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We report highlights from the 10th Annual Autumn Meeting of the British Society for Heart Failure (BSH), which was held at the Queen Elizabeth II Conference Centre, Westminster, London, on 23–24 November 2007. The key topics discussed were primary care, multidisciplinary working and interface issues between primary and secondary care, including referrals, areas of responsibility and communication.

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Report from the BSH Annual General Meeting

The Chairman of the BSH, Professor Martin Cowie (London), gave a presentation briefly summarising the activities of the BSH over the previous year and reviewed plans for the future. BSH membership continues to grow, and currently stands at 656 members; the majority of these are cardiologists and nurses, although there are a number of representatives from other disciplines including general practitioners, surgeons, pharmacists and geriatricians.

The BSH’s involvement in sessions at the British Cardiovascular Society Annual Scientific Conference has continued to increase, with eight sessions at the 2007 meeting covering a broad range of subjects including cardiac magnetic resonance, diabetes and cytotoxic chemotherapy. It is hoped that this high-profile presence will be continued next year. Continued collaboration with other societies is also planned for 2008.

In a change to previous years, the next BSH Annual Autumn Meeting will no longer take place on a Saturday; instead it will be held on Thursday 20 and Friday 21 November 2008. In addition, the duration of the meeting will be increased to two full days.

It was suggested that the aims of the BSH had become outdated and proposed changes were outlined by Professor Cowie. A copy of these new aims will be sent out to all members and a postal vote undertaken to ascertain their acceptability to members.

Finally, Professor Cowie expressed his thanks to the Friends of the BSH for their support in 2007. The BSH accounts for the year ending 31 May 2007 were presented by the Treasurer, Suzanna Hardman (London), who concluded that the society continues in a good financial state.

Forthcoming BSH events for 2008

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<tr>
<th>Event</th>
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<tr>
<td>British Cardiovascular Society Annual Scientific Conference</td>
<td>2–4 June 2008</td>
<td>Manchester</td>
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<tr>
<td>11th BSH Annual Autumn Meeting</td>
<td>20–21 November 2008</td>
<td>London</td>
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For more information about any of these events please contact the BSH Secretariat (email: info@bsh.org.uk) or see the BSH website (www.bsh.org.uk).
10th Annual Autumn Meeting of the BSH

Day one: Bridging the divide in heart failure

Session 1: Breathless in Bridgend – the GP’s view

General practitioners (GPs) are uniquely placed to screen patients for heart failure before the onset of an acute exacerbation. Screening is important because it facilitates early diagnosis and may help prevent hospital admissions. Nigel Rowell (Middlesbrough) presented data showing that it is possible for GPs to effectively diagnose heart failure before the onset of acute symptoms. There are a number of different tests available that can be performed by the GPs themselves without the need for referral to secondary care, and the strengths and weaknesses of these tests were highlighted. ECG testing is widely available, but interpretation of results can be variable. Echocardiography using portable machines is expensive and not available in many practices. B-type natriuretic peptide (BNP) testing is very important as it provides an easy to use number that is not only simple to interpret for diagnosis but can also be used to monitor therapy; however, cost can be a huge issue with this test. Suggestions on how heart failure could be detected earlier and more effectively in general practice were discussed. Instead of referring patients for open-access echocardiography or even to a community clinic, it was suggested that the technology for diagnosing heart failure should be taken into primary-care surgeries.

Session 2: The heart failure specialist nurse – a bridge over troubled water?

Heart failure management is a major challenge for healthcare providers. It is estimated that one in three people aged over 55 years will develop heart failure, and that only 35% will survive to 5 years following diagnosis. Disease management programmes have evolved in recent years and many have been shown to be effective in reducing admissions and costs, and in improving quality of life. The current European Society of Cardiology guidelines define the key components of a heart failure disease management programme (Table 1). Despite this compelling evidence, however, there are still huge inconsistencies in the provision of heart failure care locally, according to Jacky Austin (Gwent Healthcare NHS Trust, South Wales).

Although multidisciplinary, multifaceted care can reduce hospitalisations and mortality, and improve the quality of life in patients with heart failure, there is no ‘optimal’ disease management programme that can be applied universally to all patients. The most effective management programmes are those that are tailored to the specific needs of the individual patient, but which also take into account guidelines, local practice and efficiency.

