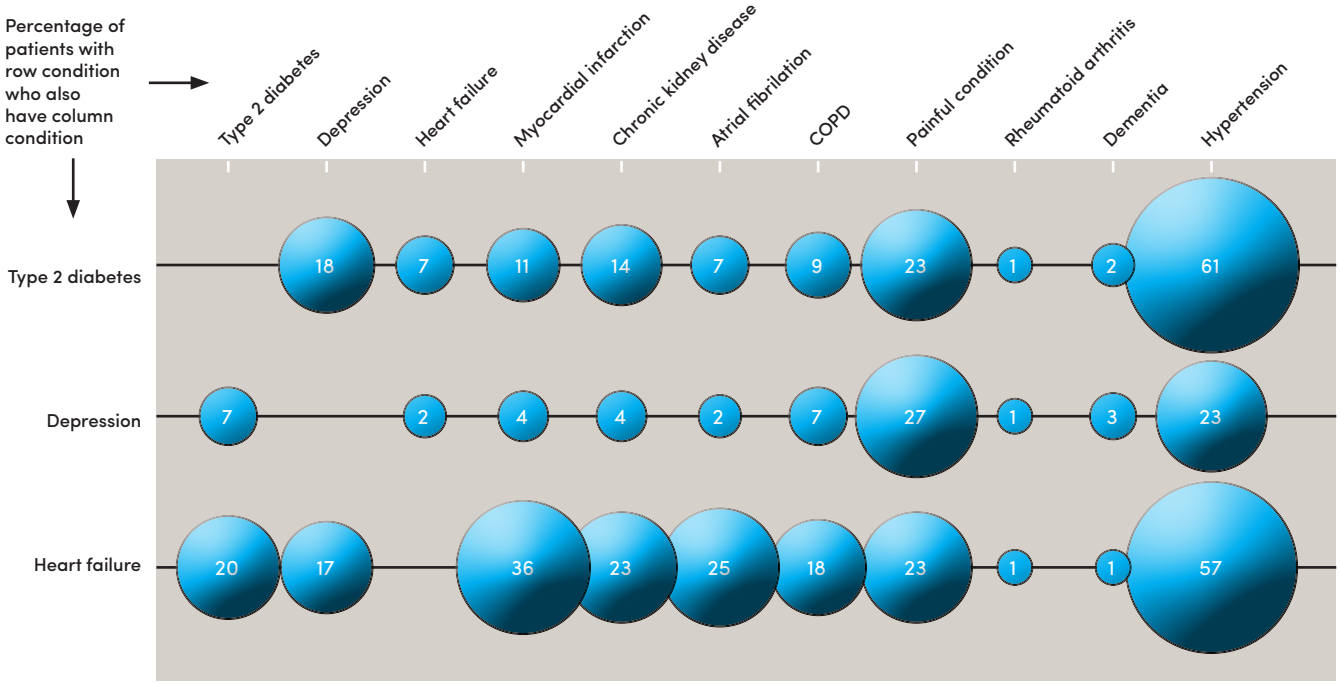
"The guidelines aren't a tablet of stone but they are very useful in ensuring that the MDT is involved in care for patients with heart failure and for informing commissioners about how multiprofessional working can help keep patients out of hospital," concluded Ms Simpson.

Where do pharmacy services fit in?

As patients with HF take an average of seven medicines per day, with potential for over 100 interactions between drugs they may need for comorbidities (Figures 3 and 4),[11] pharmacy services have a lot to contribute within the HF MDT, from general advice and follow up to specialist prescribing.

