British Society for Heart Failure
20th Annual Autumn Meeting

Three decades of heart failure

Fleming Room, Queen Elizabeth II Centre, London

23–24 November 2017

Website: www.bsh.org.uk
Twitter: @BSHeartFailure

Programme and Abstracts
The BSH is grateful to the following for meeting-specific contributions:

**Gold Exhibitors:**
- Medtronic
- Novartis Pharmaceuticals*
- Vifor Pharma*

**Bronze Exhibitors:**
- Abbott
- Biotronik
- Pharma Nord
- Bayer
- Boston Scientific
- Roche Diagnostics

**Other Contributors:**
- Alliance for Heart Failure
- APC Cardiovascular
- British Association for Cardiovascular Prevention and Rehabilitation
- British Heart Foundation
- Cardiomyopathy UK
- Heartfelt Technologies
- Life Biomedical
- National Institute for Cardiovascular Outcomes Research (NICOR)
- Pumping Marvellous Foundation

*Novartis Pharmaceuticals and Vifor Pharma are also Silver Exhibitors

The BSH also gratefully acknowledges the support provided by the Friends of BSH:

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- Roche Diagnostics
- Servier Laboratories
- Vifor Pharma
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Session 9: Outpatient-based therapies
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Accreditations

This programme has been accredited by the Royal College of Nursing Centre for Professional Accreditation. Accreditation applies only to the educational content of the programme and does not apply to any product.

The meeting has been awarded 14 study hours and the reference is 6451. This meeting has been approved by the Federation of the Royal Colleges of Physicians of the United Kingdom for 11 category 1 (external) CPD credits and the code is 113261.

Please note that photographic, video or audio recording of the sessions and slides of this meeting is strictly prohibited. There will be a photographer on-site to take photographs which will be used on the BSH website, in the meeting report and for future publications.

For scientific and/or technical reasons the BSH programme directors reserve the right to make any change to the programme.

The BSH cannot accept responsibility for personal accidents, or loss or damage to private properties of participants and exhibitors at the BSH Annual Autumn Meeting. Participants and exhibitors are advised to make their own arrangements if they consider it necessary.
Programme – Day One  THURSDAY 23 NOVEMBER 2017

Programme directors: Parminder Chaggar (Sheffield) / Peter Cowburn (Southampton) / Roy Gardner (Glasgow) / Simon Williams (Manchester)

08:45–09:20  Registration
09:20–09:25  Introduction  Iain Squire (Leicester)

09:25–10:40  Session 1: Update session
Chairs:  Martin Cowie (London) / Iain Squire (Leicester)
09:25–10:00  2017 trials and conference highlights  John McMurray (Glasgow)
10:00–10:20  Update on peri-partum cardiomyopathy  Mark Petrie (Glasgow)
10:20–10:40  Update on cardio-oncology  Alexander Lyon (London)

10:40–11:10  Coffee and Meet the Expert sessions

11:10–12:45  Session 2: 30 years of heart failure
Chairs: Henry Dargie (Glasgow) / John McMurray (Glasgow)
11:10–11:35  Biomarkers; from bench to bedside  Theresa McDonagh (London)
11:35–12:00  The development of cardiac resynchronisation therapy  John Cleland (Glasgow)
12:00–12:45  Philip Poole-Wilson Memorial Lecture
Control of neurohormonal activation – a success in the treatment of systolic heart failure  Karl Swedberg (Gothenburg, Sweden)

12:45–14:15  Lunch

13:15–14:05  Satellite Symposium
Sponsored and organised by Vifor Pharma
What’s new in iron in heart failure?

14:15–15:30  Session 3: Modern management of the right heart
Chairs: Peter Cowburn (Southampton) / Paul Kalra (Portsmouth)
14:15–14:40  Investigating pulmonary hypertension in the 21st century; heart or lungs?  David Kiely (Sheffield)
14:40–15:05  Contemporary carcinoid heart disease  Joseph Davar (London)
15:05–15:30  The development and application of the CardioMEMS device  Martin Cowie (London)

15:30–16:00  Tea and Meet the Expert sessions

16:00–16:10  Update on the BSH Heart Failure Nurse Forum  Jayne Masters (Southampton)
16:10–16:50  Session 4: Research
Chairs: Andrew Clark (Hull) / Iain Squire (Leicester)
16:10–16:35  Rapid fire abstracts: Young Investigators’ Award
Judging: Lisa Anderson (London) / Andrew Clark (Hull) / Martin Cowie (London) / Paul Kalra (Southampton) / Iain Squire (Leicester)
panel: Paul Kalra (Southampton) / Iain Squire (Leicester)
Each presenter is permitted 5 minutes presentation time and 2 minutes panel/audience questions
Does rhythm matter in acute heart failure? An insight into clinical outcomes from the British Society for Heart Failure National Audit  Simon Anderson (Manchester)
Temporal trends and patterns in heart failure incidence: a population-based study of 4 million individuals  Nathalie Conrad (Oxford)
Risk related to atrial fibrillation in heart failure  Li Shen (Glasgow)

16:35–16:50  BSH Research Fellow update: What is the role of arrhythmias in heart failure? (RHYTHM-HF)  Simon Beggs (Glasgow)

16:50–17:25  Session 5: Heart failure question time
Chair: Andrew Clark (Hull)
Panel: Paul Kalra (Portsmouth) / Annie MacCallum (Gloucestershire) / John McMurray (Glasgow) / Nigel Rowell (Middlesbrough)

17:25–18:25  Cheese and wine reception
## Programme – Day Two  FRIDAY 24 NOVEMBER 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Chair(s)</th>
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<tbody>
<tr>
<td>08:30–08:55</td>
<td>BSH Annual General Meeting (BSH members only)</td>
<td>Roy Gardner (Glasgow) / Iain Squire (Leicester)</td>
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<tr>
<td>08:55–09:00</td>
<td>Introduction and the new BSH Board</td>
<td>Paul Kalra (Portsmouth)</td>
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<tr>
<td>09:00–10:15</td>
<td>Session 6: 50 years on from the first cardiac transplant</td>
<td>Roy Gardner (Glasgow) / Parminder Chaggar (Sheffield)</td>
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<tr>
<td>09:00–09:25</td>
<td>Who and when to refer for a heart transplant</td>
<td>Jayan Parameshwar (Cambridge)</td>
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<tr>
<td>09:25–09:50</td>
<td>30 years of LVAD technologies</td>
<td>Steve Shaw (Manchester)</td>
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<tr>
<td>09:50–10:15</td>
<td>What to do when a sick LVAD recipient turns up at your A&amp;E</td>
<td>Paul Callan (Manchester)</td>
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<tr>
<td>10:15–10:20</td>
<td>Presentation of the Young Investigators’ Award</td>
<td>Iain Squire (Leicester)</td>
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<tr>
<td>10:20–10:50</td>
<td>Coffee and Meet the Expert session</td>
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<tr>
<td>10:50–11:50</td>
<td>Session 7: Heart failure services</td>
<td>Paul Forsyth (Glasgow) / Mark Petrie (Glasgow)</td>
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<tr>
<td>10:50–11:10</td>
<td>Best practice tariff update</td>
<td>Suzanna Hardman (London)</td>
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<tr>
<td>11:10–11:30</td>
<td>Integrated heart failure services</td>
<td>Jayne Masters (Southampton)</td>
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<td>11:30–11:50</td>
<td>A contemporary inpatient heart failure unit</td>
<td>Lisa Anderson (London)</td>
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<td>11:50–13:00</td>
<td>Session 8: Sports and exercise (Joint BSH / BACPR Session)</td>
<td>Steve Shaw (Manchester) / Simon Williams (Manchester)</td>
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<tr>
<td>11:50–12:15</td>
<td>Sudden death in athletes</td>
<td>Sanjay Sharma (London)</td>
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<td>12:15–12:40</td>
<td>How to differentiate between athletic heart and cardiomyopathy</td>
<td>John Somauroo (Liverpool)</td>
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<tr>
<td>12:40–13:00</td>
<td>A review of RCTs of exercise in heart failure</td>
<td>Joe Mills (Liverpool)</td>
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<tr>
<td>13:00–14:30</td>
<td>Lunch</td>
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<td>13:30–14:20</td>
<td>Satellite Symposium</td>
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<td>Sponsored and organised by Novartis Pharmaceuticals</td>
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<td></td>
<td>Expert viewpoint: Redefining the future of heart failure patients across the UK</td>
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<tr>
<td>14:30–15:30</td>
<td>Session 9: Outpatient-based therapies</td>
<td>Chris Arden (Southampton) / Jenny Welstand (Wrexham)</td>
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<tr>
<td>14:30–14:50</td>
<td>Managing depression</td>
<td>John Sharp (Glasgow)</td>
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<tr>
<td>14:50–15:10</td>
<td>Getting the best out of device diagnostics</td>
<td>Roy Gardner (Glasgow)</td>
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<tr>
<td>15:10–15:30</td>
<td>A model for pharmacist drug titration clinics</td>
<td>Paul Forsyth (Glasgow)</td>
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<tr>
<td>15:30–16:00</td>
<td>Tea and Meet the Expert session</td>
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<tr>
<td>16:00–17:00</td>
<td>Session 10: Clinical cases heart failure MDT</td>
<td>John Baxter (Sunderland)</td>
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<td>16:00–16:30</td>
<td>Case study: Cardiac amyloidosis</td>
<td>Jane Cannon (Glasgow)</td>
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<tr>
<td>16:30–17:00</td>
<td>Case study: Revascularisation in acute heart failure (a case for the heart failure MDT)</td>
<td>Oliver Watson (Sheffield)</td>
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<tr>
<td>17:00</td>
<td>Meeting close</td>
<td>Simon Williams (Manchester)</td>
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# MEET THE EXPERT SESSIONS

**EXHIBITION AREA I – BRITTEN ROOM**

## THURSDAY 23 NOVEMBER 2017

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<tr>
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<th>Time</th>
<th>Topic</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Roy Gardner, Consultant Cardiologist, Golden Jubilee, Glasgow</td>
<td>10:43–10:53</td>
<td>Using NT-proBNP to manage your heart failure patients</td>
<td>Roche Diagnostics exhibition stand</td>
</tr>
<tr>
<td>Dr Susan Piper, Consultant Cardiologist, King’s College Hospital, London</td>
<td>10:55–11:05</td>
<td>The importance of coding for iron deficiency in heart failure</td>
<td>Vifor Pharma exhibition stand</td>
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<tr>
<td>Mr Stuart Allen, Principal Cardiac Physiologist, Manchester Heart Centre, Central Manchester University Hospitals NHS Foundation Trust</td>
<td>15:33–15:43</td>
<td>CRT heart failure diagnostics – how can I utilise them to manage my patient?</td>
<td>Medtronic exhibition stand</td>
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<tr>
<td>Miss Jacqui Hyland, Heart Failure Specialist Nurse, University Hospitals Coventry and Warwickshire NHS Trust, Coventry</td>
<td>15:45–15:55</td>
<td>Improving outcomes in heart failure – expert insights from a heart failure nurse specialist</td>
<td>Novartis Pharmaceuticals exhibition stand</td>
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## FRIDAY 24 NOVEMBER 2017

<table>
<thead>
<tr>
<th>Expert</th>
<th>Time</th>
<th>Topic</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Martin Cowie, Professor of Cardiology, Imperial College, London</td>
<td>10:35–10:45</td>
<td>Heart failure and atrial fibrillation: anticoagulation in the real world</td>
<td>Bayer exhibition stand</td>
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<tr>
<td>Prof. Martin Cowie, Professor of Cardiology, Imperial College, London</td>
<td>15:45–15:55</td>
<td>Implementing a CardioMEMS service: the practicalities</td>
<td>Abbott exhibition stand</td>
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ABSTRACTS

2017 trials and conference highlights
John McMurray (Professor of Medical Cardiology, University of Glasgow, Deputy Director [Clinical] of the Institute of Cardiovascular and Medical Sciences at the University of Glasgow, and Honorary Consultant Cardiologist at the Queen Elizabeth University Hospital, Glasgow)

This presentation will review the late breaking trials relevant to heart failure presented in the past year at the American College of Cardiology, European Society of Cardiology and American Heart Association, as well as key publications in the same time frame.

Update on peri-partum cardiomyopathy
Mark Petrie (Honorary Consultant Cardiologist, University of Glasgow, Glasgow)

Peripartum cardiomyopathy is the most emotive form of heart disease. Women who are meant to be celebrating a happy time are hit by what is a devastating diagnosis. Mark Petrie will review the current knowledge of peripartum cardiomyopathy. Recent data suggest that mortality rates are lower than previously reported. Death rates are especially low in white populations. He will review both short- and long-term data. Myocardial recovery rates also appear to be much greater than previously reported. Some progress has been made with regard to the genetics of peripartum cardiomyopathy. 2017 has seen the publication of the first trial of bromocriptine in peripartum cardiomyopathy. The European Society of Cardiology’s peripartum cardiomyopathy registry has now included over 650 cases. Early data from this Registry will be reviewed.

