Five key points you need to know about setting up ACC services as part of the multi-professional arrhythmia team

1. A multi-disciplinary steering group needs to be in place to support ACCs, in order to provide a successful arrhythmia service and to ensure local support. It is recognised as beneficial if ACCs have a structured induction period, which ideally should include time spent in primary care.

2. Timetabled regular consultant cardiology supervision, alongside committed management support, is key to the success of the ACC service. This is particularly important for those working in district general hospitals or primary care trusts.

3. The infrastructure associated with an ACC post needs to be in place prior to the appointment of the ACC. This should include office space and clinic space along with IT and admin support.

4. ACCs are a highly skilled resource for healthcare trusts and may have a greater impact if freed from more routine clinical and administrative activities.

5. ACCs should contribute to routine clinical audit data collection in order demonstrate the value of their post.
Evaluation of the British Heart Foundation Arrhythmia Care Co-ordinator Services

Executive summary April 2010
Dr. Hanif Ismail     Professor Bob Lewin

British Heart Foundation Care and Education Research Group

FOREWORD

Arrhythmias, or irregular heartbeats, range in their severity from causing minor inconvenience or discomfort to precipitating sudden death. Symptoms of arrhythmia include palpitations, dizziness or blackouts. Arrhythmias are very common, particularly among older people. They can have a profound effect on the quality of life and there is a good deal that the NHS can do to tackle them.

In 2005 the Department of Health recommended that arrhythmia patients should have access to a named Arrhythmia Care Co-ordinator (ACC), and the British Heart Foundation (BHF) responded by funding 32 of these posts in 19 NHS Trusts across England and Wales. The ACCs were placed in primary, secondary and tertiary centres to provide an integrated care pathway for patients with arrhythmias.

This report details an independent evaluation of the work of these nurses which was undertaken by researchers at the University of York. It confirms that the BHF ACCs have played a pivotal role in the NHS drive to improve the diagnosis, management and treatment of arrhythmia for the prevention of stroke and sudden cardiac death. It further demonstrates that our BHF ACCs have made substantial savings in re-admission and in increasing the throughput of patients seen.

The BHF ACCs typify our approach to heart health. We have pioneered a new service, demonstrated its effectiveness and identified important issues that need to be considered when establishing effective services. It is now up to healthcare commissioners to recognise the value of these services and replicate the model across the UK, thereby ensuring all arrhythmia patients receive the same standard of care.

Peter Weissberg
Medical Director – British Heart Foundation
For most people an arrhythmia is not life threatening and all that may be required is assessment followed by reassurance. Others will require treatment that may include medication, an invasive procedure such as catheter ablation, or the implantation of a device such as a pacemaker or an implanted cardiac defibrillator (ICD). For most of these more complex treatments regular follow-up is essential: for example, patients with pacemakers and ICDs need regular checks to ensure their device is functioning properly and those on drugs such as Warfarin need careful monitoring.

All patients and their families have educational needs regarding their diagnosis and prognosis, treatment options, medications and how best to live with their condition. Some also need help with psychosocial problems, negotiating their way through the NHS and communicating with other physicians or employers.

In 2005 the Department of Health added another chapter to the National Service Framework for Coronary Heart Disease (2000), Chapter Eight – Arrhythmia and Sudden Cardiac Death (SCD). This set out three quality requirements (Figure 1) and suggested that:

“People with long-term conditions receive support in managing their illness from a named arrhythmia care co-ordinator”

This person would act as the ‘key worker’ to assess the patients’ needs and ensure they received the best possible multi-disciplinary care.

Figure 1
After the publication of chapter eight, a working group was set up by the BHF and the Heart Team at the Department of Health (DOH) to further define the role of the ACC. An ACC Committee was set up by the DOH to advise and support ongoing work associated with the role of the ACC. Specialists in the field of arrhythmia sat on the panel and led on the development of national templates for an ‘ideal’ job description, person specifications, with an outline of the proposed role of the ACC. The role covered four domains:

- Clinical activities
- Educational activities for patients, carers and other healthcare professionals
- Management and leadership
- Audit and evaluation

The release of chapter eight highlighted the need to increase the number of these arrhythmia specialists. In 2006, the BHF awarded funding to 32 ACCs in 19 NHS Trusts in England and Wales as part of a three year pilot project.