Dr Rani Khatib, Consultant Pharmacist in Cardiology and Cardiovascular

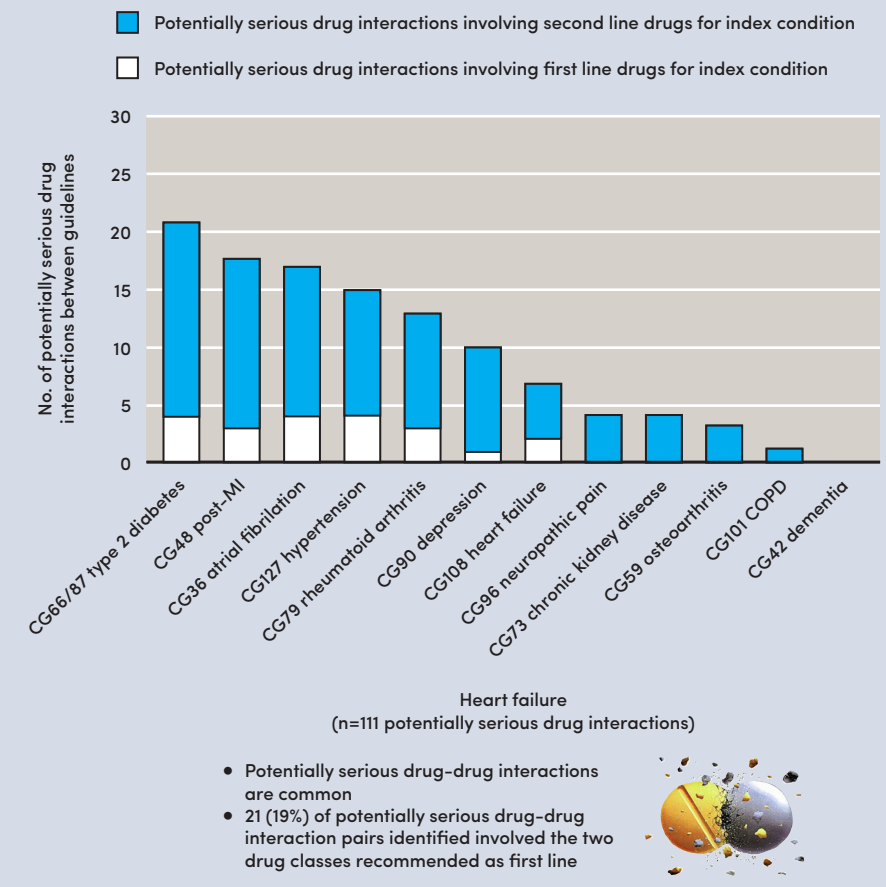
Figure 3 Comorbidities seen with heart failure, compared to type 2 diabetes and depression



Proportion of people with three index conditions who have each of other conditions.
Morbidity data were not available for osteoarthritis or neuropathic pain; "painful condition" data shown are defined by receipt of four or more prescriptions for non-over the counter analgesics in previous 12 months

BMJ 2015;350:h949 | doi: 10.1136/bmj.h949

Figure 4 Potential for drug interactions in patients with heart failure



BMJ 2015;350:h949 | doi: 10.1136/bmj.h949

Research at Leeds Teaching Hospitals NHS Trust, presented data from the European Society of Cardiology HF long-term registry showing that only 29% of patients were on target doses of ACEIs and 18% on target doses of BBs.[12] In one-third of cases, no reason was documented for the failure to uptitrate.

Even if HF drugs are prescribed in appropriate doses, there are no guarantees that patients actually take them, Dr Khatib reminded delegates.

Research has shown that non adherence amongst patients with HF ranges from 4%-63%, with a mean of 27%,[13] and that 20%-64% of readmissions for HF are related to poor adherence.[14] Hospitalisations reported in non-adherent patients were 2.5 times higher than among adherent patients, said Dr Khatib.

He explained that reasons for non-adherence are complex, but medicines optimisation (defined by NICE as 'a person-centred approach to safe and effective medicines use, to ensure people obtain the best possible outcomes from their medicines'), can address adherence issues. The four principles of medicines optimisation, as defined by the Royal Pharmaceutical Society are:[15]

- Aim to understand the patient's experience
- Evidence-based choice of medicines
- Ensure that medicines use is as safe as possible
- Make medicines optimisation part of routine practice

One of the changes to the guideline is that a healthcare professional with expertise in specialist prescribing for heart failure should be part of the MDT, and clinical pharmacists can contribute significantly in optimising patients' complicated medicines regimens, Dr Khatib pointed out.

Under the updated guideline, the MDT and primary care need to liaise closely about drug titration and monitoring of people with HF, and Dr Khatib added that community pharmacists can also play a role in helping patients with their HF, including advice about the use of repeat prescription systems which can contribute to non-adherence.

He reported that, in Leeds, where community HF nurses play a significant role, he now carries out weekly virtual reviews of six or eight complex patients, provides telephone support, and sees patients referred to the Advanced Cardiology Medicines Optimisation Clinic. Pharmacists also contribute to the pan-Leeds HF MDT and the HF Palliative Care Team.