Update on cardio-oncology
Alexander Lyon (Senior Lecturer, Imperial College London, and Honorary Consultant Cardiologist, Royal Brompton Hospital, London)

The advancing options for cancer therapy have resulted in significant improvement in long-term survival for many forms of cancer, but also have resulted in untoward side effects associated with treatment. One such complication that is increasingly being recognised is the development of cardiovascular complications including cardiomyopathy and clinical heart failure. Whether a previously other healthy person from a cardiovascular perspective develops cancer therapy-related cardiac dysfunction or a high-risk cardiovascular patient requires cancer therapy, the team of oncologists and cardiologists must be better equipped with an evidence based individualised approach to care for these patients across the spectrum. Although the toxicities associated with various cancer therapies are well recognised, limitations to our understanding of the appropriate course of action remain. In this respect, enhanced risk prediction, surveillance strategies, and better prevention and treatment algorithms are required. I will discuss the pathophysiology, evaluation, prevention, and treatment of cancer therapy-related cardiac dysfunction, a potential algorithm for approaching these patients and the growing medical subspecialty of cardio-oncology.
Biomarkers; from bench to bedside
Theresa McDonagh (Consultant Cardiologist, King’s College Hospital, London)

The abstract for this presentation was not available before going to press.

The development of cardiac resynchronisation therapy
John Cleland (Director of Robertson Centre for Biostatistics and Glasgow Clinical Trials Unit, University of Glasgow, Glasgow)

The concept of ventricular dyssynchrony due to conduction disorders is not new\(^1\) nor is the concept of its exacerbation by pacing\(^2\) nor its ability to respond to treatment, surgical\(^3\) or pharmacological.\(^4\) Gibson and colleagues were the first to conceive of atrio-ventricular dyssynchrony as a therapeutic target\(^5\) although no substantial trials were done. The concept of atrio-bioventricular pacing (aka cardiac resynchronisation therapy [CRT]) was introduced almost simultaneously by Auricchio et al.\(^6\), Bakker et al.\(^7\) and Cazeau et al.\(^8\) Initial experience was quickly followed by randomised cross-over studies demonstrating improved ventricular function, symptoms and exercise capacity (at least for those in sinus rhythm) and subsequently by morbidity and mortality trials that demonstrated striking reductions in mortality. However, which mechanism is most important for delivering success is uncertain. QRS duration is the only robust predictor. Failure to demonstrate that echocardiographic measures of ventricular dyssynchrony predict the benefits of CRT suggests that atrio-ventricular resynchronisation and a reduction in mitral regurgitation might be key mediators of the effects of CRT but many others are possible. It is quite likely that CRT exerts its benefits through a variety of mechanisms depending on the patient, circumstances and over time.

References

Control of neurohumoral activation – a success in the treatment of systolic heart failure
Karl Swedberg (Senior Professor, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, and Professor of Cardiology, National Heart and Lung Institute, Imperial College, London, UK)

The discovery that inhibition of angiotensin-converting enzyme (ACE) could induce vasodilation opened a new approach to treatment of heart failure. Captopril was the first oral agent with such potential. As a vasodilating agent it was of course developed primarily to treat hypertension.\(^1\) Early on it was realised that the vasodilating properties could be used in the treatment of heart failure. The concept of neurohumoral antagonism was not discussed at that time.

By the end of the 1970s we published studies on the beneficial effects of long-term beta-blockade in patients with dilated cardiomyopathy.\(^2\) To explain the effects we postulated that chronic sympathetic activation was harmful and counteraction of this stimulation could induce improvement in myocardial performance. Chronic stimulation by other neurohumoral hormones might induce similar chronic damage. This approach to treating chronic systolic heart failure was proven 20 years later to be the most effective treatment of this syndrome.\(^3\)

Chronic neuroendocrine activation and the results triggered some thoughts about neurohumoral activation in other neuroendocrine systems, e.g. the renin-angiotensin-aldosterone system (RAAS). To test this an outcome trial was essential.
We managed to convince Merck to sponsor a study with enalapril and in April 1985 we initiated the COoperative North Scandinavian ENalapril SUrvival Study (CONSENSUS). The study continued until the Drug Safety and Monitoring Board (DSMB) wanted to meet in Copenhagen 13 December 1986. The DSMB informed us that they recommended to stop the trial because of overwhelming benefits on survival by enalapril. The final count in CONSENSUS was 253 patients with 118 deaths. Small numbers considering today’s mega-trials. The reduction in all-cause mortality was 27% and the reduction after 6 months (primary endpoint) was 40%. The results were rapidly accepted by the medical community. There were no more placebo-controlled trials subsequently conducted in patients with congestive heart failure (CHF) and in New York Heart Association (NYHA) class IV. In a sub-study we analysed blood concentrations of norepinephrine, angiotensin II and aldosterone. We could show that the concentrations varied widely in these very symptomatic patients. The survival was highly significantly directly related to the degree of hormone concentration. Another important paper from the CONSENSUS study was the 10-year follow-up. We found that only 80% of patients had been treated with enalapril after the study was stopped and 90% were dead within 5 years; only 5 patients survived 10 years and they were all in the original enalapril group. The next important step in the progress of RAAS-antagonism in CHF was the presentation of the results from SOLVD in 1991. In SOLVD 2569 patients in NYHA class II–III with systolic dysfunction were randomised to enalapril or placebo. There were 962 deaths. The reduction in mortality by enalapril was 16%. Obviously, SOLVD was a much larger study than CONSENSUS with important findings. ACE inhibitor treatment became important for the general acceptance across the spectrum of patients with systolic heart failure.

Another important study was the SAVE trial which randomised 2231 patients to placebo or captopril 3–16 days after an acute myocardial infarction (MI) and with ejection fraction <40% and without symptoms of heart failure. The results demonstrated a reduction in mortality by 19% (p=0.019) and with consistent findings by subgroup and mode of death. Another important piece in the documentation of the benefits of ACE inhibitors in left ventricular (LV) systolic dysfunction.

In the 1990s Bertram Pitt and Faiez Zannad conducted the RALES trial where spironolactone was superior to placebo for survival in 1663 patients in NYHA class III–IV. A 30% reduction in all-cause mortality by spironolactone was observed. They followed with a new study in 6632 patients with LV dysfunction after MI treated with eplerenone or placebo, EPHESUS. All-cause mortality was reduced by 15%. Fewer symptomatic patients with systolic heart failure were studied in EMPHASIS. In 2737 patients in NYHA class II all-cause mortality was reduced by 24% from eplerenone.

Twenty-seven years after CONSENSUS, in PARADIGM, enalapril was inferior to a new drug, LCZ696, with additional properties of inhibiting the breakdown of vasoactive peptides in addition to blockade of the angiotensin-1 receptors through valsartan. In 8399 patients sacubitril/valsartan reduced mortality by 16% compared with enalapril. The effects of these results are just evolving and the next step in the treatment of systolic CHF is ready to be embarked on. From all these studies, it is clear that at least three neurohormonal blockers should be considered in combination in the treatment of patients with systolic heart failure.

References
Investigating pulmonary hypertension in the 21st century: heart or lungs?

David Kiely (Consultant Respiratory Physician, University of Sheffield, Sheffield)

The abstract for this presentation was not available before going to press.

Contemporary carcinoid heart disease

Joseph Davar (Consultant Cardiologist, Royal Free Hospital, and Honorary Senior Lecturer, University College, London)

Carcinoid heart disease (CHD) could be encountered in up to 25–50% of patients with carcinoid syndrome and is responsible for substantial morbidity and mortality. The pathophysiology of carcinoid heart disease, clinical features, diagnosis, progression of the disease and different contemporary modalities of treatment are reviewed.

The development and application of the CardioMEMS device

Martin R Cowie (Professor of Cardiology, Imperial College London, and Honorary Consultant Cardiologist, Royal Brompton Hospital, London)

In the USA, the Food and Drug Administration (FDA) has approved the CardioMEMS implantable (wireless) pulmonary artery pressure monitoring system to reduce heart failure admissions and improve the quality of life in patients with heart failure and NYHA Class III symptoms. This presentation will review the clinical trial and ‘real world’ evidence that supported that decision.1 UK experience of this technology and its integration into the patient pathway is limited but rapidly expanding. In August 2013, NICE issued interventional procedure guidance encouraging further research into the insertion and use of this technology in chronic heart failure, “particularly studies that look at their long-term effects on hospital admissions and quality of life and that record adverse events”.2

The Royal Brompton Hospital was the first UK centre to gain experience with CardioMEMS, and this early experience will be presented. Fifteen additional UK centres have enrolled in a registry-style study, and it is hoped that this study will provide important confirmatory information from the UK National Health Service perspective on key issues (such as the ease of implantation and low complication rate, high patient compliance, and stabilisation of the heart failure syndrome by targeting a pulmonary artery pressure range). Preliminary economic modelling suggests that even in the European healthcare setting – where hospitalisation is charged at a substantially lower amount than that in the USA – this technology may be reasonable value for money if targeted at the correct patient population.3 Data from patients with congenital heart disease or primary pulmonary hypertension are currently lacking.

References


Update on the BSH Heart Failure Nurse Forum

Jayne Masters (Lead Heart Failure Nurse, University Hospital Southampton NHS Foundation Trust, Southampton)

There is no abstract for this presentation.
Young Investigators’ Award (YIA)

The YIA was created to motivate junior doctors (and other healthcare professionals) to present their work and provide a platform via which they are able to gain experience presenting to a large audience and raise their profile amongst colleagues. It also provides an opportunity for delegates to hear about some interesting new data.

Submissions
The BSH received 15 abstract submissions for the YIA this year.

As per the abstract guidelines, these submissions were from:

- BSH members
- physicians, nurses or other professionals allied to medicine
- staff who are not in consultant posts, substantive or honorary.

All abstracts related to contemporary data and had only been previously presented/published elsewhere in 2017.

Short listing
Entries were short listed based on the quality of the research by a panel of five current BSH Board members who were not conflicted by any of the submissions. The three abstracts judged to be the best were chosen for oral presentation.

Presentation
Authors will present their abstract during Session 4 on Thursday (16:10–16:50). Each presenter will have 5 minutes for presentation.

Questions
Questions will be permitted from the audience as well as from the judging panel. If you would like to pose a question, please raise your hand and wait for a microphone to be handed to you. Before asking your question, please state whether you have any conflict of interest with any of the YIA presenters. There will be 2 minutes of questions for each presenter.

Judging panel
The panel consists of five non-conflicted independent judges:

- Dr Lisa Anderson
- Professor Andrew Clark
- Professor Martin Cowie
- Dr Paul Kalra
- Professor Iain Squire

The session has two independent chairs:

- Professor Andrew Clark
- Professor Iain Squire

Each judge will rank the presentations from 1st to 3rd place and provide the outcome confidentially to the BSH Secretariat. The BSH Secretariat will total all scores and provide details of the winning presentation to Professor Iain Squire, who will announce the winner at 10:15 on Friday 24 November.

Winners and runners-up
The winning presentation will be announced at 10:15 on Friday 24 November during the course of the meeting.

All presenters will receive the following:

- certificate
- complimentary registration for the 20th BSH Annual Autumn Meeting 2017
- complimentary registration for the BSH Heart Failure Day for Revalidation and Training on 1 March or the BSH Heart Failure Nurse and Healthcare Professional Study Day on 2 March 2018 in Birmingham.

The winner will also receive a prize of £250.
Does rhythm matter in acute heart failure? An insight into clinical outcomes from the British Society for Heart Failure National Audit

Simon G Anderson,1,2* Ahmad Shoib,3 Phyo Kyaw Myint,4 John G Cleland,5,6 Suzanna M Hardman,7 Theresa McDonagh,8 Henry Dargie,9 Bernard Keavney,1 Clifford J Garratt,1 Mamas A Mamas3 (1Division of Cardiovascular Sciences, Faculty of Biology, Medicine and Health, The University of Manchester, Manchester; 2Department of Cardiology, North West Heart Centre, University Hospitals of South Manchester, Manchester; 3Keele Cardiovascular Research Group, Centre for Prognosis Research, Institute for Primary Care and Health Sciences, University of Keele and Royal Stoke Hospital, Stoke-on-Trent; 4Institute of Applied Health Sciences, University of Aberdeen, Aberdeen; 5Robertson Centre for Biostatistics and Clinical Trials, University of Glasgow, Glasgow; 6National Heart and Lung Institute, Imperial College, London; 7Clinical & Academic Department of Cardiovascular Medicine, Whittington Hospital, London; 8Faculty of Life Sciences and Medicine, King’s College London, London; 9Institute of Cardiovascular and Medical Sciences, University of Glasgow, Glasgow)

Background: Atrial fibrillation (AF) is the most common sustained arrhythmia in patients with acute Heart Failure (AHF). The presence of AF is associated with adverse prognosis in patients with chronic Heart Failure (CHF) but little is known about its impact in acute Heart Failure.

Methods: Data was collected between April 2007 to March 2013 across 185 (>95%) hospitals in England & Wales for patients with a primary death from, or a discharge diagnosis of AHF. We investigated the association between the presence of AF and all-cause mortality during the index hospital admission and at 30 days and 1 year post-discharge using shared frailty Cox proportional hazard models.