Table 1. Guidelines for a chronic disease management programme. Data from the European Society of Cardiology

<table>
<thead>
<tr>
<th>Component</th>
<th>Recommendations</th>
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<tr>
<td>A team approach</td>
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<td>Inpatient and community care</td>
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<td>Discharge planning</td>
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<td>Education, counselling and self care</td>
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<td>Optimisation of medication</td>
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<td>Vigilant follow-up</td>
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<td>Enhancing access to health care</td>
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The results of the first large-scale multicentre study (COACH*) to evaluate the efficacy of a disease management programme in heart failure patients was reported by Tiny Jaarsma (Netherlands). The aim was to evaluate two different levels of intensity of nurse-led heart failure care (basic and intensive) versus control in patients with New York Heart Association (NYHA) functional class II–IV heart failure and evidence of structural heart disease. A total of 2957 patients were screened at 17 centres; 1049 were found to be eligible. Over a follow-up period of 18 months there was no difference in the incidence of the primary endpoint (all-cause mortality and heart failure readmission) between the three groups. However, there was evidence that nurse-led advising and counselling were associated with improved adherence to non-pharmacological treatment. In addition, it was suggested that nurse-led advising and counselling might decrease mortality at the ‘cost’ of an increased number of shorter hospitalisations. The results of the COACH study have recently been published.

Session 3: Mind the gap – what is the role of the GP(SI) and (heart failure) cardiologist?

In addition to providing a full range of general medical services to their own patients, GPs with a Special Interest (GPSIs) have additional skills and training which enable them to take referrals from colleagues that might otherwise have been referred to a secondary-care consultant. The experience of initiating a GPSI in cardiology service in a Primary Care Trust was described by Peter Savill (Southampton). This included developing a training programme, obtaining a Royal College of General Practitioners-approved diploma in cardiology, undertaking training in echocardiography and obtaining support from a consultant mentor. A summary of the referral indications, diagnosis and outcomes for the 2360 patients who have been referred to the service, which comprises two GPSIs and a cardiac nursing service, is shown in Figure 1. Introduction of this service has improved the cardiac care of patients, and improved the interface between primary and secondary care, with more efficient use of resources and skills.

A guide to making the best use of hospital cardiology services was presented by Adrian Davies (Middlesbrough). Consultant cardiologists play a vital role in teaching and training, and can provide an expert opinion to confirm or reject the diagnosis of heart failure. Hospitals can provide

Table 1. Summary of the referral indications, diagnosis and outcomes for 2360 patients referred to a GPSI cardiology service.

<table>
<thead>
<tr>
<th>Main referral indications</th>
<th>Main diagnosis</th>
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<tr>
<td>Suspected heart failure*</td>
<td>Atrial fibrillation/flutter</td>
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<tr>
<td>Murmurs</td>
<td>Aortic stenosis</td>
</tr>
<tr>
<td>Palpitations</td>
<td>Heart failure/LVSD</td>
</tr>
<tr>
<td>Atrial fibrillation/flutter</td>
<td>Hypertension</td>
</tr>
<tr>
<td>Chest pain</td>
<td>Ischaemic heart disease</td>
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*Including dyspnoea and ankle oedema as primary referral indications

Figure 1.
many different types of specialist investigations, including magnetic resonance imaging (MRI), stress and contrast echocardiography, exercise tests, cardiac catheterisation and computed tomography (CT). Hospital-based cardiology services are the pinnacle of care. Specific strengths include accurate diagnosis, the diagnosis of diastolic heart failure, initiation of treatment with difficult drugs, rhythm control, evaluation of ischaemia, assessment of the need for and up titration of drugs, particularly in difficult cases, cardiac surgery and the organisation of palliative care. Potential ways of improving the current heart failure care system were identified, including the expansion of all in-hospital heart failure services, enhancement of local services to help provide ‘seamless care’, improvement of palliative-care provision and increasing the number of GPwSIs. Issues that threaten to erode the effectiveness of the hospital system include the loss of trained staff, difficulties in recruiting new staff, hiring out of service resulting in the loss of ‘seamless care’, the drive to reduce referrals for primary care and the implementation of unrealistic appointment times.