Turning to national pharmacy services, Dr Khatib explained that the NHS is now investing £100 million to support an extra 1500 clinical pharmacists in general practice by 2020 and, as of September 2018, 810 clinical pharmacists were working in general practice, with many more sites approved and recruiting. As a result, nearly 2000 surgeries in the UK, serving a population of 15 million, have access to clinical pharmacists in patient-facing roles as part of the MDT, providing clinical assessment and treatment, expert knowledge of medicines for long term conditions, such as HF, as well as lifestyle advice, and contributing to patient safety.

"The pharmacist's role in HF is not just about uptitration of medicines, side effects and adherence, it's about broader input on all the patient's needs and problems with medicines, from painkillers to herbal therapies. We can provide a one-stop advice service," concluded Dr Khatib.

The GP and commissioning perspective

From the GP perspective, the updated HF guideline has helped to clarify the roles of primary and specialist care, but some of the targets will be challenging unless services are well resourced.

Gloucestershire GP and commissioner, Dr Jim Moore reported that, for over 14 years, his primary care based HF service has been able to achieve echo and specialist review within six weeks, but it does have eight whole time equivalent HF nurses, three GPs with a Specialist Interest (GPSIs), and an echo service available two days a week which produces reports that GPs can understand.

"Heart failure nurses are critical to our service, and we trust them. If they ask our GPs to prescribe a drug, the answer will almost certainly be 'yes' because they know the nurses are better at optimising treatment," said Dr Moore.

Underlining the importance of good communication, Dr Moore suggested that specialist MDTs should limit a patient's report to a two-page summary of diagnosis and aetiology, immediate and planned treatment to ensure that it is read by their GP. He recalled previously prolonged delays of up to eight weeks in his area to get letters from cardiologists, and underlined the importance of timely communications between all members of a patient's specialist and primary care team.

Addressing the new guideline treatment recommendations, Dr Moore suggested that any GP resistance to these recommendations is likely to focus on MRAs, owing to concerns about blood pressure and renal function. However, the emphasis on monitoring for patients on triple therapy (monthly for the first three months and then six-monthly) should be helpful, he added.

Dr Moore highlighted the considerable survival improvement which has been achieved for patients with HF over the past 30 years, largely thanks to new treatments. One-year mortality fell from 52% with placebo treatment in the CONSENSUS trial published in 1987[16] to 27.3% with ACEIs in RALES 1999,[8] and 21% with ACEI+MRA treatment,[8] 12.8% with additional BB in COPERNICUS in 2001,[17] 9.6% with triple therapy and CRT-P in CARE in 2005,[18] and 7.6% with sacubitril valsartan, BB, MRI and CRT-P in PARADIGM-HF in 2014 (Figure 5).[9]

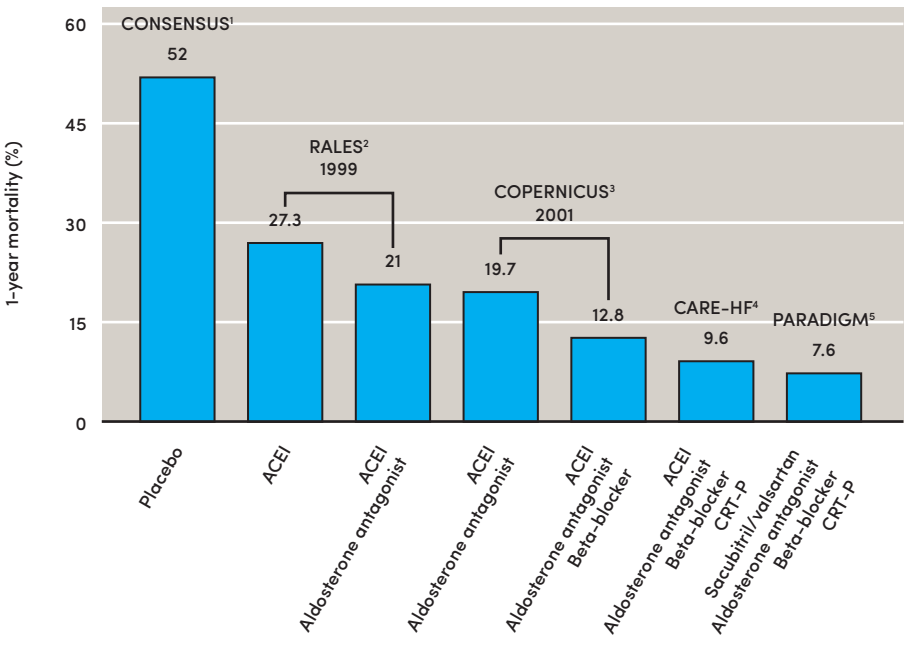
However, he pointed to recent evidence showing that, while patients may get on to these lifesaving treatments in specialist care, drug dosing is not optimised when they return to primary care. It is hoped that, by clarifying the responsibilities of primary care to HF patients at all times, including periods when they are receiving specialist care from the MDT, the new guidelines will achieve further progress, he added.