Results: Of 96,593 patients admitted with AHF, 44,642 (46%) were in sinus rhythm (SR) and 51,951 (54%) in AF. Patients with AF were older (mean age 79.8 (79.7-80) versus 74.7 (74.5-74.7) years; \( p < 0.001 \)), but had a lower prevalence of diabetes, acute myocardial infarction and left ventricular systolic dysfunction (LVSD) than those in SR. In a multivariable analysis, AF was independently associated with mortality at all time points, in hospital (HR 1.15, 95% CI 1.09-1.21, \( p < 0.0001 \)), 30 days (HR 1.13, 95% CI 1.08-1.19, \( p < 0.0001 \)), and 1 year (HR 1.09, 95% CI 1.05-1.12, \( p < 0.0001 \)). In subgroup analyses, AF was independently associated with worse 30 days outcome irrespective of sex, ventricular phenotype and in all age groups except in those who aged between 55–74 years (Hazard ratio 1.04 (CI 0.85-1.29, \( p = 0.69 \)).

Conclusion: AF is independently associated with adverse prognosis in AHF during admission and up-to one-year post discharge. As the clinical burden of concomitant AF and AHF increases, further refinement in the detection, treatment and prevention of AF-related complications are necessary to effectively improve patient outcome.

Duality of Interest Statement: The authors declare that there is no duality of interest associated with this manuscript.

*Presenting author
Temporal trends and patterns in heart failure incidence: a population-based study of 4 million individuals

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Background: Large-scale and contemporary population-based studies of heart failure incidence are needed to inform resource planning and research prioritisation but current evidence is limited.

Purpose: To evaluate temporal trends in heart failure incidence in a large representative cohort of adults in the United Kingdom (UK).

Methods: We used linked primary and secondary electronic health records of 4 million individuals from the Clinical Practice Research Datalink (CPRD), a cohort that is representative of the UK population in terms of age and sex. We investigated characteristics of patients with incident heart failure (mean age, 77 years; 49% women), as well as temporal trends in heart failure incidence by sex, age, and socio-economic status from 2002 to 2014.

Results: Over the study period, age-sex-standardised heart failure incidence rates declined, similarly for men and women, by 7%. However, the absolute number of individuals with newly diagnosed heart failure increased by 12%, largely due to an increase in population size and age, and was similar to the number of new cases of lung, breast, bowel and prostate cancer together. Over the study period, patients’ age and multi-morbidity at first heart failure presentation increased. Socio-economically deprived individuals were 61% more likely to develop heart failure and did so 3.5 years earlier in life than those from the most affluent group. From 2002 to 2014, the socio-economic gradient in age at first presentation with heart failure widened. Socio-economically deprived individuals also had more co-morbidities, despite their younger age.

Conclusion: Despite a moderate decline in standardised heart failure incidence, the burden of heart failure in the UK is increasing, and is now similar to the four most common causes of cancer combined. The observed socio-economic disparities in disease incidence and age at onset within the same nation point to a potentially preventable nature of heart failure that still needs to be tackled.

Conflicts of interest: None.

*Presenting author

Figure. Overall and age-stratified heart failure incidence in 2002 versus 2014. Standardised heart failure (HF) incidence (left panel) presents cases in 100,000 persons from the European standard population. Crude incidence (right panel) presents estimated number of cases in the United Kingdom (UK) population (census mid-year estimates) in 2002 and 2014.
**Risk related to atrial fibrillation in heart failure**

Li Shen,1,* Ulrik M Mogensen,1,2 Pardeep S Jhund,1 Mark C Petrie,1 John JV McMurray1

(1BHF Cardiovascular Research Centre, University of Glasgow, Glasgow, UK; 2Rigshospitalet Copenhagen University Hospital, Copenhagen, Denmark)

**Background:** Heart failure (HF) patients with atrial fibrillation (AF) have been found to be at higher risk of death and hospitalisation in some studies but not others. Prior studies have been limited by size, incomplete adjustment and not accounting for AF type (persistent/permanent versus paroxysmal) or HF type (HFrEF versus HFpEF).

**Purpose:** To evaluate the risk related to AF in HF.

**Methods:** Analysis of large pooled HFrEF datasets (PARADIGM-HF and ATMOSPHERE) and HFpEF datasets (CHARM, I-Preserve and TOPCAT). Comparison of ‘no AF’ to persistent/permanent AF and paroxysmal AF (PxAF). Adjustment for other prognostic variables, including NTproBNP.

**Results:** Of 15415 HFrEF patients, 5481 (35.6%) had a history of AF, and of these, 1645 (30.0%) had PxAF. Compared to patients without AF, patients with PxAF had higher risks of the primary endpoint of cardiovascular death or HF hospitalisation (HR 1.20, 95% CI [1.09-1.32], P<0.001), HF hospitalisation (1.34 [1.19-1.51], P<0.001), and stroke (1.34 [1.02-1.76], P=0.037), while the corresponding risks in patients with persistent/permanent AF were not elevated. Of 8380 patients with HFpEF, 2709 (32.3%) had a history of AF – paroxysmal in 1226 (45.3%). Compared to patients without AF, those with PxAF had higher risks of the primary endpoint (1.26 [1.12-1.42], P<0.001), HF hospitalisation (1.40 [1.22-1.60], P<0.001), and stroke (1.44 [1.09-1.89], P=0.009). Unlike in HFrEF, the risks in patients with persistent/permanent AF were also similarly elevated for the primary endpoint (1.23 [1.10-1.37], P<0.001) and HF hospitalisation (1.38 [1.21-1.58], P<0.001), but not for stroke (1.20 [0.90-1.60], P=0.20). In both types of HF, anticoagulants were used less often in patients with PxAF (HFrEF 53%; HFpEF 49%) than in patients with persistent/permanent AF (71%; 72%). Neither type of AF was associated with higher mortality in either HFrEF or HFpEF.

**Conclusion:** After accounting for other prognostic variables, the risk of AF relates to HF hospitalisation rather than death. In HFrEF, only PxAF is associated with higher risk whereas in HFpEF both AF types are associated with higher risk of HF hospitalisation. Importantly, in both HFrEF and HFpEF, paroxysmal (but not persistent/permanent) AF is associated with higher risk of stroke, probably because of lower anticoagulant use in PxAF.

**Conflicts of Interest:** None.

*Presenting author

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**BSH Research Fellow update: What is the role of arrhythmias in heart failure? (RHYTHM-HF)**

Simon Beggs (Research Fellow, University of Glasgow, Glasgow)

In this presentation, I will provide a progress update from my first year in post as the BSH Research Fellow. My work has focused on the development of – and subsequently patient recruitment for – the RHYTHM-HF research study, which examines the association between arrhythmias and adverse events in patients with heart failure. Significant landmarks during the past 12 months include successful application for a clinical study grant worth £429,737 from the British Heart Foundation (BHF) to support the study (awarded June 2017), finalisation of ethical and R&D approval, and initiation of patient enrolment (September 2017). The BHF grant will expand the study’s scope by funding a number of exciting and highly novel sub-studies (hint: ‘why do patients with heart failure die?’), and I look forward to sharing these with you at the meeting!
Heart failure question time

Heart failure question time will take the form of a topical debate, chaired by Professor Andrew (Dimbleby) Clark, with questions put to the panel that have been selected prior to the session from those submitted by the audience.

The panel consists of four guests:

- Dr Paul Kalra, Consultant Cardiologist, Portsmouth Hospitals NHS Trust
- Mrs Annie MacCallum, Head of Specialist Services, Gloucestershire Care Services NHS Trust, Gloucestershire
- Professor John McMurray, Professor of Medical Cardiology, University of Glasgow
- Dr Nigel Rowell, GPsI Cardiology, James Cook University Hospital, Middlesbrough

In your delegate pack, you will find a question card. If you would like to pose a question, please complete the question card and place it in the box on the BSH exhibition stand in the Britten room before 13:30 on Thursday. If you would like to raise your question from the audience, please include details of your name, mobile and e-mail.

During lunch on Thursday (13:30–14:15), the submitted questions will be reviewed and selected by Dr John Baxter, Professor Andrew Clark and Dr Paul Kalra.

If your question is selected and you would like to raise the question yourself, you will be contacted (via the mobile number and/or e-mail address indicated on your question card) and asked to come to the BSH exhibition stand during the tea break on Thursday (15:30–16:00) for a short briefing by Professor Andrew Clark. You will be asked to raise your question from the audience during session 5 (16:50–17:25).
Who and when to refer for a heart transplant

Jayan Parameshwar (Consultant Cardiologist, Papworth Hospital NHS Foundation Trust, Cambridge)

Heart transplantation is the treatment of choice for selected patients with end-stage heart failure and improves quality of life and prognosis. Median survival is approximately 12 years, survival in excess of 20 years not infrequent, and a few patients have crossed the 30-year mark. However, the limited number of available donor hearts restricts this treatment to a small fraction of potential recipients.

Most patients who receive a transplant have advanced heart failure due to systolic ventricular dysfunction. In the UK, approximately 160 heart transplants are performed every year while, at any given time, about 200 patients are on the waiting list. Careful selection of patients is therefore crucial to make best use of scarce donor hearts. Patients with New York Heart Association (NYHA) class IIIB and class IV heart failure are best discussed with the local heart failure/transplant centre to optimise medical management and to consider high-risk non-transplant cardiac surgery where appropriate. Patients with chronic heart failure should be referred before they develop significant end-organ dysfunction (renal and hepatic) or irreversible secondary pulmonary hypertension.

Indications for referral include: recurrent admission to hospital (two or more in 12 months) despite adequate medical therapy, ongoing symptoms and poor quality of life after therapy is optimised, persistent elevation or rising level of natriuretic peptides, falling serum sodium or rising serum creatinine, the need to decrease the dose of prognostically important drugs, and evidence of rising pulmonary artery pressure on echocardiography.

Important contraindications to heart transplantation include: active infection, recent pulmonary embolism, diabetes mellitus with significant end-organ damage other than the heart, symptomatic cerebrovascular or peripheral vascular disease, recent malignancy, significant pulmonary pathology, estimated glomerular filtration rate <40 ml/min/1.73 m², severe pulmonary hypertension associated with a high pulmonary vascular resistance, psychosocial factors including a history of non-adherence to therapy, active cigarette smoking, drug or alcohol abuse, and marked obesity.

All heart transplant centres are dealing with a rising number of patients who require urgent inpatient transfer. These include patients with new-onset heart failure and acute decompensation of chronic heart failure. These patients often have multi-organ dysfunction and timing of referral and transfer is difficult. Most patients with post-cardiotomy cardiogenic shock are poor candidates for heart transplantation. Early discussion with the transplant centre is recommended. At present there is inadequate funding and infrastructure to manage this group of patients.

Further reading


30 years of LVAD technologies
Steve Shaw (Consultant Cardiologist, Wythenshawe Hospital, Manchester)

Left ventricular assist devices (LVADs) are rapidly becoming the dominant treatment for end-stage heart failure. Already in the USA, the annual implant rate has surpassed the number of heart transplants being performed. In the UK, there has also been an exponential increase in LVAD implants over the past decade and we could exceed the rate of heart transplantation within a short time from now. The introduction and success of continuous flow pumps have been responsible for such wide uptake of these devices. However, they remain associated with some important and serious complications. Recently, a continuous flow LVAD with intrinsic pulsatility (Heartmate 3) has been introduced with the hope of reducing complications, particularly pump thrombosis. The real life performance of this pump is being evaluated through a post-market registry study called ELEVATE. Data will be presented for 6 months follow up to evaluate its performance.

What to do when a sick LVAD recipient turns up at your A&E
Paul Callan (Consultant Cardiologist in Advanced Heart Failure, Transplantation and Mechanical Circulatory Support, Wythenshawe Hospital, Manchester)

Durable left ventricular assist devices (LVADs) have revolutionised advanced heart failure care. They can provide substantial improvements in both quantity and quality of life for appropriately selected patients with end-stage heart failure, and enable many patients that would have previously been considered ineligible to be bridged to successful cardiac transplantation.1,2 Advances in device technology have resulted in lower adverse event rates; however they remain high, with an average time from implant to rehospitalisation of 5.2 months.3,4 Patients can present with primary cardiac complications, such as arrhythmias and right heart failure; however the majority are non-cardiac, including neurological, gastrointestinal, and infection related sequelae. Patients may also present with acute medical and surgical conditions unrelated to the device. With growing numbers of supported patients, heart failure specialists based outside VAD centres are increasingly likely to encounter such patients in an acute setting. This presentation aims to:

- give an overview of common LVAD related complications
- provide a framework for assessment, including history and examination, initial investigations and management
- highlight the role of echocardiography in unwell LVAD supported patients
- discuss the role of specialist VAD nurses and the support they offer.

References

Further reading
Best practice tariff update
Suzanna Hardman (Consultant Cardiologist, Whittington Hospital, London)

There is no abstract for this presentation.

Integrated heart failure services
Jayne Masters (Lead Heart Failure Nurse, University Hospital Southampton NHS Foundation Trust, Southampton)

The way that heart failure services (HF) are configured and organised has changed significantly over the past 30 years. HF specialist nurses now have a proven role in changing outcomes for patients diagnosed with this condition; and several models have been developed that show benefit.¹

The National Heart Failure Audit of primary HF admissions in England and Wales consistently shows that patients admitted to hospital have better outcomes when under the care of cardiologists.² Current guidelines³,⁴ recommend that all patients admitted with a primary diagnosis of HF are seen by and followed up by a member of the specialist HF multi-disciplinary team (MDT); a recommendation that calls for considerable inter-professional, inter-departmental and inter-organisational collaboration. The recommendation does not specify which healthcare professionals should be part of such an MDT but it is widely accepted that there should be at least a cardiologist and a specialist nurse.