**Meet the expert sessions**

During the lunch break on Day one of the meeting, delegates were invited to attend two ‘meet the expert’ sessions. Professor Martin Cowie presented a case study to illustrate the practical considerations of adding an angiotensin-receptor blocker (ARB) in a heart failure patient already receiving angiotensin-converting enzyme (ACE) inhibitor therapy. Professor Chim Lang (Dundee) discussed the implications of increased heart rate in patients with heart failure and the need for further studies to investigate whether pure heart rate-lowering agents could be beneficial in heart failure.

**Session 4: Quality Street – three years of the Quality and Outcome Framework**

The implications of the introduction of the Quality and Outcome Framework (QOF), a fundamental part of the new General Medical Services contract, for patient care were explained by Dr Ahmet Fuat (Darlington). The QOF is a system to remunerate GPs for providing good-quality patient care. Achievement is measured against a range of evidence-based indicators, with points awarded according to the level of achievement. QOF is continually evolving, and regular reviews of targets will be undertaken in order to optimise patient care. There are currently 20 points available for heart failure in QOF: 4 points for producing and maintaining a register of patients with heart failure (HF1, Table 3); 6 points for confirming the diagnosis with echocardiography (HF2); and 10 points for treating patients with left ventricular systolic dysfunction (LVSD) with an ACE inhibitor or an ARB (if tolerated and not contraindicated) (HF3). The percentage of general practices achieving these targets in 2005 and 2007 is shown in Table 3. Annual QOF inspection visits are undertaken to ensure the accuracy of data reported. Exception reporting, which defines patients that can be excluded from QOF, is generally higher for heart failure than for other indications.

It was concluded that heart failure care has improved; however, targets are likely to become more challenging in order to optimise quality of care. It is hoped that individual practices will utilise data from QOF to help identify areas in which they can improve.

Introduction of the QOF has resulted in some remarkable changes in the way cardiovascular disease is managed in general practice. However, the system needs to evolve, particularly since the current indicators relating to heart failure are rather limited in scope. This is at least partly due to the limitations of the criteria and the processes by which QOF indicators are developed. In a presentation looking at the future development of the QOF, Richard Hobbs (Birmingham) suggested that more sophisticated indicators could be used to help improve areas such as heart failure diagnosis, the use of other drugs licensed for the treatment of heart failure (e.g. beta-blockers and spironolactone), the achievement of target doses and perhaps the monitoring of quality-of-life indicators. However, the introduction of more sophisticated markers could make the whole QOF system much more complicated.

**Session 5: The future’s bright**

The results of an observational study to evaluate outcome and treatment optimisation in patients identified with moderate or severe LVSD in a primary-care cardiology service were reported by Chris Arden (Southampton). Patients were identified from the GPSI database and sent a questionnaire regarding details of current medication, hospital admissions and heart failure specialist nurse (HFSN) contact. Seventy two patients were identified, of whom 52 had moderate LVSD; 20 were classified as severe. Prescribing levels for key heart failure therapies were encouraging in most patients, with 77% of severe patients and 67% of moderate patients receiving an ACE inhibitor, 59% and 71% a beta-blocker, and 35% and 19% spironolactone, respectively. However, there were opportunities identified for dose optimisation of ACE inhibitors in several patients within both study groups, and there was also less dose titration of beta-blockers in patients with moderate LVSD. A low uptake of aldosterone antagonists in patients with severe LVSD was also noted. These findings reaffirm the important role of the HFSN in helping to achieve, and maintain, optimal uptake of evidence-based therapies in patients with heart failure.