The guidance states that the primary care team should:

- Ensure effective communication links between different care settings and clinical services involved in the person's care
- Lead a full review of the person's HF care, which may form part of a long-term conditions review
- Recall the person at least every six months and update the clinical record
- Ensure that changes to the clinical record are understood and agreed by the person with HF and shared with the specialist HF MDT
- Arrange access to specialist HF services if needed

Turning to commissioning opportunities that may aid implementation of the guidelines, Dr Moore suggested that a good case can be made for the introduction of long term condition (LTC) clinics, to include HF, as a way of meeting monitoring requirements

Figure 5 Reduction in heart failure mortality since the 1980s



- ACEI, angiotensin-converting enzyme inhibitor; CRT-P, cardiac resynchronisation therapy-pacemaker.

1. CONSENSUS Trial Study Group. *N Engl J Med.* 1987;316:1429–1435; 2. Pitt et al. *N Engl J Med.* 1999;341:709–717; 3. Packer et al. *N Engl J Med.* 2001;344:1651–1658; 4. Cleland et al. *N Engl J Med.* 2005;352:1539–1549; 5. McMurray et al. *N Engl J Med.* 2014;371:993–1004.

while cutting down on clinic visits for patients with multiple comorbidities. In Gloucestershire, a pilot study is underway in 16 practices, with potential for roll-out across the county. Including HF in LTC clinics would raise the profile of HF amongst all clinical staff, said Dr Moore, increase awareness of symptoms, aid earlier diagnosis and earlier re-referral. It would also reduce hospital admissions, improve MDT-patient-primary care communication and overall care and support for patients, and reduce costs, he added.

Dr Moore said that a strong case can also be made for cardiac rehabilitation programmes, based on NICE resource impact data for England. These show that, if a third of patients with HF are referred for cardiac rehabilitation and 70% complete it, there would be a 30% reduction in hospital readmissions at year 5, and a total cost saving of nearly £7 million.

"It's a 'no-brainer" and these data can be used to make a strong case to commissioners in favour of cardiac rehabilitation," he said.

Dr Moore concluded by stressing the benefits of using best practice tariff as a rich source of funding for HF care – through provision of in-reach services that meet best practice criteria – and using HF specialists as champions to raise awareness and motivate colleagues to implement the guidelines.

An outside perspective: has the guideline committee got it right?

The patient-centred MDT approach in the new chronic HF guidelines is very welcome, and the advice about providing information to patients and extending the first consultation is very helpful. All clinicians should use the guidance to ensure 100% access to NT-proBNP/BNP testing, and focus on the 2-week time frame for specialist review. This was the top-line assessment of Dr Paul Kalra, chair of the British Society for Heart Failure and Consultant Cardiologist at Portsmouth Hospitals NHS Trust.

However, he was concerned that the guidelines provide clinicians with opportunities to avoid prescribing life-prolonging interventions for patients with HF and renal disease. He also felt that the 38 pages of the short version of the guidelines could be too long for non specialists to digest and he regretted that clear accessible algorithms were only included in the 520-page full version of the guidance.

Dr Kalra disagreed with criticism of the guidelines in the medical press which suggested that it was unrealistic to expect GPs to carry out six-monthly HF reviews, though he regretted the failure to reinforce the importance of patients being seen within two weeks of hospital discharge during the vulnerable phase.

"There is a lot of emphasis on patients being discharged when stable and the primary care team taking over routine management, but these patients are not stable and we need to recognise that they are still at risk – even if they are on triple therapy," he said.

Dr Kalra also felt that the emphasis on patients with HFrEF should not detract from the fact that those with HFpEF have the same needs for support from HF services.

In terms of diagnosis, although he recognised NT-proBNP as the optimal blood test, he suggested that BNP should have been left in the guidance as many laboratories use this.