This talk outlines how we have developed HF services for the patients of Southampton and West Hampshire to create an integrated multi-disciplinary model of care.

References

A contemporary inpatient heart failure unit
Lisa Anderson (Heart Failure Consultant, St George’s Hospital, London; Honorary Reader in Cardiovascular Medicine)

In April 2016, the dedicated Heart Failure Unit at St George’s Hospital opened for the specialist management of complex heart failure inpatients regardless of age or systolic function. Dr Anderson will discuss the challenges and achievements of the first year of the Unit and review the major learning points through this process. Dr Anderson will outline the further developments required for the Heart Failure Unit and provide an estimate of bed numbers and basic requirements for a dedicated HFU.
Sudden death in athletes
Sanjay Sharma (Professor of Cardiology, St George's University Hospitals NHS Foundation Trust, London)

The abstract for this presentation was not available before going to press.

How to differentiate between athletic heart and cardiomyopathy
John Somauroo (Consultant Cardiologist, Liverpool Heart & Chest Hospital, Liverpool)

The 'Athletes Heart' (AH) describes cardiac structural and functional adaptations that occur in response to regular physical exercise. Such remodelling permits enhanced filling of the left ventricle in diastole and augmentation of stroke volume allowing generation of a large and sustained cardiac output even at rapid heart rates. The magnitude to which this adaptation occurs is influenced by sporting discipline, training volume, ethnicity, body size, sex and age. All cardiac chambers may become enlarged with concomitant changes in function.

This adaptation can be challenging when the athlete undergoes pre-participation screening as physiological changes can mimic conditions that may predispose an athlete to sudden cardiac death. The combination of repolarisation changes on ECG and left ventricular (LV) hypertrophy on echocardiography may lead to suspected hypertrophic cardiomyopathy (especially in healthy black athletes), also an increased left or right ventricular cavity size with borderline low ejection fraction may lead to suspected dilated or arrhythmogenic right ventricular cardiomyopathy (especially in endurance athletes).

A detailed family and personal history may unmask inherited or acquired cardiac conditions, which may cause cardiac symptoms (usually with exercise). In 80% of athletes, ECG changes occur as a result of physiological adaptation of the cardiac autonomic nervous system. Other changes occur in 5% of athletes, suggestive of cardiac disease, including cardiomyopathies and channelopathies. The original ESC criteria for ECG interpretation in athletes have been revised through Seattle and Refined criteria to reduce false-positive rates in both white and black athletes.

Echocardiography gives detailed assessment of cardiac structure with LV geometry determined using a combination of LV mass index (LVMI) and relative wall thickness (RWT). Ejection fraction has been used to assess cardiac function, but tissue Doppler imaging and speckle tracking further aid assessment of global and regional cardiac function both at rest and with exercise.

With the ongoing diagnostic dilemma, the use of other modalities including cardiopulmonary exercise testing, cardiac magnetic resonance (CMR) imaging and 24 hr ECG monitoring may be required. A period of detraining for 4–8 weeks may show regression of the electrical and structural anomalies making pathology less likely. A comprehensive understanding of cardiac structure and function in a heterogeneous athletic population is therefore fundamental to facilitate the identification of normal and abnormal features, and investigation should be performed by an expert to reduce erroneous disqualification from sport or falsely reassure an athlete with a potentially life-threatening cardiac condition.

Further reading
A review of RCTs of exercise in heart failure

Joe Mills (Consultant Cardiologist, Liverpool Heart and Chest Hospital, Liverpool)

It is well recognised that sedentary behaviour is one of the principal modifiable risk factors for the development of cardiovascular disease (CVD). In general, the greatest benefit is seen for those individuals who move from a very sedentary baseline to a fairly modest level of regular physical activity and whilst the physiological impact of exercise is complex, the positive effect on insulin sensitivity, blood pressure control, lipid status and coagulation/fibrinolysis must be central to its link with reduced incidence of CVD. However, for those individuals with established CVD, particularly during acute events, it wasn’t until fairly recently that the emphasis switched away from one of long periods of bed-rest and immobility. The British Association for Cardiovascular Prevention & Rehabilitation will be 25 years old in 2018 and that time frame more or less parallels the development of a robust evidence base to support exercise-based rehabilitation for all patients with CVD. Initial evidence was focused almost exclusively on the post myocardial infarction patient group but even since the mid 1990s there were reports of exercise training in patients with stable chronic heart failure leading to improved cardiorespiratory fitness and favourable left ventricular remodelling. Many of the early studies enrolled only small numbers of subjects and were concerned very much with safety and with mechanisms of efficacy, but even the larger ‘outcomes’ trials of the past 10 years have been modest in size in comparison to most contemporary drug trials. Despite issues with statistical power, methodology such as exercise prescription/exercise duration and overall generalisability (60 something year old white males with New York Heart Association II or III symptoms was the predominant study group) exercise-based cardiac rehabilitation is now endorsed by all major national and international guideline authorities. Unfortunately, the reality is that very few patients with a new diagnosis of heart failure or a hospital admission due to heart failure ever begin a programme of structured exercise rehabilitation. The reasons for this are unclear but a lack of formalised funding for heart failure rehab along with some of the semantics within the actual guideline recommendations must surely play a part. Ongoing trials examining the impact of home-based exercise rehab for heart failure patients will hopefully lead to a more pragmatic and diverse rehabilitation offer to patients with both normal and reduced ejection fraction heart failure.
Managing depression
John Sharp (Consultant Clinical Psychologist, Golden Jubilee National Hospital, Glasgow)

Major depressive disorder (MDD) commonly coexists in patients with heart failure (HF) and is independently associated with poorer quality of life, increased use of healthcare resources, more frequent adverse clinical events and hospitalisations, and twice the risk of mortality. MDD can be challenging to diagnose in patients with HF, who often suffer from fatigue, insomnia, weight changes, and other neurovegetative symptoms that overlap with those of depression. Pathophysiologic mechanisms (e.g. inflammation, autonomic nervous system dysfunction, cardiac arrhythmias, and altered platelet function) connect depression and HF. Despite the impact of depression on patient wellbeing and HF outcomes, there remains a paucity of high-quality trials to determine the efficacy and effectiveness of both pharmacologic and psychological interventions. Evidence suggests that both pharmacologic treatment and psychological treatment are safe and effective in reducing depression severity in patients with HF. Collaborative care programmes featuring interventions that work to improve access to psychological therapy for people with HF are recommended. Recent improvement initiatives have demonstrated the feasibility of delivering such programmes to dramatically increase recognition of psychological distress and facilitate access to appropriate care.

Getting the best out of device diagnostics
Roy Gardner (Consultant Cardiologist and Clinical Lead, Scottish National Advanced Heart Failure, Golden Jubilee National Hospital, Glasgow)

Heart failure hospitalisation is associated with a worsened prognosis, and is a major pressure on healthcare beds and budgets. Device diagnostics are becoming increasingly refined, and these may allow us to monitor and risk stratify patients remotely; with the aim of avoiding unnecessary hospitalisation through early intervention. This presentation will highlight current technologies, as well as giving us a glimpse of where these might take us in the future.

A model for pharmacist drug titration clinics
Paul Forsyth (Lead Pharmacist – Clinical Cardiology (Primary Care) / Heart Failure Specialist, West Glasgow ACH, Glasgow)

Heart failure is an escalating global ‘pandemic’ with malignant outcomes. Disease registries around the world highlight frequent unmet need with pharmacological therapy optimisation, as international healthcare systems struggle to cope with the burden. Structured multi-disciplinary programmes of care have long been known to improve outcomes in patients with heart failure. As such, the European Society of Cardiology (ESC) recommends that patients with heart failure are managed by a multi-disciplinary heart failure team to reduce the associated risk of mortality and morbidity. Although the exact complement of healthcare professionals needed within such a team is not explicitly defined, it is recognised that collaborative working between various professions, including doctors, nurses and pharmacists, is a necessity to meet patient needs.

Clinical pharmacist services have been developing within the multi-disciplinary heart failure team for the past two decades to help tackle some of these issues, supported by a growing underpinning evidence base. Global implementation of such services is widespread, including examples from Europe, North America, Asia, Middle East and Australasia.

This presentation will briefly discuss the background to pharmacist care in heart failure. It will also touch on new developments and roles within pharmacy in the UK, including independent prescribing. It will finish with a worked example of pharmacist-led independent prescribing clinics for patients with left ventricular systolic dysfunction post incident myocardial infarction from across seven hospitals and primary care localities in NHS Greater Glasgow & Clyde.
Case study: Cardiac amyloidosis

Jane Cannon (Clinical Fellow in Advanced Heart Failure and Cardiac Devices, Golden Jubilee National Hospital, Glasgow)

Cardiac amyloidosis remains challenging to diagnose and treat. This clinical case presentation will highlight some of the clinical challenges faced in the diagnosis and management of patients with cardiac amyloid. There will be an interactive MDT discussion highlighting some of the potential pitfalls which may present when working with this multi-system disease.

Case study: Revascularisation in acute heart failure (a case for the heart failure MDT)

Oliver Watson (SpR, Northern General Hospital, Sheffield)

To revascularise or not to revascularise that is the question…

We present a case of acute heart failure for discussion with an assembled expert panel. The case will focus on the general management of acute heart failure and specifically the role and timing of revascularisation in patients presenting with heart failure and coronary artery disease.
Dr Lisa Anderson  
Heart Failure Consultant, St George's Hospital, London  
Honorary Reader in Cardiovascular Medicine  

Dr Anderson trained at Liverpool Medical School, completing junior doctor rotations in Liverpool and London before joining the London (SW) Cardiology SpR training scheme. Dr Anderson was BHF Fellow at the Royal Brompton Cardiac MR Unit from 1998 to 2001, developing a method (T2I) for early detection of cardiac iron that is now the International Gold Standard and has led to a significant fall in cardiac deaths in thalassaemia.  

Dr Anderson was appointed as Consultant in Heart Failure at St George's in 2005, has worked with GP colleagues and commissioners to build up community and hospital heart failure services. In 2016, the St George's Heart Failure Unit opened, providing specialist nursing, therapist and cardiology care to admitted patients with heart failure. The purpose of this unit is to improve patient experience and outcomes, to better integrate acute with community care and to provide a centre of excellence in which to train heart failure nurses and fellows.  

Dr Anderson was appointed as Councillor to the BSH Board in 2015. Dr Anderson has ongoing research interests in heart failure and CMR.

Mr Simon Anderson  
Division of Cardiovascular Sciences, Faculty of Biology, Medicine and Health, The University of Manchester, and Department of Cardiology, North West Heart Centre, University Hospitals of South Manchester, Manchester  

This biography was not available before going to press.

Dr Chris Arden  
GPSI Cardiologist/GP, Park Surgery, Southampton  

Chris Arden is a GP near Winchester, Hampshire. He also works in a community cardiac clinic in Southampton as a GPSI in cardiology, assessing patients with suspected heart failure, atrial fibrillation, palpitations, hypertension and valvular heart disease. He has BSE accreditation in echocardiography, ambulatory ECG, blood pressure and event recorder monitoring; receiving consultant mentorship support from secondary care; and working in partnership with specialist heart failure and cardiac rehabilitation nursing colleagues.  

Chris Arden is Cardiovascular Lead for West Hampshire CCG and a member of the Primary Care Cardiovascular Society, British Society of Echocardiography and British Heart Valve Society. He is a Board member of the BSH and is on the editorial boards of the British Journal of Cardiology and Primary Care Cardiovascular Journal.

Dr John Baxter  
Consultant Physician, Sunderland Royal Hospital, Sunderland  

Dr John Baxter is a Consultant Geriatrician and Clinical Lead for heart failure in older persons at Sunderland Royal Hospital. He is an Observer on the Board of the BSH and is a past Treasurer of the British Geriatric Society Cardiovascular Section.

Dr Simon Beggs  
Research Fellow, University of Glasgow, Glasgow  

Dr Simon Beggs is a Research Fellow in Glasgow, currently out of clinical training in order to pursue a PhD examining the role of arrhythmias in people with heart failure. After graduating from Edinburgh University Medical School, his early clinical training was in the West of Scotland, including a fellowship with the Scottish National Advanced Heart Failure Service based at the Golden Jubilee National Hospital. He was named as the 2015 BSH Research Fellow. Upon completion of his PhD he intends to resume clinical training, with a specialist interest in heart failure.

Dr Paul Callan  
MBChB, MRCGP, MSc Clinical Trials (Dist)  
Consultant Cardiologist in Advanced Heart Failure, Transplantation and Mechanical Circulatory Support, Wythenshawe Hospital, Manchester  

I once read that the majority of adults in the UK live within a 20 mile radius of where they were born. Keen to become a statistical outlier, I left Manchester upon completion of undergraduate training to work in London, Yorkshire, and even Grimsby. I was recently appointed as a Consultant Cardiologist within the excellent heart failure and transplant departments at Wythenshawe Hospital, which is exactly 20 miles from where I grew up, thus proving that heart failure specialists ignore evidence based practice at their peril.