The potential role for development and delivery of these new co-ordinated arrhythmia services is outlined in Table 1.

Table 1: Key objectives for improved arrhythmia care (DOH 2005)

- That primary, secondary and tertiary care services work together
- That service development is patient-led, and that patients and their families receive the information, treatment, care and ongoing support they need
- That all those who are part of the care pathway including patients, families and carers, receive the education and training they need
- That an effective holistic patient assessment process is in place
- That ongoing monitoring and auditing of the joined up service takes place

The BHF also funded an evaluation of the impact of these new posts.

After a tendering process the BHF Care and Education Research Group at the University of York were awarded the contract and the following questions were addressed:

- Mapping the work of the ACCs: who was appointed to these roles? How were services structured? Which patients did they see?
- Did the ACCs meet the objectives set out in the model job description?
- How did the ACCs perceive their role and what were the common barriers and facilitators in establishing their service?
- How did patients perceive the ACCs’ role?
- How did the physicians perceive the ACCs’ role?
- Did the ACCs improve the patients’ health related quality of life?
- Did the appointment of the ACCs help to reduce costs and hospital readmissions?

To answer these questions we used both quantitative and qualitative research methods.
Executive Summary

RESEARCH METHODS

Quantitative methods

Audit
ACCs were provided with an on-line database. It recorded patient demographics and clinical information, nursing process data such as the number of patient contacts and referrals to other healthcare professionals. For the BHF the ACCs also completed quarterly monitoring reports recording the number of face to face and telephone contacts with patients and the number of teaching sessions they delivered to patients and other medical staff.

Some patients, for example those attending a routine clinic, were seen only briefly by the ACC. Others with more complex needs were seen over a period of weeks or months. The ACCs asked patients, whom they expected to see more than once, to fill in a questionnaire pack that included a questionnaire measuring anxiety and depression, the Hospital Anxiety and Depression Scale (HADS), the Dartmouth COOP quality of life scales and with the EQ5D a measure of health utility. Patients repeated this assessment four months later to measure any change.

Surveys
During the ACCs’ first year in post, and then a year later, they were asked to complete a questionnaire describing the activities they were engaged in. The items were taken from the roles set out in the Model Job Description.

Diaries
In their first year all ACCs were asked, for one week, to record their activities in a diary. This was to establish what proportion of their time they were spending in each aspect of their role and was also repeated a year later to see how this had changed.

Readmission data
We obtained Hospital Episode Statistics (HES) for the number of readmissions for arrhythmia for the year preceding the appointment of the ACCs (2005) and again in the final year of the study (2009) and compared this with all similar hospitals in England.

Qualitative methods
Eight centres were chosen using a framework designed to reflect the range of ACC placements (rural, large teaching hospital, tertiary centre). Interviews were conducted with the ACCs and separately a consultant cardiologist working in arrhythmia. The ACCs were asked about service delivery, referral patterns and caseloads and their integration into the multi-disciplinary team (MDT). The consultants were asked how the ACC had contributed to the work of the team and what, if any, improvements this had led to.

To discover how the patients viewed the role of the ACC, interviews were conducted with 30 patients and 10 carers.

A more detailed description of the research methods can be found in the full report which can be downloaded from www.bhf.org.uk/publications
Key findings

There were 32 appointees and all were registered nurses; 11 at Grade 7 and 21 at Grade 6. Only three used the title of ACC, the others were given the title Arrhythmia Nurse Specialist by their employers, this was also the title preferred by the appointees.

The majority of the ACCs (76%) had previously worked in a coronary care unit or a cardiology ward environment, 15% had previously worked in primary care and 9% had previously worked in cardiology labs.

Where were the ACCs based?

The BHF invited bids from all over England and Wales. Half of the appointees were based in Greater London. Of the remainder, Wales had four, the South West region six, the Midlands four and the North West two. Nine sites were awarded funding for a single ACC, eight for two, one for three and one for four ACCs.