Techniques to help improve the outcomes of patients with heart failure were outlined in a presentation by Henry Dargie (Glasgow). In order to achieve good outcomes the whole spectrum of patient management must be optimised, which includes diagnosis, appropriate investigation, which should incorporate all available modalities rather than only echocardiography, medical treatment, interventional and surgical treatment and the overall healthcare system. The importance of data and audit for improving outcomes was stressed. Evidence from randomised controlled trials was used to illustrate the optimal medical management of patients with heart failure, including the use of diuretics, ACE inhibitors, ARBs and beta-blockers, with the addition of spironolactone if necessary. Other important therapies including statins, digoxin and cardiac resynchronisation therapy (CRT) were also covered. The impact of the introduction of these therapies on heart failure survival rates was discussed. It was acknowledged, however, that there is
a gap between clinical trial data and ‘real-life patients’. The importance of new telemonitoring techniques, and the use of natriuretic peptides such as BNP and NT-proBNP, and other newer biomarkers for monitoring patients with heart failure, was highlighted. An integrated heart failure service, incorporating input from heart failure cardiologists, heart failure nurses and other affiliated specialists such as pharmacists, geriatricians and GPs, is mandatory for improving outcomes in these patients.

Session 6: Post-MI heart failure – the forgotten many

Session 6 took the form of a symposium, and was sponsored by Pfizer Ltd. In the opening presentation, Martin Cowie stated that approximately 25% of all new heart failure cases in the UK occur following an acute myocardial infarction (MI), which may also trigger acute decompensation in patients with chronic heart failure. Prognosis following acute MI has improved greatly in recent years, due mainly to improved diagnostic techniques, increased use of pre-hospital thrombolysis and primary angioplasty, and an improved evidence base for drug therapy. However, the development of heart failure has a huge impact on outcome in these patients. The challenge is to ensure a rapid but thorough approach to diagnosis and care. Appropriate investigations to detect ongoing ischaemia, arrhythmia or significant ventricular dysfunction are the key issues. In addition, the initiation of appropriate therapies, many of which will require monitoring and titration, is a challenge, particularly in view of the current drive to reduce length of hospital stay and to transfer care back into the community as quickly as possible.

The evidence base for the treatment of post-MI patients with left ventricular dysfunction and heart failure was reviewed in a presentation by Theresa McDonagh (London). There is strong evidence from clinical trials to support the use of ACE inhibitors, beta-blockers and aldosterone antagonists in this patient population. Evidence for the use of ARBs is less well defined in heart failure, and there appears to be no benefit of adding an ARB to an ACE inhibitor. However, ARBs are useful in patients who are intolerant to ACE inhibitor therapy. Evidence from MADIT II and DINAMIT was presented to support the use and timing of implantable cardiac defibrillator (ICD) therapy in post-MI patients. The importance of multidisciplinary strategies and the implementation of clinical pathways to minimise variations in patient management were discussed. It was concluded that, in patients who develop post-MI heart failure, the initiation of appropriate therapy will prolong the length of hospital stay, which is at odds with the current drive to reduce the duration of hospitalisation. All post-MI patients should have access to an integrated heart failure service (Figure 2).

Procedures for the early detection and prevention of heart failure in post-MI patients were outlined in a presentation by Kiran Patel (Birmingham). Using BNP or echocardiography to screen post-MI patients and those with an adverse family history can be effective in identifying patients with heart failure. It was suggested that all post-MI patients should undergo echocardiographic evaluation to help determine the most appropriate treatment regimen. The timing of this evaluation would depend on symptomatology: those with symptomatic heart failure should undergo immediate evaluation; those with no evidence of heart failure could undergo evaluation at a later date. In patients with poor echo visualisation, such as the elderly, obese patients and those with co-morbidities such as chronic obstructive pulmonary disease, alternative imaging methods such as MRI or contrast echocardiography should be used. It was suggested that few hospitals currently have procedures in place to help identify post-MI patients with heart failure. Methods for the prevention of sudden cardiac death were also discussed. Patients who remain symptomatic despite optimal medical therapy should undergo further evaluation to assess whether advanced therapies could prove beneficial. The optimal management of patients with LVSD post-MI requires organised and targeted strategies.