Dr Jane Cannon  
Clinical Fellow in Advanced Heart Failure and Cardiac Devices, Golden Jubilee National Hospital, Glasgow  

Dr Jane Cannon is a cardiology registrar in the West of Scotland who has sub-specialty interests in advanced heart failure and complex cardiac devices. She was named the inaugural BSH Fellow in 2013 and has recently completed her PhD looking at the association between heart failure and cognitive impairment at the University of Glasgow under the supervision of Professor JJV McMurray. She is due to complete her cardiology training in February 2018 and plans to undertake a post-CCT fellowship in transplant cardiology and mechanical circulatory support at the Queen Elizabeth Hospital, Birmingham.

Dr Parminder Chaggar  
Cardiology SpR, Northern General Hospital, Sheffield  

Parminder Chaggar graduated from the University of Sheffield Medical School in 2003 and is a final year SpR in Sheffield, subspecialising in heart failure and devices. In a decade of cardiology training he has completed three fellowships and research, and he has served as the BSH Trainee Rep, founded and chaired the UK Heart Failure Trainee Network and helped develop the ESC heart failure accreditation. In the new year he will run out of reasons to delay his CCT and (after a well-earned holiday on the Amalfi coast) he will commence a Consultant post at Royal Cornwall Hospital where he will be the clinical lead for heart failure. His new heart failure team will need to induct this northerner into the Cornish way and hopefully someone will teach him to surf. Awesome.
Professor Andrew L Clark  
Professor of Clinical Cardiology and Honorary Consultant Cardiologist, Hull York Medical School Castle Hill Hospital, Hull  
Professor Clark was educated at Pembroke College, Cambridge, and trained in medicine at the Westminster Medical School. He trained in cardiology at Manchester Royal Infirmary, the National Heart and Lung Institute (London) and the Western Infirmary, Glasgow. Whilst at the National Heart and Lung Institute, under the guidance of Philip Poole-Wilson and Andrew Coats, he developed an interest in exercise physiology, particularly in patients with heart failure.  
He became a Professor in 2009. He is responsible for running the heart failure service in Hull, and he plays an active role in the day-to-day provision of cardiology services to the population of Hull and the East Riding of Yorkshire.  
Professor Clark is an internationally recognised expert in heart failure, and is a frequently invited speaker to conferences of all sorts. He has published over 300 papers, principally in the field of heart failure, but including papers on primary care and even contraception.  
He is past Chair of the BSH, and is a member of the working groups for Heart Failure, and Cardiac Rehabilitation and Exercise Physiology in the European Society of Cardiology.  
He is currently Chair of the Heart Failure Alliance, which has led on advising the All-Party Parliamentary Group on Heart Failure in its production of its report on heart failure. He chairs steering committees for multi-centre clinical trials, is on the National Audit for Heart Failure steering group, and is on the editorial boards of several national and international medical journals.

Mrs Louise Clayton  
Heart Failure Advanced Nurse Practitioner, University Hospitals of Leicester NHS Trust, Leicester  
I started my career in nursing in 1996 and spent 4 years on a cardio-renal acute medical ward at Leicester Royal Infirmary. As ward manager the reality of the 'revolving door of heart failure' really started to become apparent. My passion to improve the lives of people living with heart failure was ignited.  
In 2000 I was lucky enough to be working alongside Prof. Squire and I became involved in a research trial looking at the effectiveness of heart failure specialist nurse interventions.  
I spent almost 14 years establishing and developing the Leicester Community Heart Failure Nursing Service. Working alongside my GP colleagues as well as the Acute Sector Consultants the service provided that all important 'bridge' between providers.  
I have held a number of Honorary Lecturer posts and taught across the breadth of the multi-disciplinary team, including facilitating the Leicester programme of the Caledonian heart failure management course.  
After 14 years in the community working with a well established specialist team there remained a significant gap in service provision in Leicester. No Acute Heart Failure Nursing Service. University Hospitals of Leicester is now recognised as having one of the largest number of heart failure admissions in the UK. I have spent the last 4 years developing this Acute Service. Along with the Heart Failure Consultants we now run regular urgent heart failure clinics, have a dedicated heart failure unit, direct admissions capability, an expanding specialist nursing team and excellent links with palliative care, rehabilitation and our older person champion teams.

I am an active member of the BHF Alliance and BSH. Throughout my career I have maintained my clinical focus. I see patients every day of the week and gain most satisfaction from the relationships forged during these times. Improving the lives of those affected by heart failure continues to be my passion.

Professor John GF Cleland MD, PhD, FRCP, FACC, FESC  
Director of Robertson Centre for Biostatistics and Glasgow Clinical Trials Unit, University of Glasgow, Glasgow  
Professor Cleland was appointed the Director of the Robertson Centre for Biostatistics and Clinical Trials in 2016, an internationally accredited Clinical Trials Unit offering a complete service both to academic clinicians and industry.  
The special area of expertise is cardiovascular disease but includes all branches of medicine and social sciences.  
Professor Cleland qualified from the University of Glasgow. He completed his training at St. Mary's Hospital, Paddington and the Hammersmith Hospital, London, in 1989. In 1994, he was awarded a Senior Research Fellowship by the British Heart Foundation. He was appointed Professor of Cardiology at the University of Hull in 1999 and subsequently at the National Heart & Lung Institute, Royal Brompton, Harefield and Hammersmith Hospitals, Imperial College London, where he retains a part-time contract.  
His main area of interest is in heart failure, extending from its epidemiology and prevention, through the development and implementation of guidelines for the application of current knowledge, to large randomised trials. Particular current interests include the influence of myocardial substrate on therapeutic response, novel methods of delivering care and theranostics.  
He is a Past Chairman of the European Society of Cardiology’s Working Group on Heart Failure and of the BSH, founded the European Journal of Heart Failure, is a National Institute of Health Research Senior Investigator and chairs the Academic Committee of the National Heart Failure Audit and the National Clinical Specialties Research Group on Heart Failure. He has published more than 800 papers in peer reviewed journals and is a Thomson Reuters Highly Cited Researcher.

Mrs Nathalie Conrad  
DPhil Student, The George Institute for Global Health, University of Oxford, Oxford  
Nathalie Conrad is an engineer who is passionate about applying her data analytics skills to medical research. She is currently enrolled as a PhD student at the George Institute for Global Health, Medical Sciences Division, University of Oxford, and is supported by a scholarship from the British Heart Foundation.  
Her research investigates the epidemiology of heart failure using large real-world data sets, such as anonymised electronic health records. She is particularly interested in investigating how sex and socio-economic differences impact disease incidence, care delivery and outcomes.  
Another of Nathalie’s research interest is digital health systems. Prior to engaging in her PhD, Nathalie has been working on the design of a home monitoring and clinical decision support system for patients with heart failure, and its assessment as part of a randomised control trial.  
Nathalie has a broad expertise in information technology and healthcare from her previous work experience at IBM, Johnson & Johnson Medical as well as a United Nations Agency. She holds an engineering master's degree from the Swiss Federal Institute of Technology (ETH) Zurich.
Dr Peter Cowburn  
Consultant Cardiologist with special interest in heart failure, University Hospital Southampton, Southampton  

Dr Peter Cowburn is a Consultant Cardiologist with a specialist interest in heart failure at University Hospital Southampton. His MD thesis was undertaken in Glasgow studying the haemodynamic effects of endothelin and endothelin receptor antagonists in patients with chronic heart failure (CHF). Following SpR training in the Wessex region, he completed an 18-month heart failure/device fellowship in Toronto, Canada, where he trained in cardiac resynchronisation therapy (CRT). He reported the first case series of inotrope-supported CRT and has an interest in the haemodynamic and renal effects of CRT. He was Deputy Chair of the BSH in 2007–9, having served as a Councillor to the Board in 2005–7. At Southampton General he helped establish a novel nurse-led inpatient heart failure service, which led to a dramatic reduction in inpatient mortality. He established an inpatient ultrafiltration programme in 2010, the first in the UK. He was a member of the working group who published guidelines for referral and assessment of adults for cardiac transplantation (Heart 2011). He was one of the document reviewers for the ESC guidelines for the diagnosis and treatment of acute and chronic heart failure 2012. He was reappointed to the BSH Board as a Councillor in 2015.

Professor Martin R Cowie  
Professor of Cardiology, Imperial College London, and Honorary Consultant Cardiologist, Royal Brompton Hospital, London  

Martin Cowie is Professor of Cardiology at Imperial College, London, UK and Honorary Consultant Cardiologist at the Royal Brompton Hospital, London. A founding member and past-Chair of the BSH, Professor Cowie has also been a Board Member (and Chair of the Education Committee) of the Heart Failure Association of the European Society of Cardiology (ESC). From November 2016, he has been a Non-Executive Director of the National Institute for Health and Care Excellence (NICE) in England. He has advised that organisation on its heart failure guidelines and quality standards. He sits on the Cardiovascular Round Table and the EU Affairs Committee of the ESC, and leads its work in e-health, recently being appointed as Chair of the e-health Unit at the European Heart Health Institute in Brussels. He was shortlisted for the NHS Digital Champion (Leadership) Award in 2017. Professor Cowie’s studies and reviews have been featured in a variety of peer-reviewed journals, including The New England Journal of Medicine, The Lancet, Circulation, JAMA, European Heart Journal, British Medical Journal, and the European Journal of Heart Failure. He has contributed chapters to many books, and has written a book for patients entitled Living with Heart Failure – A Guide for Patients. His research interests centre on the use of new technologies to improve the outcome, efficiency and experience of care for people living with heart failure. Professor Cowie is a Fellow of the Royal College of Physicians of London, and Edinburgh, and a Fellow of the European Society of Cardiology.

Professor Henry J Dargie  
Honorary Senior Research Fellow, University of Glasgow, Glasgow  

Professor Dargie graduated in medicine from Glasgow University and trained in medicine and nephrology in Glasgow and clinical pharmacology and cardiology at Hammersmith Hospital in London. He was a consultant cardiologist at the Western Infirmary for 25 years and then Director of the Scottish Advanced Heart Failure Service which incorporates the national heart transplant and ventricular device services. Now he is an honorary senior research fellow at the University of Glasgow. His clinical and research interests have included the epidemiology, imaging and clinical pharmacology of heart failure. He has led a number of large clinical trials in cardiovascular disease and serves and as chairman or member of the Data Monitoring Committees of several studies in cardiovascular disease.

A former member of the Commission on Human Medicines of the Medicines and Healthcare products Regulatory Agency of the UK, he also chaired its External Advisory Group on Cardiovascular, renal and diabetes medicines and the Specialist Advisory Group on cardiovascular medicines of the European Medicines Agency. As Chair of the BSH he promoted the setting up of the National Audit of heart failure in the UK (NHFA) in which he retains an interest in research and the development of a novel audit tool to be used by all contributors to the NHFA. He has 349 citations in PubMed on cardiovascular medicine in peer-reviewed journals. In 2015 he received the Heart Failure Association of the European Society of Cardiology Lifetime Achievement Award.

Dr Joseph Davar MD, PhD, FRCP, FACC  
Consultant Cardiologist, Royal Free Hospital, and Honorary Senior Lecturer, University College, London  

Dr Joseph Davar is a Consultant Cardiologist at the Royal Free Hospital (RFH) & Honorary Senior Lecturer at UCL. Dr Davar’s earlier training was undertaken in Tbilisi and Moscow. He was the youngest recipient of the esteemed A.L. Myasnikov Prize of Academy of Medical Sciences of USSR for his book ‘Mitral Valve Prolapse’. Completing additional training at The Brompton and The Royal Free Hospitals, he holds the position of lead consultant for Valvular Heart Disease, Carcinoid Heart Disease as well Cardiac CT programmes at the RFH. Dr Davar regularly lectures both nationally and internationally and has published numerous articles in peer-reviewed journals.

Dr Ceri Davies  
Consultant Cardiologist, St Bartholomew’s Hospital, London  

Dr Davies is a general cardiologist with an interest in heart failure and imaging who works at the Royal London Hospital and Barts Heart Centre.
Mr Paul Forsyth
Lead Pharmacist – Clinical Cardiology (Primary Care) / Heart Failure Specialist, West Glasgow ACH, Glasgow

Paul worked as a Heart Failure Pharmacist from 2004 before becoming Lead Pharmacist for Clinical Cardiology in Primary Care in 2016. He is an Observer to the Board of the BSH and co-chair of the UK Clinical Pharmacy Association (UKCPA) Heart Failure Group. In a clinical capacity, he has developed pharmacist-led clinics for post-MI patients with left ventricular systolic dysfunction across seven hospitals and adjoining primary care localities in NHS Greater Glasgow & Clyde. He is currently also rolling out this service to NHS Highland and NHS Tayside. He has previously presented research at European Society of Cardiology, American Heart Association, BSH and the North American Primary Care Research Group meetings. He is an honorary lecturer at the University of Strathclyde Pharmacy School and teaches annually at the Heart Failure Nurse Module at Glasgow Caledonian University. Through his UKCPA work, he is also leading on the development of a curriculum for pharmacists specialising in heart failure.