Awards were made to 11 large teaching hospitals, eight district general hospitals, two cardiology networks and three tertiary centres. Eighteen ACCs were based in secondary or tertiary care and 14 were positioned between the secondary and primary sectors. An established arrhythmia service was already in place in 13 of the 19 sites prior to the BHF funding.

The arrhythmia services ranged in size and complexity from one or two people, typically a cardiologist and electro-physiologist, to specialist tertiary centres with a MDT and several cardiologists. In the tertiary centres there were an average of three cardiologists; services included: a paediatric service (42%), a grown-up congenital heart disease clinic (47%), an end of life or palliative care service (74%) or a sudden cardiac death service (42%).

Which patients did the ACCs see?

The most common referrals were for atrial fibrillation (37%) and palpitations (15%). More than half were male (61%) with an average age of 65 years, 86% were white British and 53% were married.

The quarterly returns collected by the BHF revealed that over the three years of the evaluation, the ACCs saw a total of 25,526 patients predominantly in nurse-led or alongside consultant-led clinics. Of these, 18,180 were new patients and 7,346 patients were seen more than once. The ACCs made or received 26,372 phone calls with patients and undertook 2,105 face to face educational sessions. Our audit recorded that 60% of referrals to the ACCs were made by consultant cardiologists and 15% by GPs.
2. Did the BHF ACCs meet the objectives set out in the model job descriptions?

Key findings

The surveys and diaries showed that the majority of the ACCs successfully met the aims set out for them in the Model Job Description.

For most ACCs the role developed over time: our first survey (Table 2) showed that 30% of the ACCs were not meeting some aspects of the job description (and neither was anyone else in their MDT). A year later most of the previously unmet needs had been met.

<table>
<thead>
<tr>
<th>Table 2 Unmet needs</th>
<th>2008 Survey 1</th>
<th>2009 Survey 2</th>
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<tbody>
<tr>
<td>Participating in and establishing nurse-led clinics</td>
<td>60%</td>
<td>10%</td>
</tr>
<tr>
<td>Ensuring patients at risk of SCD are identified and have access to specialists</td>
<td>59%</td>
<td>20%</td>
</tr>
<tr>
<td>Establish patient support groups</td>
<td>41%</td>
<td>30%</td>
</tr>
<tr>
<td>Develop and implement care pathways/referral protocols</td>
<td>33%</td>
<td>10%</td>
</tr>
<tr>
<td>Providing continuity of patient care by following a patients journey from pre-admission to discharge</td>
<td>33%</td>
<td>20%</td>
</tr>
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</table>

Analysis of the diaries showed that for the majority of ACCs the predominant activity was “to improve the educational, emotional and practical support offered to patients and their families and to educate other healthcare professionals in managing arrhythmia”.

There were many examples of the ACC introducing better practice.

Case Study of Good Practice

The ACCs in one site set up a nurse-led rapid access clinic to improve the pathway between primary and secondary care for the management of atrial fibrillation. Referrals came mainly from GPs, but also from pre-operative assessment clinics, A&E and from wards. Patients were seen within 10-15 days of referral with all diagnostic tests undertaken during a single visit.

During the 30 minute appointment, the ACC took a detailed history, conducted a clinical examination, made diagnoses and discussed treatment options with the patients, who were also given information leaflets and the contact details of the ACC.

Cardiologists provided clinical supervision at the clinic when required and a treatment plan was sent to the patients GP within two days. The clinic has been popular with patients and GPs and received recognition locally and nationally.
Recommendations

All the data, both qualitative and quantitative, pointed to the excellence of the service the ACCs can provide: it also revealed three areas that could be improved further:

- Almost all of the ACCs were undertaking a clinical role. However, the degree to which they were using their clinical knowledge and skills varied. Some were running ‘nurse-led’ clinics but in some cases the ACCs were being used for routine tasks that did not fully exploit their expertise and that less qualified staff could have performed.

- One aim, “ensuring all patients at risk of SCD have access to specialist care” remained an unmet need in several centres.

- All the ACCs had intended to establish a patient support group. This was the job description aim that was least likely to have been achieved with less than half of the sites having a support group.