Day two: Advanced heart failure management challenges

Session 7: Advanced heart failure management challenges

Moving to the other end of the heart failure spectrum, Henry Dargie gave an overview of the definition of advanced heart failure. It is important to define advanced heart failure accurately, in order to facilitate appropriate investigations such as coronary angiography, invasive haemodynamics and cardiorespiratory exercise testing, and treatments including CRT alone, with an ICD (CRT-D) or an ICD alone. Revascularisation by PCI or bypass surgery and valve replacement or repair may also be considered in selected patients. Other important issues, including cardiac transplantation and the use of ventricular assist devices (VADs) which can be used as a ‘bridge to recovery’ or even

Figure 2. Components of an integrated heart failure service.
as definitive treatment (‘destination’ therapy), were also discussed, as was the common issue of palliative care. The impact of newer technologies, including radiofrequency ablation for the treatment of atrial fibrillation, haemofiltration, which has shown promising results in fluid overload, intra-aortic balloon pumps and vasmigulation, were also discussed. Improved monitoring of rhythm and haemodynamics, the use of BNP and other biomarkers, and improved imaging techniques (e.g. cardiac MRI and CT scanning) could also help to improve outcome in this cohort. It was acknowledged that there is an urgent need for contemporary data on the incidence of advanced heart failure in the UK. Referrals for heart transplantation, which are currently declining worldwide, need to increase in order to maintain this important therapy. Implementation of a VAD programme in the UK to increase usage (which is currently poor) would also be beneficial in this cohort. In addition, the profile of advanced heart failure needs to be heightened and more accurately defined; it was suggested that the instigation of a BSH working group on advanced heart failure could help to achieve this objective.

The treatment of diuretic resistance and other problems associated with the use of standard therapies in patients with advanced heart failure were discussed by Theresa McDonagh. Diuretic resistance, defined as the continued presence of peripheral oedema despite adequate diuretic therapy, is a common problem in patients with advanced chronic heart failure and is associated with a poor outcome. Management strategies include sodium and fluid restriction, stopping the administration of non-steroidal anti-inflammatory drugs and cyclo-oxigenase inhibitors, and adjusting the diuretic administration by increasing the dose, increasing the frequency of administration or using a different diuretic agent. Changing to intravenous diuretic administration can be beneficial, and continuous infusions have been shown to be more effective than bolus dosing. Combination therapy using diuretics with different sites of action in the kidney may also prove effective. The importance of monitoring electrolytes and the possible need to consider reducing or stopping administration of drugs acting on the renin–angiotensin– aldosterone system in patients with significant renal dysfunction was discussed. Novel approaches to the treatment of diuretic resistance that are currently undergoing evaluation in clinical trials include the administration of nesiritide, adenosine receptor antagonists, arginine vasopressin receptor antagonists and the use of ultrafiltration.

CRT has been shown to reduce morbidity and mortality in patients with moderate-to-severe heart failure and a prolonged QRS duration. The use of CRT in patients with advanced NYHA class IV heart failure was discussed in a presentation by Peter Cowburn. The possible problems associated with device implantation in these patients, such as technical difficulties associated with implantation in severely enlarged hearts with distorted anatomy, increased procedural risks, ongoing ischaemia, stress-induced pulmonary oedema and the lack of potential for reverse remodelling, were discussed. The importance of patient selection and lead positioning, factors considered crucial to the success of this treatment, was illustrated. Multidisciplinary support to optimise both medical therapy and device management are essential to ensure the success of CRT in this patient cohort. The use of CRT in patients with end-stage heart failure requiring inotropic support should now be evaluated in a randomised controlled trial.

A perspective on the use of palliative care for patients with heart failure was given by Dr Miriam Johnson (Senior Lecturer in Palliative Medicine at Hull-York Medical School), who, in collaboration with local cardiologists, was involved in developing one of the first cardiology–palliative care services in the UK. The barriers to implementing a palliative approach to patient care, such as the belief that it is only appropriate for patients who are imminently dying, difficulties in predicting prognosis until it is too late (prognostic paralysis) and the problems associated with telling patients about the choices and limitations of treatment, were discussed. It was acknowledged that the definition of standard referral criteria can be problematic; however, it was suggested that patients with NYHA class III–IV heart failure, recurrent hospitalisation for symptomatic decompensated heart failure despite optimal medical therapy and difficult physical or psychosocial issues are those most likely to benefit from palliative care. Finally, it was emphasised that all healthcare professionals involved in the treatment of patients with heart failure, should be able to provide a palliative approach to care.