In terms of treatment, Dr Kalra felt that the guidelines could have transmitted a stronger message that ACEIs/ARBs, BBs and MRAs are all disease-modifying therapies as he felt that even some cardiologists equate MRAs with diuretics and doubt the need for them when patients with HF are already euvolaemic after diuretic treatment. He also questioned the decision to group sacubitril/valsartan and ivabradine with hydralazine and nitrates and digoxin as treatment options for patients with persistent symptoms when the newer agents offer so much greater benefits.

Dr Kalra saved his greatest criticism of the guidelines for the section on HF treatment in patients with kidney disease which recommends lower doses and slower titration of disease-modifying drugs for patients with eGFR of ≤45 ml/min/1.73m^2 and referral to a renal physician for those with eGFR of <30 ml/min/1.73m^2.

"If we give clinicians the option of not using these drugs, they will lose their confidence and not use them – to the great detriment of patients with heart failure. These are arbitrary thresholds because research has not been done to show what do with ACEIs or MRAs in response to changes in renal function. Don't let's deny patients effective treatment because we fear what will happen to their renal function," Dr Kalra concluded.

Discussion

Should we be adapting treatment to a patient's symptoms and stage of heart failure?

Professor Cowie: 10 years ago we tended to treat patients with more severe symptoms with more therapies but, in general, treatment is now driven by the underlying cardiac problem – such as HFrEF – with less regard to the symptom level. Even with mild symptoms, HFrEF can have a poor prognosis and must be taken seriously – it is important that clinicians do not equate mild symptoms with a necessarily good prognosis and thereby undertreat their patients.

How should the extended consultation be managed?

Dr Al-Mohammad: We should try to persuade managers that we need a dedicated heart failure diagnostic clinic. In my experience, 25-30% of patients with symptoms are found not to have heart failure but they still want to know why they are ill, so we need to take time to consider other diagnoses. For those with heart failure, I have fought with our managers to get 45 minute appointments, so I only see six patients per clinic instead of eight. However, I have failed in trying to ensure that we can get patients back again after two weeks as our clinic list is so busy and we have a backlog. Even so, we should use the guidelines as a tool to get more clinics and more heart failure specialists to address what will undoubtedly be increasing demand.

Dr Jim Moore: In my primary care based service we offer 45 minutes for the first appointment to make the diagnosis and assessment and because we think it's essential to explain the diagnosis to patients who are often devastated. They need to know there has been a big change in how we manage heart failure, and that there is a lot we can do for them.

How should we manage patients with an ejection fraction of 45%-50%?

Dr Al-Mohammad: Since the term HFmEF was created, we have been struggling to decide what to do with it because we do not have a direct evidence base. By looking back at patients with this range of ejection fraction in previous big trials, it seems that they tend to behave like HFrEF. We also know that ejection fraction can vary by 5% within a short period of time. I suggest we look at the echo and if the left ventricle appears to be weak, we treat for HFrEF and if it appears to be stiff we treat for HFpEF.

Professor Cowie: The new research suggests that an ejection fraction of 40%-50% behaves much like HFrEF and I'm very glad the NICE guideline committee hasn't attempted to introduce HFmEF.

What does care planning look like for patients and how can it be incorporated into the clinic time we have?

Nick Hartshorne-Evans: We should have a standardised care plan that focuses on what's important to the patient, for example: What is heart failure? What treatments are you on? What treatments may you need in the future – to include cardiac rehabilitation and, gently, palliative care. In effect, the MDT needs to tell the patient and their family how to live better with heart failure.

Dr Al-Mohammad: We tend to think of care in terms of drugs but we also need to include the caring aspects. To really improve things, care plans need to be part of the Quality Standards for heart failure against which we will be judged.

Do patients with heart failure benefit from intravenous iron?

Dr Al-Mohammad: NICE didn't include a recommendation about intravenous iron because the evidence on which we based our recommendations was focused on impact on mortality. There is no evidence that intravenous iron affects mortality, but it definitely improves symptoms, exercise tolerances and quality of life. The UK-based IRONMAN study is currently recruiting and is looking at whether intravenous iron improves mortality and hospitalization.

Professor Cowie: NICE didn't say we shouldn't use it, so if we think it can be useful for our patients, we should consider it.

Many patients don't have enough blood pressure or renal function to tolerate maximal doses of triple therapy. Should we start with one drug and then add others or start with all at once?