Professor Roy S Gardner MBChB, MD, MRCP, FESC, FHFA
Consultant Cardiologist and Clinical Lead, Scottish National Advanced Heart Failure, Golden Jubilee National Hospital, Glasgow

- Honorary Professor – University of Glasgow.
- Treasurer: BSH.
- Specialist interest in advanced heart failure, cardiac transplantation, mechanical circulatory support, and complex devices (ICDs and CRT).
- Author/Editor: Oxford Specialist Handbook of Heart Failure, and Oxford Textbook of Heart Failure.
- Active research profile in heart failure, complex devices, and biomarkers.
- Editorial advisory board: Biomarkers in Medicine.
- ESC: patient care committee, national heart failure societies committee, and advanced heart failure curriculum committee member.
- NICE: Scientific advisor/clinical expert – interventional procedures programme (CRT/ICD, Enduralife, and Cardiomems), and scoping workshops (sacubitril-valsartan, and s/c furosemide).

Dr Suzanna MC Hardman
Consultant Cardiologist, Whittington Hospital, London

Dr Hardman qualified from UCL & UCLH, London, before training in cardiology. Following a PhD, which explored time-dependent heart muscle function, she won a young investigators’ prize from the BCS and then an Intermediate Fellowship from the BHF. Thereafter, she was appointed consultant/senior lecturer at the Whittington Hospital & UCL to improve cardiovascular care across primary, secondary and tertiary care.

Over the ensuing 20 years Dr Hardman has developed innovative Heart Failure (HF) services locally, and through a diversity of national roles has contributed to the growing awareness of HF and the changes that underpin the improving HF care across the UK.

Repeatedly elected to the Board of the BSH, including as Chair (2011/2013), Dr Hardman has worked closely with numerous professional societies and diverse others to improve HF care. She was a member of the NICE Guideline Development Group for Chronic Heart Failure (2010), Acute Heart Failure (2014) and related Quality Standards (2011 and 2015), and is currently a member of the Chronic Heart Failure update GDG, and is a member and deputy clinical lead of the Steering Committee of the National HF Audit. In Europe an FP7 grant to develop a HF summary through SemanticHealthNet has extended her work within e-Cardiology.

Dr Hardman has advised and works with the BSH, BCS, SAC, RSM and others on the HF curriculum, training and revalidation, alongside work with the HFA of the ESC in Europe. She worked with the BSH, RSM & BHF to develop the Living with Heart Failure programme. As a member of the RSM Cardiology Council she advises on Heart failure with a key initiative being the series of HF lectures for those training in Cardiology (both core and advanced HF training).

Dr Paul Kalra
Consultant Cardiologist, Portsmouth Hospitals NHS Trust, Portsmouth

Paul Kalra is a consultant cardiologist with specialist interest in heart failure at Portsmouth NHS Trust. He has championed local heart failure services, developing an integrated team of heart failure nurse specialists across primary and secondary care and initiating local ICD and CRT implantation. He has developed and leads a cardiovascular research programme in Portsmouth.

Paul has been on the BSH Board since 2009, and was recently appointed as Chair Elect. He was Programme Co-director of the Annual Autumn Meeting in 2010, 2013 and 2016, and the Training/Revalidation meeting in 2010, 2011 and 2015.

He co-founded the Cardiorenal Forum, which has held its 11th annual meeting in October 2016, and has recently received funding to conduct an outcome study of intravenous iron in patients with chronic heart failure (IRONMAN) in the UK. This is now recruiting. Please contact him if your site is interested in participating (paulkalra@doctors.org.uk).

Professor David G Kiely
Consultant Respiratory Physician, University of Sheffield, Sheffield

David is a Respiratory physician and Professor of Pulmonary Vascular Medicine in Sheffield. He participates in a number of research studies funded by the NIHR, MRC and BHF, and his research is primarily focused on the assessment and classification of pulmonary hypertension.
**Dr Alexander Lyon MA, BM, BCH, PhD, FRCP, FHFA**  
**Senior Lecturer, Imperial College London, and Honorary Consultant Cardiologist, Royal Brompton Hospital, London**

Dr Alexander Lyon is a Senior Lecturer in Cardiology at Imperial College London and a Consultant Cardiologist at the Royal Brompton Hospital. His clinical interests are in the field of heart failure, cardio-onychology including chemotherapy cardiomyopathy and the cardiovascular complications of modern cancer therapies, Takotsubo syndrome, and the development of novel therapeutics including gene therapy for chronic heart failure.

Alex is the clinical lead for the Cardio-Oncology service at the Royal Brompton Hospital since 2011, specialising in surveillance and cardioprotection from modern cancer drugs, risk stratification and treatment of all cardiac complications of cancer treatment. Alex is the current president of the British Cardio-Oncology Society (formerly the UK Cardio-Oncology Consortium) and he is the cardiology advisor to the charity Macmillan Cancer. Alex is on the board of the Heart Failure Association of the European Society of Cardiology, and he is the chair of the Heart Failure Association Cardio-Oncology Study Group. He is a co-author of the ESC Position Statement on Cardio-Oncology. He is a member of the International Cardio-Oncology Society and was co-chair of the 2017 Global Cardio-Oncology Summit which hosted 325 specialists from 33 countries at the Royal College of Physicians in London in September 2017.

**Mrs Annie MacCallum**  
**Head of Specialist Services, Gloucestershire Care Services NHS Trust, Gloucestershire**

As an experienced heart failure nurse specialist, Annie continues to promote the development of the nurse specialist role in line with the latest evidence in heart failure management and national guidance in the development of services.

As Head of Specialist Services at Gloucestershire Care Services NHS Trust, Annie combines the professional leadership and operational management of the multi-disciplinary specialist teams caring for patients with heart failure and other long term conditions in the community.

Working in collaboration with commissioners and clinical colleagues Annie has been closely involved in promoting greater integration of teams working across organisational boundaries in Gloucestershire.

Annie is a past member of the Board of the BSH and British Association for Prevention and Cardiac Rehabilitation.

**Mrs Jayne Masters**  
**Lead Heart Failure Nurse, University Hospital Southampton NHS Foundation Trust, Southampton**

Jayne is the lead heart failure nurse for University Hospitals Southampton NHS Foundation Trust, where she has worked for the past ten years. She has been a Board member of the BSH for the past 6 years where she has been a programme director for the national nurse’s study day, a member of the NICE Guideline Development Group for the Acute Heart Failure guidelines and is currently leading on the development of a national heart failure nurse forum. Jayne is also working towards a PhD, her research looks at factors that influence HF patients’ access to specialist MDTs.

**Professor Theresa McDonagh**  
**Consultant Cardiologist, King’s College Hospital, London**

This biography was not available before going to press.

**Professor John McMurray MB ChB (Hons), MD, FRCP, FESC, FACC, FAHA, FRSE, FMedSci**  
**Professor of Medical Cardiology, University of Glasgow, Deputy Director (Clinical) of the Institute of Cardiovascular and Medical Sciences at the University of Glasgow, and Honorary Consultant Cardiologist at the Queen Elizabeth University Hospital, Glasgow**

John McMurray is Professor of Medical Cardiology and Deputy Director (Clinical) of the Institute of Cardiovascular and Medical Sciences at the University of Glasgow and Honorary Consultant Cardiologist at the Queen Elizabeth University Hospital, Glasgow.

Professor McMurray received his MB ChB (Hons) and MD degrees from the University of Manchester. His primary research interests include heart failure, atrial fibrillation, and the cardiovascular consequences of diabetes and chronic kidney disease, with a focus on clinical trials and epidemiology. He has chaired and participated in numerous clinical trial executive/steering and data-monitoring committees and currently chairs the event adjudication group at Glasgow University, which has served as the endpoint committee for many trials.

Professor McMurray was the lead author of the World Health Organization and first Scottish Intercollegiate Guidelines Network Guidelines on the Management of Heart Failure. In addition, he was a member of the 2008 European Society of Cardiology Heart Failure Guidelines Task Force, Chair of the 2012 Task Force, a member of the 2013 American College of Cardiology/American Heart Association Heart Failure Guidelines Committee, and a member of the 2014 National Institute for Health and Care Excellence (NICE) Acute Heart Failure Guideline Committee. He is a member of the editorial board of The New England Journal of Medicine and sits on the editorial boards of several leading cardiovascular journals, including the European Heart Journal – where he is an Associate Editor – and Circulation. He has published over 750 original papers, reviews, and book chapters (see: https://scholar.google.co.uk/citations?user=n0ZdRMoAAAAJ&hl=en).

Professor McMurray and Professor Salim Yusuf were jointly awarded the 8th Arrigo Recordati International Prize for Scientific Research in June 2015. Professor McMurray was awarded the MacKenzie medal of the British Cardiovascular Society, and the Louis and Artur Lucian Award for Research in Circulatory Diseases in June 2017. Professor McMurray was included in the 2015, 2016 and 2017 listing of Highly Cited Researchers by Thomson-Reuters (see: http://hcr.stateofinnovation.com/). He is a member of NICE Appraisal Committee A.
Dr Joe Milis  
Consultant Cardiologist, Liverpool Heart and Chest Hospital, Liverpool  
I was born in Birmingham (& support the Baggies), trained in Cambridge, Leeds, Norway and Manchester, and now work in Liverpool at the largest single-site Cardiothoracic unit in the UK. I have been a Consultant for 10 years and after beginning my career as an interventional zealot, I eventually realised that there was a world outside the cath lab, and have become increasingly involved in community cardiology services along with CVD prevention & rehabilitation. With regards the latter, I have just stepped down as president of BACPR and now enjoy the lofty title of CVD Prevention Co-ordinator for the UK. I enjoyed a wonderful 3 years working as a Junior Research Fellow for the BHF – examining both genetic and exercise effects on insulin resistance/atherothrombosis – but now I focus my non-clinical time on the service development and promotion of CVD prevention & rehabilitation programmes. Away from work, I have an amazing wife who manages to hold down a tertiary centre neonatology consultant job whilst also looking after me and our 3 exhausting children... and a cat and a pony. I love Abersoch and La Clusaz and am counting the days down to retirement so I can spend more time on the water and in the mountains....

Dr Jayan Parameshwar  
Consultant Cardiologist, Papworth Hospital NHS Foundation Trust, Cambridge  
Dr Jayan Parameshwar is a Consultant Cardiologist and has been associated with the Advanced Heart Failure programme at Papworth Hospital for over 25 years. He is involved in the assessment of patients for heart transplantation and mechanical circulatory support, and in the care of these patients after surgery. He studied medicine at Pondicherry, India, and completed an internal medicine residency at the All India Institute of Medical Sciences, New Delhi. He did his cardiology training at Hillingdon Hospital, and at the National Heart and Royal Brompton Hospitals in London. His interest in heart failure was sparked by Dr George Sutton and Professor Philip Poole-Wilson. He has served on the Board of Directors of the International Society for Heart and Lung Transplantation and as Associate Editor of the Journal of Heart and Lung Transplantation.

Professor Mark Petrie  
Honorary Consultant Cardiologist, University of Glasgow, Glasgow  
Professor Mark Petrie is another heart failure cardiologist from Glasgow. He recently jumped from the NHS to University of Glasgow. He is fortunate enough to work in a heart failure team in The Golden Jubilee National Hospital with many proponents of excellent heart failure care (cardiologists, nurses, surgeons and intensive care staff). Mark also shares a heart failure clinic in Glasgow Royal Infirmary with Jackie Taylor (Medicine for the Elderly), Karen Hogg and Yvonne Millerick (palliative care) and the superb nursing team. Mark is keen that the UK conducts many heart failure clinical trials over the next few decades answering the many questions that we are presented with clinically every day.

Dr Nigel Rowell  
GPSI Cardiology (recently retired), James Cook University Hospital, Middlesbrough  
Nigel has recently retired from clinical duties as a GP with a special interest in heart failure. He was a GP in the same Middlesbrough practice for 28 years and throughout this time built a portfolio of other careers. Initially running an outpatient echo service for 16 years, he then helped set up the community Heart Failure service on South Tees in 2004. Since then he ran a community BNP based assessment service, integrated within a Heart Failure team.

Professor Sanjay Sharma  
Professor of Cardiology, St George’s University Hospitals NHS Foundation Trust, London  
This biography was not available before going to press.

Dr John Sharp  
Consultant Clinical Psychologist, Golden Jubilee National Hospital, Glasgow  
John completed both his undergraduate Psychology degree and Doctorate in Clinical Psychology at the University of Glasgow where he is an honorary research fellow following some not-especially-noteworthy forays into academia and clinical teaching. He has worked as a clinical psychologist within cardiac settings since qualifying in 2004. He is a consultant clinical psychologist within the Scottish National Advanced Heart Failure Service at the Golden Jubilee National Hospital and is enthusiastic if not always effective in his efforts to improve psychological care for people with heart failure. He desperately, and somewhat pathetically, attempts to deny his advancing years by running more miles than can ever be healthy and racing marathons that he can’t ever win. He struggles to take writing profiles about himself seriously.