**Session 8: Hot topics**

The meeting concluded with brief presentations of several clinical trials that may impact on heart failure practice in the future. This included a summary of the main results of three recently published trials, CORONA,3 EVEREST4,5 and STARS-BNP.6 In addition, Martin Cowie gave delegates an overview of the design of three recently initiated heart failure studies: SHIFT, EchoCRT and HOME-HF. Finally, the results of two small, previously unreported studies (the LV REMODEL study and an economic analysis of HFSSNs) were also presented.

SHIFT

Ivabradine blocks the I\_1 channel in the sinoatrial node, causing a reduction in heart rate, which may be beneficial in heart failure. SHIFT is a placebo-controlled study looking at the use of ivabradine in 5500 patients with NYHA class II–IV heart failure, ejection fraction (EF) ≥35% and heart rate ≥70 bpm. Doses will be titrated up to 7.5 mg/day according to heart rate and tolerability. The primary endpoint, which is a composite of cardiovascular death and heart failure hospitalisation, will be evaluated over 2 years. Results are expected in 2010.

EchoCRT

The EchoCRT study, which is due to commence shortly, is the first prospective randomised controlled trial designed to evaluate the impact of CRT in over 1000 patients with advanced heart failure (NYHA class III), a narrow QRS (<120 ms) and mechanical dyssynchrony as assessed by echocardiography. The primary outcome is a composite of all-cause mortality and cardiovascular hospitalisation. Results are expected in 2–3 years.

HOME-HF

HOME-HF is a randomised study designed to evaluate the impact of telemonitoring on all-cause hospitalisation rates compared to usual care in 182 patients with NYHA class II–III heart failure. The primary endpoints are time to first re-hospitalisation, days alive and out of hospital, and cost. The study is now complete and results are due to be released shortly.

LV REMODEL

The results of this placebo-controlled study to evaluate the effects of eplerenone on left ventricular remodelling in
Heart failure specialist nurses: economic analysis
Evidence suggests that provision of a HFSN service can help to reduce the frequency and duration of hospital admissions in patients with heart failure. In 2004, the British Heart Foundation (BHF) provided funding for 76 community HFSNs in England. The results of an economic cost–benefit analysis performed over a 1-year period during the 3-year evaluation of this BHF heart failure nursing programme were presented by Jill Pattenden (York). Over the 1-year evaluation period, 13,049 patients were discharged from hospital with a primary diagnosis of heart failure; 34% of these patients were seen by a HFSN. Results showed that patients seen by a HFSN had fewer re-admissions for heart failure; however, the duration of hospital admission was slightly longer than for patients who received usual care. The cost–benefit calculation showed that there was a significant cost saving for patients seen by a HFSN compared with those who were not under the care of a HFSN; however, there were some outliers in the data that need to be investigated further before these results can be published.

References

Table 2. Definition of acronyms

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<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>COACH</td>
<td>Coordinating study evaluating outcomes of advising and counselling in heart failure</td>
</tr>
<tr>
<td>CORONA</td>
<td>Controlled rosuvastatin multinational trial in heart failure</td>
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<tr>
<td>DINAMIT</td>
<td>Defibrillator in acute myocardial infarction trial</td>
</tr>
<tr>
<td>EchoCRT</td>
<td>Echocardiography guided cardiac resynchronisation therapy</td>
</tr>
<tr>
<td>EVEREST</td>
<td>Efficacy of vasopressin antagonism in heart failure outcome study with tolvaptan</td>
</tr>
<tr>
<td>HOME-HF</td>
<td>A randomised controlled evaluation of home telemonitoring of patients with heart failure recently discharged from hospital</td>
</tr>
<tr>
<td>LV REMODEL</td>
<td>Left ventricular remodelling</td>
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<tr>
<td>MADIT II</td>
<td>Multicentre automatic defibrillator implantation trial</td>
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<tr>
<td>STARS-BNP</td>
<td>Systolic heart failure treatment supported by BNP trial</td>
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<tr>
<td>SHIFT</td>
<td>Systolic heart failure treatment with I, inhibitor ivabradine trial</td>
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Becoming a Member or a Friend of the BSH
Membership is open to anyone involved in the diagnosis, management or science of HF. If you are interested in becoming a Member or Friend of the BSH, please contact:

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