Dr Hardman: It depends on the patient. For someone with a lot of fluid, I wouldn't start with an MRA. The priority should be a diuretic because if you cut down the fluid that will give you more blood pressure. If a patient has AF, I would start with rate slowing and anticoagulation. If a patient doesn't have a lot of fluid, I'd start with a beta blocker or ACE inhibitor, and gradually build up to triple therapy. I never start with all the drugs together.

Dr Taylor: Treatment is usually initiated by the specialist team because, in general practice, we don't have the capacity to monitor kidney function as closely as needed. When I do the six-month medication review for stable patients, they are rarely anywhere near the optimal dose of beta blocker because they're stuck on diuretic when they don't need it. It's complicated and if in doubt I think we should get a specialist involved.

Nick Hartshorne-Evans: The effects of uptitration can be quite traumatic for patients in terms of blood pressure dropping, and we know that we need to persevere because the drugs work in the longer term. What is optimal for one patient may be different for another, and if someone cannot reach so called 'target' dose this should be explained in a sensitive way.

References

1 NICE. Chronic heart failure in adults: diagnosis and management, NG106, September 2018

2 NICE. Ivabradine for treating chronic heart failure, TA267, November 2012

3 NICE. Implantable cardioverter defibrillators and cardiac resynchronisation therapy for arrhythmias and heart failure, TA314, June 2014

4 NICE. Sacubitril valsartan for treating symptomatic chronic heart failure with reduced ejection fraction, TA388, April 2016

5 NHS digital. Estimates of predicted use compared to observed use. NICE technology appraisals in the NHS in England (Innovation Scorecard) to June 2017, https://files.digital.nhs.uk/publication/d/o/nice-tech-apps-eng-jan18-innoscor-est.pdf

6 Zannad F, McMurray JJ, Krum H et al. EMPHASIS-HF Study Group. Eplerenone in patients with systolic heart failure and mild symptoms. *N Engl J Med.* 2011 Jan 6;364(1):11-21.

7 Real J, Cowles E, Wierzbicki AS. Chronic heart failure in adults: summary of updated NICE guidance. *BMJ 2018*; Sep 24;362:k3646. doi: 10.1136/bmj.k3646.

8 Pitt B, Zannad F, Remme WJ et al. The effect of spironolactone on morbidity and mortality in patients with severe heart failure. *N Engl J Med.* 1999;341:709-717

9 McMurray JJ, Packer M, Desai AS et al. Angiotensin-neprilysin inhibition versus enalapril in heart failure. *N Engl J Med.* 2014 Sep 11;371(11):993-1004

10 Swedberg K, Komajda M, Böhm M et al; SHIFT Investigators. Ivabradine and outcomes in chronic heart failure (SHIFT): a randomised placebo-controlled study. *Lancet.* 2010 Sep 11;376(9744):875-85

11 Dumbreck S, Flynn A, Nairn M et al. Drug-disease and drug-drug interactions: systematic examination of recommendations in 12 UK national clinical guidelines. *BMJ* 2015;350:h949

12 Savarese G, Lund LH. Global public health burden of heart failure. Cardiac Failure Review 2017; 3(1): 25-32

13 Krueger K, Botermann L, Schorr SG et al. Age-related medication adherence in patients with chronic heart failure: A systematic literature review. *International Journal of Cardiology 2015*; 184: 728-735

14 Riles EM, Jain AV, Fendrick AM. Medication adherence and heart failure. Curr Cardiol Rep. 2014 Mar;16(3):458.

15 Royal Pharmaceutical Society. Medicines Optimisation. 2013. Available at: https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Policy/helping-patients-make-the-most-of-their-medicines.pdf (accessed Aug 2018)

16 [No authors listed]. Effects of enalapril on mortality in severe congestive heart failure. Results of the Cooperative North Scandinavian Enalapril Survival Study (CONSENSUS). The CONSENSUS Trial Study Group. *N Engl J Med.* 1987 Jun 4;316(23):1429-35.

17 Packer M, Coats AJ, Fowler MB et al. Effect of carvedilol on survival in severe chronic heart failure. *N Engl J Med.* 2001 May 31;344(22):1651-8.

18 Cleland JG, Daubert JC, Erdmann E et al. The effect of cardiac resynchronization on morbidity and mortality in heart failure. *N Engl J Med* 2005 Apr 14;352(15):1539-49

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e-mail: info@logoscommunications.co.uk phone: 0207 351 8856 twitter: @LogosHC

Medical Writer: Jenny Bryan (jennylbryan@btinternet.com) I Design by: Stephan Smith (contact@stephansmith.co.uk)