Dr Steve Shaw  
Consultant Cardiologist, Wythenshawe Hospital, Manchester  
I’m a consultant cardiologist at Wythenshawe Hospital in Manchester, with a subspecialty interest in advanced heart failure, mechanical circulatory support and cardiac transplantation.
**Professor John Somauroo**
Consultant Cardiologist, Liverpool Heart and Chest Hospital, Liverpool

Professor John Somauroo is Consultant Cardiologist with Cardiomyopathy and Sports and Exercise Cardiology clinics at Liverpool Heart and Chest Hospital, and Cardiomyopathy/Cardiology clinics at Countess of Chester Hospital. He was awarded a Chair in Sports and Exercise Cardiology at Liverpool John Moores University in 2016. Prof Somauroo is on the Premiership Football Cardiac Screening Panel, screening players from many clubs around England, and is Cardiologist to Liverpool Football Club. He was integral in setting up cardiac screening for all Rugby Union players in England prior to the Rugby World Cup in 2013. He continues to research, publish and lecture nationally and internationally on physiological versus pathological changes in athletes’ hearts and their differentiation from cardiac disease utilising novel echocardiographic techniques. He has a large research database, screening athletes from many sports including football, ultra-endurance runners both in the UK and internationally in San Francisco, USA; the Nigerian Olympic team; the British Cycling team; boxers; the British aikido martial arts team; ice-hockey; jockeys and rugby league players. Prof Somauroo is also currently on advisory panels working with the Saudi Football Association and Hong Kong College of Cardiology setting up international cardiac screening programmes.

**Professor Iain Squire**
Professor of Cardiovascular Medicine at the University of Leicester, and Honorary Consultant Physician at University Hospitals of Leicester, Leicester

Professor Iain Squire, the outgoing Chair of the BSH, is Professor of Cardiovascular Medicine at the University of Leicester and Honorary Consultant Physician at University Hospitals of Leicester. Professor Squire has contributed to the development heart failure services in Leicestershire with one of the first community based heart failure nurse services in the late 1990s, and more recently a 27-bed dedicated inpatient heart failure unit, and nurse-led heart failure follow-up clinics, at Glenfield Hospital. Professor Squire has long association with the BSH; before becoming the current Chair, he held the offices of Deputy Chair, Treasurer and Councillor. Professor Squire has over 175 publications in peer-reviewed journals and is Vice Chair of NICE Technology Appraisal Committee A.

**Professor Karl Swedberg**
Senior Professor, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

Professor of Cardiology, National Heart and Lung Institute, Imperial College, London

Karl Swedberg is Senior Professor of Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden, and Professor of Cardiology, National Heart and Lung Institute, Imperial College, London. His research interests include beta-blockers and angiotensin-converting enzyme inhibitors (ACEIs) and their effects on heart failure (HF) and myocardial infarction (MI), neuroendocrine activation in HF and the treatment of chronic HF. Professor Swedberg was the first to report on the survival benefits of a beta-blocker (1979), ACEI (1987) and angiotensin receptor blocker (2003) in chronic HF. He has published widely, including over 330 original research papers and 25 textbook chapters. Professor Swedberg was included in the 2016 listing of Highly Cited Researchers by Thomson-Reuters. In addition, he has been a steering committee member for numerous outcome trials in HF and MI. Professor Swedberg received the 2004 Kaufman Award from Cleveland Clinics (USA) for his HF research, the European Society of Cardiology Gold Medal 2007 for his outstanding contributions to the cardiovascular field and in 2016 the Lifetime Achievement Award from Heart Failure Association (HFA). He has been an Honorary Member of the Thai Heart Association since 2007, the Swedish Society of Cardiology since 2008, and the Japan Circulatory Society since 2009. In addition, Professor Swedberg was Editor-in-Chief of European Journal of Heart Failure from 2005 to 2009. He is associate Editor of the European Heart Journal since 2012.

**Dr Oliver Watson**
StR, Northern General Hospital, Sheffield

Oliver Watson is currently a final year cardiology specialist trainee in the South Yorkshire area. He graduated from the University of Sheffield in 2004 and completed his training in South Yorkshire. He has completed his sub-speciality training in Heart failure and Inherited cardiac conditions alongside cardiac imaging (Cardiac CT and echo). He has recently obtained a Consultant post at Sheffield Teaching hospitals to continue his clinical interest in genetic cardiomyopathy and heart failure.
Dr Jenny Welstand
Lead Heart Failure Nurse Specialist, Betsi Cadwaladr University Health Board, Wrexham

Jenny Welstand undertook her nurse training at Charing Cross Hospital in London qualifying in 1986. In 1990 she joined the cardiac unit in Oxford and developed roles in surgical pre-assessment, as a cardiology nurse practitioner, and established a community cardiac rehabilitation service. Moving to North East Wales in 2002 she established an integrated heart failure service working between primary and secondary care. This service has substantially reduced readmissions and length of stay. The service focuses on helping patients to make sense of their diagnosis and supporting them with the effects of living with a disabling condition.

Jenny was awarded a Doctorate in 2013, winning the Lord Jones prize for best thesis and defensive at viva at Glyndwr University. Her thesis investigated the patient’s experience of living with heart failure. Presenting her findings in 2010 at the Cardiovascular Nurses Spring Meeting in Geneva, she won best oral presentation of conference. She has subsequently been invited to present at several major conferences. Jenny has served as a council member on the British Council of Cardiovascular Nursing. She was very pleased to be invited to join the Board of the BSH as a Nurse Observer in 2015.

Dr Carol J Whelan
Consultant Cardiologist and Clinical Lead for Heart Failure, Royal Free Hospital, London

Dr Carol Whelan was appointed in October 2009 as Consultant Cardiologist at the Royal Free Hospital, London, with an interest in imaging, heart failure and in particular, cardiac amyloidosis. She was appointed as Honorary Senior Lecturer at UCL in recognition for her work at the National Amyloidosis Centre. She became the hospital clinical lead for Heart Failure in 2011 and is now Trust lead.

She has an interest in transthoracic echocardiography as well as TOE and stress (exercise and dobutamine) echocardiography. She is actively involved in teaching and is joint clinical lead for the medical student teaching programme in cardiology.

She thoroughly enjoyed her period of relaxin research with John McMurray at Glasgow University before commencing SpR training in North West London. She has published these and other research findings and presented at national and international meetings. She has also written book chapters and reviews on secondary prevention of myocardial infarction, current management of heart failure and has published widely on cardiac amyloidosis.

Dr Simon Williams
Consultant Cardiologist and Clinical Lead for Heart Failure, Wythenshawe Hospital, Manchester

- Specialises in all aspects of heart failure: from community heart failure and general inpatient/outpatient management to acute heart failure treatment/cardiac transplantation.
- Current Deputy Chair BSH (2015–17).
- Writes a few articles in leading magazines with his mates from time to time in his role as Senior Lecturer at the University of Manchester.
- Likes running, supporting Altrincham AFC and watching Coronation Street.
EXHIBITORS AND CONTRIBUTORS

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ALLIANCE FOR HEART FAILURE
The Alliance for Heart Failure is a coalition of charities, patient groups, professional bodies and healthcare companies working together to raise the profile of heart failure in Government, the NHS and media, and improve outcomes for people with heart failure.

Members of the Alliance collaborate on overarching policy issues in the aim of securing prioritisation of heart failure and improving access to care, treatment and services for people with heart failure. Members remain independent, but the shared mission to deliver timely diagnosis and improve access to the right care and support is strengthened by joining forces.

Alliance member organisations are: Bayer, British Association for Nursing in Cardiovascular Care; British Society for Echocardiography; BSH; Cardiomyopathy UK; Cardiovascular Care Partnerships; Kent Surrey Sussex Academic Health Science Network; Medtronic UK; National Heart & Lung Institute; Novartis Pharmaceuticals UK Ltd; Pumping Marvellous Foundation; Roche Diagnostics Ltd; South East Clinical Networks.

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BRITISH ASSOCIATION FOR CARDIOVASCULAR PREVENTION AND REHABILITATION (BACPR)

Our mission statement is to support health professionals in the development, delivery and assessment of evidence-based, individualised programmes of prevention and rehabilitation which have been appropriately funded and which are accessed both by individuals with established Cardiovascular Disease (CVD) and those with significant CVD risk factors.

Our Foundations

BACPR is a membership organisation representing and serving the needs of all professionals involved in cardiovascular disease prevention and rehabilitation. As an affiliated group of the British Cardiovascular Society (BCS), the BACPR was first established as the British Association for Cardiac Rehabilitation (BACR) in 1993 as a multi-disciplinary body. To date it continues in this light with its membership consisting of an array of disciplines involved in cardiovascular health, including: nurses, physiotherapists, cardiologists, GPs, dieticians, psychologists, occupational therapists, exercise physiologists and exercise instructors.

BACPR Education coordinates both the well-respected BACPR Specialist Level 4 Exercise Instructor qualification and a range of short Continuing Professional Development (CPD) courses for health and exercise professionals involved in cardiovascular prevention and rehabilitation all recognised by BCS and Skills Active/Chartered Institution for the Management of Sport and Physical Activity (CIMSPA). Delegates receive comprehensive peer reviewed course material and all courses are delivered by specialist professionals from the UK currently involved in the field of cardiovascular rehabilitation.

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BRITISH HEART FOUNDATION

We are the nation’s heart charity and the largest independent funder of cardiovascular research. Coronary heart disease is the UK’s single biggest killer but we are leading the fight against it. Our pioneering research has been key in developing our best practice programmes that have helped transform the care of people living with heart and circulatory conditions. economy. Boston Scientific provides technologies, solutions and programs to help your hospital succeed in the new value-based healthcare environment.

Contact information:

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Website: www.bhf.org.uk

BRITISH SOCIETY FOR HEART FAILURE (BSH)

The BSH is a multi-disciplinary society and membership is open to all healthcare professionals involved with the diagnosis, treatment and management of heart failure, and research in this area.

The aims of the BSH are as follows:

- to increase knowledge and promote research about the diagnosis, causes, management and consequences of heart failure amongst healthcare professionals, with the intention of delaying or preventing the onset of heart failure and improving care for patients with heart failure
- to provide expert advice to healthcare professionals, patient or government organisations, including the National Health Service, when appropriate and as requested.

At present the BSH has nearly 1,200 members and nine companies that are Friends of the BSH. The BSH Board consists of the following members: Professor Iain Squire (Chair), Professor Andrew Clark (Past Chair), Dr Paul Kalra (Chair Elect), Dr Simon Williams (Deputy Chair), Professor Roy Gardner (Treasurer), Dr Lisa Anderson, Dr Peter Cowburn and Dr Ceri Davies as Councillors. The Observers to the Board are as follows: Dr Chris Arden, Dr John Baxter, Dr Parminder Chaggar, Mr Paul Forsyth, Mrs Jayne Masters, Professor John McMurray and Dr Jenny Welstand.

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CARDIOMYOPATHY UK

Cardiomyopathy UK is the specialist national charity supporting children, young people and adults affected by the heart muscle disease cardiomyopathy. Our vision is for everyone affected by cardiomyopathy to lead long and fulfilling lives.

The charity provides a range of support and information services, works to raise awareness of the condition, campaigns for better access to quality treatment and promotes research. Last year alone we directly supported over 200 families with children and young people with cardiomyopathy and over 2,000 adults with cardiomyopathy.

As well as working with individuals affected by the condition the charity also provides training conferences and seminars for healthcare professionals which aim to improve participants’ ability to diagnose and treat cardiomyopathy.

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HEARTFELT TECHNOLOGIES
Heartfelt Technologies exists to help patients, their families, carers and doctors, to reduce hospital re-admission rates from congestive heart failure de-compensation.

This is a big problem: heart failure costs the NHS about two billion pounds per year, and statistics show that one in five people will suffer from heart failure (it is the most common cause of hospitalisation for those aged over 65), and half of those affected will have multiple hospital emergency visits as a result. However, it is estimated that three-quarters of these repeat emergency admissions could be avoided.

We are developing a device to monitor heart failure in the home, whilst fitting naturally around the patient’s lifestyle. What this means for the patient and their carers is one less thing to worry about with their often complex drug and monitoring routines; for the doctor this means consistently collected data to help patients to live longer, healthier lives.

Our technology is specifically designed to work for patients who are currently not compliant (not weighing themselves regularly, not reporting breathlessness, etc...). Our device is a camera system, which automatically captures cardiovascular information (volume of the lower leg/foot) whenever the patient simply walks past the monitor.

The data are then transmitted to ‘the cloud’ for further processing and flagging of high-risk patients. Once flagged, our data feed into existing telemedicine monitoring systems allowing carers and medical professionals to take prompt action.

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LIFE BIOMEDICAL
Life Biomedical are proud to present Critical Diagnostics’ Rapid ST2 test. ST2 is a clinically proven cardiac blood test for use in risk stratification of patients with heart failure.

Some vital facts and figures about ST2:
- Patients with high ST2 levels are at an increased risk of morbidity and mortality from their heart failure
- ST2 is superior to natriuretic peptides in the risk stratification of patients with acute or chronic heart failure
- ST2 guided heart failure management can help personalise medical therapy, improve clinical outcomes and reduce hospital admissions
- The Aspect Plus ST2 platform provides rapid, actionable results in just under 20 minutes and has benefited patients worldwide.

To find out more, please visit our stand to see how the ST2 test can help you improve the management of your patients with heart failure.

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MEDTRONIC
As a global leader in medical technology, services and solutions, Medtronic improves the health and lives of millions of people each year. We believe our deep clinical, therapeutic and economic expertise can help address the complex challenges – such as rising costs, ageing populations, and the burden of chronic disease – faced by families and healthcare systems today. But, we can’t do it alone. That’s why we’re committed to partnering in new ways and developing powerful solutions that deliver better patient outcomes.

Founded in 1949 as a medical repair company, we’re now among the world’s largest medical technology, services and solutions companies, employing more than 85,000 people worldwide, serving physicians, hospitals and patients in more than 160 countries. Join us in our commitment to take healthcare Further, Together. Learn more at Medtronic.com.

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**NATIONAL INSTITUTE FOR CARDIOVASCULAR OUTCOMES RESEARCH (NICOR)**

The National Institute for Cardiovascular Outcomes Research (NICOR) collects clinical information from UK hospitals into secure registries established by the cardiovascular specialist societies.

We help the NHS, the government and regulatory bodies improve quality of care by checking that the care received by heart disease patients meets good practice standards. We do this by conducting clinical audit and by comparing patient outcomes, such as casemix-adjusted survival and readmission rates.

Our reports and online public portals help hospitals and health improvement bodies to monitor practice, inform patient choices about their place of care, and build public confidence in NHS cardiac care.

From 1 July 2017 Barts Health NHS Trust has hosted NICOR to manage the National Cardiac Audit Programme after being awarded the contract by the Healthcare Quality Improvement Partnership (HQIP) following a European Union tender process. The new NCAP programme will combine the six separate audits previously hosted by University College London (UCL), including the National Heart Failure Audit, into one cardiac audit with six clinical domains.

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Website: https://bartshealth.nhs.uk/national-cardiac-audit-programme-

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**NOVARTIS PHARMACEUTICALS**

Novartis provides innovative healthcare solutions that address the evolving needs of patients and societies. Headquartered in Basel, Switzerland, Novartis offers a diversified portfolio to best meet these needs: innovative medicines, eye care and cost-saving generic pharmaceuticals. Novartis is the only global company with leading positions in these areas. In 2015, R&D throughout the Group amounted to approximately USD 8.9 billion. Novartis Group companies employ approximately 118,000 full-time-equivalent associates. Novartis products are available in more than 180 countries around the world.

In the UK, Novartis develops, manufactures and markets innovative medicines, devices and diagnostic tests which help improve patient outcomes. Based on four sites across the north and south of England, we employ approximately 1,500 people to serve healthcare needs across the whole of the UK, as well as supporting the global operations of Novartis by manufacturing the active pharmaceutical ingredients used worldwide in many medicines. The company spent over £16 million on R&D in the UK in 2015. For more information, please visit www.novartis.co.uk.

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**PHARMA NORD**

Pharma Nord is one of Europe’s leading manufacturers of dietary supplements and natural preventative medicines. The company develops, manufactures and markets its products, which are produced to pharmaceutical standards, with emphasis on documented bioavailability, efficacy and safety. Pharma Nord has sponsored a number of randomised controlled clinical trials of relevance to cardiovascular disorders, most notably the recent Q-SYMBIO and KISEL-10 studies. In the Q-SYMBIO study, long term daily supplementation with coenzyme Q10 (in addition to conventional medication) reduced cardiovascular mortality in patients with heart failure (NYHA class III or IV) by more than 40%. In the KISEL-10 study, long term supplementation with coenzyme Q10 and selenium reduced the risk of cardiovascular mortality in the normal elderly population by more than 50%, as well as significantly reducing frequency of hospital admissions and improving quality of life. These studies demonstrate the importance of Pharma Nord product quality and bioavailability, which other supplement manufacturers cannot match. Pharma Nord coenzyme Q10 is available within the EU as the licensed medicine Myoquinon®.

**Contact information:**

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PUMPING MARVELLOUS FOUNDATION
The Pumping Marvellous Foundation was founded to demonstrate leadership around the patient voice working in partnership with all stakeholders to ensure the patient and their families have the best quality of life that is achievable.

PMF has four primary goals that act as a cohesive multi-disciplinary approach to heart failure care.
1. To support patients, carers and their families on how to self-manage the psychological, socio-economic, and physical, impacts on their lives that the condition imposes.
2. To improve timescales to diagnose heart failure at primary care gateways.
3. To increase the number of patients receiving specialist heart failure care and support.
4. To influence government, regulators and the pharmaceutical industry policies to reflect patient needs.

PMF carries out the following activities to achieve these goals
a) Working in partnership with clinicians, commissioners and a range of associated agencies to create patient-driven initiatives.
b) Acting as a catalyst to facilitate the progression of heart failure care.
c) Providing advocacy services to beneficiaries via a network of regional volunteers.
d) Lobbying MPs and government officers to gain their support to increase awareness of heart failure.
e) Using peer-to-peer coaching and support of patients to promote self-care, self-education and self-intervention.

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ROCHE DIAGNOSTICS
Roche is a global pioneer in pharmaceuticals and diagnostics focused on advancing science to improve people’s lives. The combined strengths of pharmaceuticals and diagnostics under one roof have made Roche the leader in personalised healthcare – a strategy that aims to fit the right treatment to each patient in the best way possible.

Roche is the world’s largest biotech company, with truly differentiated medicines in oncology, immunology, infectious diseases, ophthalmology and diseases of the central nervous system. Roche is also the world leader in in vitro diagnostics and tissue-based cancer diagnostics, and a frontrunner in diabetes management.

Founded in 1896, Roche continues to search for better ways to prevent, diagnose and treat diseases and make a sustainable contribution to society. The company also aims to improve patient access to medical innovations by working with all relevant stakeholders. Twenty-nine medicines developed by Roche are included in the World Health Organization Model Lists of Essential Medicines, among them life-saving antibiotics, antimalarials and cancer medicines.

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VIFOR PHARMA
Vifor Pharma UK, affiliated to Vifor Pharma: a world leader in the discovery, development, manufacturing and marketing of pharmaceutical products for the treatment of ion imbalances such as iron deficiency and elevated potassium, is based in Bagshot, Surrey.

Established in 2010, Vifor Pharma UK has grown in size, commands a market leading position in the intravenous (IV) iron therapy market and has recently introduced a medicine for the treatment of hyperkalaemia, which has a key role in the optimisation of RAASI therapy in heart failure.

Vifor Pharma UK is committed to investing in the education of health care professionals and in responsible public awareness initiatives.

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Website: www.viforpharma.co.uk
Advance notice

For more information about the events below please visit the BSH desks in exhibition area I or www.bsh.org.uk

New Consultants’ Meeting
Top tips for the transition to heart failure consultant
25 January 2018 – One Wimpole Street, London
This full day meeting will provide opportunities for new and recently appointed Heart Failure Consultants (typically within their first 2–3 years) to network with others at a similar stage of their career and gain insights and practical advice from those with experience in this role. We expect around 25–30 newly appointed consultants to attend. The programme and registration form will be available on the BSH website in the coming weeks and will be circulated to members via e-mail when available.

10th BSH Heart Failure Day for Revalidation and Training
All you need to know about heart failure – in a day
1 March 2018 – Institution of Engineering and Technology (IET) Birmingham Austin Court
This programme has been designed by Dr Lisa Anderson, Dr Parminder Chaggar, Dr Peter Cowburn, Dr Paul Kalra, Professor Iain Squire and Dr Simon Williams to meet the educational needs of the heart failure component of the core curriculum in cardiovascular medicine, as well as the needs for advanced training in heart failure and revalidation. It will provide an in-depth discussion around particularly challenging and often controversial management issues that will be relevant to consultants and trainees in cardiology, internal medicine, care of the elderly specialists, nurses and GPs with a special interest in heart failure. The day has been structured to provide a balance of carefully selected talks and interactive case-based sessions.

8th BSH Heart Failure Nurse and Healthcare Professional Study Day
2 March 2018 – Institution of Engineering and Technology (IET) Birmingham Austin Court
The programme has been designed by Mrs Jayne Masters and Dr Jenny Welstand. The day aims to provide evidence-based knowledge from leading UK specialists in heart failure management and in-depth discussion around particularly challenging and controversial management issues facing nurses and other healthcare professionals caring for patients with heart failure. It is designed to educate and interest heart failure nurses, and will be of interest to nurses, both early in their role and those with more experience, as well as other healthcare professionals.

European Heart Failure Awareness Day
May 2018 (date to be confirmed)
This is a Europe-wide day to raise the awareness of heart failure. The initiative is led by the European Society of Cardiology (ESC)/Heart Failure Association (HFA) and is supported by the BSH. More details are available on our website (http://www.bsh.org.uk/resources/heart-failure-awareness/).

British Cardiovascular Society Annual Conference
4–6 June 2018 – Manchester Central, Manchester
The BSH will be involved with a number of heart failure-related sessions at this conference. A programme for these sessions will be available on the BSH website in the spring.

21st BSH Annual Autumn Meeting
29–30 November 2018, Queen Elizabeth II Centre, London
Healthcare professionals and company staff only are allowed inside Exhibition Area I, outlined with a dotted line, due to ABPI regulations.
Ferinject® (ferric carboxymaltose) Prescribing Information - UK

For full prescribing information refer to the Summary of Product Characteristics (SmPC)

Active ingredient: Ferric carboxymaltose (50mg/mL)
Presentation: Solution for injection/infusion. Available as a 2mL vial (as 100mg of iron), 10mL vial (as 500mg of iron) and 20mL vial (as 1000mg of iron). Indications: Treatment of iron deficiency when oral iron preparations are ineffective or cannot be used. The diagnosis must be based on laboratory tests. Dosage and Administration: The protocol of Ferinject follows a stepwise approach: Step 1: Determination of the iron need; The individual iron need for replenishment using Ferinject is determined based on the patient’s body weight and haemoglobin (Hb) level. In the SmPC, the ICDR should be used to determine the iron need. Step 2: Calculation and administration of the maximum individual iron dose; Based on the iron need determined, the appropriate dose(s) of Ferinject should be administered: a single Ferinject administration should not exceed: 15 mg iron/kg body weight (for administration by intravenous injection) or 20 mg iron/kg body weight (for administration by intravenous infusion) The maximum recommended cumulative dose of Ferinject is 1,000 mg of iron (20 mL Ferinject) per week. Administration rates for intravenous injection: For iron doses of 100mg to 200mg, there is no prescribed administration time. For doses >200mg to 500mg, Ferinject should be administered at a rate of 150mg iron/min. For doses >500mg to 1,000mg, the minimum administration time is 15 min. Administration of intravenous drip infusion: For iron doses of 100mg to 200mg, there is no prescribed administration time. For doses >200mg to 500mg, Ferinject should be administered in a minimum of 6 mins. For doses >500mg to 1,000mg, the minimum administration time for 15 mins. Ferinject must be diluted in 0.9% (w/v) NaCl but not diluted to concentrations less than 2 mg iron/mL. Step 3: Post-iron replenishment assessments: Contraindications: Hypersensitivity to Ferinject or any of its excipients. Known serious hypersensitivity to other parenteral iron products. Anaemia not attributed to iron deficiency. Iron overload or disturbances in utilisation of iron. Special warnings and precautions: Parenterally administered iron preparations can cause potentially fatal anaaphylactic/anaaphylactoid reactions. This risk is enhanced for patients with known allergies, a history of severe asthma, eczema or other atopic allergy, and in patients with immune or inflammatory conditions. Ferinject should only be administered in the presence of staff trained to manage anaphylactic reactions where full resuscitation facilities are available (including 1,100 adrenaline solution). Each patient should be observed for 30 minutes following administration. If hypersensitivity reactions or signs of intolerance occur during administration, the treatment must be stopped immediately. In patients with liver dysfunction, parenteral iron should only be administered after careful risk/benefit assessment. Careful monitoring of iron status is recommended to avoid iron overload. There is no safety data on the use of single doses of more than 200mg iron in haemodialysis-dependent chronic kidney disease patients. Parenteral iron must be used with caution in case of acute or chronic infection, asthma, eczema or other atopic allergies. It is recommended that treatment with Ferinject is stopped in patients with ongoing bacteraemia. In patients with chronic infection a benefit/risk evaluation has to be performed. Caution should be exercised to avoid venous leakage when administering Ferinject. Special populations: The use of Ferinject has not been studied in children. A careful risk/benefit evaluation is required before use during pregnancy. Ferinject should not be used during pregnancy unless clearly necessary and should be confined to the second and third trimester. Undesirable effects: Common (≥1/10 to <1/10): Hypophosphataemia, headache, dizziness, flushing, hypotension, nausea, injection site reactions. Please consult the SmPC in relation to other undesirable effects. Legal category: POM Price: pack of 5 x 2ml = £45.18; pack of 5 x 10ml = £405.88 pack of 1 x 20ml = £164.23 MA Number: 10240/0002 Date of Authorisation: 19.07.2007 MA Holders: Vifor France, 100-101 Tempeau Boieldieu, Tour Franklin La Defense, 92920 Paris La Defense Cedex, France Further details available from: Vifor Pharma UK Limited, The Old Stables, Bagshot Park, Bagshot, Surrey GU19 5PU Tel: +44 1276 853 600 Fax: +44 1276 452 341 medicalinfo_UK@viforpharma.com Ferinject® is a registered trademark