The ACCs gave a number of reasons for this, most being organisational or logistical difficulties such as a lack of financial support, problems finding a place to run a group or pressure of time.
3. How did the BHF ACCs perceive their role and what were the challenges in developing their service?

Key findings

A number of common themes emerged from the interviews with the ACCs:

Job satisfaction

Almost all the ACCs were enthusiastic about their work despite feeling rather overwhelmed by the number of patients, especially as their roles developed. They became aware that there was still much to do to improve the service.

“Since I’ve taken on this job with the BHF, I’ve never felt more valued in all my life. I just found everything outstanding in the courses they give, the funding they give, and even, you get that cardiac nursing journal free”.

Improving the efficiency of the service

The ACCs believed that their appointment had significantly reduced waiting times for patients and made care more accessible. The ACCs became key in co-ordinating patient care and avoiding unnecessary multiple appointments and referrals leading to cost savings. As the ACCs took on additional responsibilities their self confidence increased and they were able to significantly reduce the more routine aspects of the consultants’ workload.

“Not only have I reduced the waiting time, I’ve also cut out an appointment where they (patients) would need to come back to the hospital – they’d come for their first appointment, wouldn’t have had any of their tests done, so then they’d be sent away for the tests, and then come back three months later”.

“I saw a chap a month ago, and he’s having his cardioversion this week, so it’s a month, waiting from referral to cardioversion. Whereas probably, if he had been seeing the consultant, he wouldn’t even have had his (first) appointment yet.”

Improving the patient experience

ACCs believed patients felt reassured and less anxious as the result of better communication and education and because they had a designated contact number that they were able to call at any time.

“Every patient that I see has my details so that they can contact me …..whenever they need advice.”

“Support is the greatest thing of all. I’m there to guide them through their management plans and provide some more explanation, I just can’t do too much”.

“A lot of patients prefer the telephone support, to coming into clinic. Some people prefer to come in and see us face to face; other people very much prefer to talk to us on the phone, and it’s not unusual to talk to a patient for an hour on the phone”.

“The knowledge that they can ring, and there is someone there, is reassuring”
Improving the knowledge of other staff
The ACCs provided over 930 teaching sessions for healthcare professionals (GPs, practice nurses, community matrons and other colleagues within the hospital). They often assumed a pivotal position in disseminating good practice in both primary and secondary care.

“And the role has been huge on teaching. I did so much teaching within the first year and, you know, I very much went out to (name of hospital) and I’ve been out to our neighbouring hospitals in our region. And it’s very important that the cardiac nurses, the cardiac rehab teams were updated. They’ve got base links with the rehab teams and with the heart failure nurses”.

“Our cardiologists, when we first started, they were a bit, well sceptical, but now they (consultants) call us, they send an e-mail and say we should ask our girls to deal with this (patients), and we thought we had actually arrived, you know that was quite warm, we felt”.

The challenges
In sites without an existing service, ACCs had to spend a good deal of time establishing contacts and gaining the trust of local clinicians, writing referral protocols, gaining and developing their niche in the patient pathway.

ACCs joining established services were often employed to do a single job, often in a particular clinic, and although they regarded this as important, they felt that it meant that they had less opportunity to develop their service in other areas where it was needed.

“I don’t think they see how much chasing of notes, ECG results, you know, and patients, generally that needs to be done”.

“And then letters to GPs, running round after the consultants again. So it’s those kinds of things that take up a lot of your time”.

“.there is no direct route to a psychologist, so what I have to do, write to the GP saying can you see …. feels a bit like writing into a black hole, you know.”

Recommendations
- Many ACCs reported a lack of administrative support reducing the ACC’s face to face time with patients.
- As the service became established, referrals and demands from other clinical staff for education increased, putting the ACCs under considerable time pressure and reducing the time they had for each patient.
- The ACCs recognised and appreciated the training and support provided by the BHF but felt they would benefit more from a tailor-made package of training that took into account their particular work setting and included basic training in counselling and cognitive behavioural techniques.
- Most reported the lack of a psychological service for patients with clinically significant anxiety or depression.
4. How did patients perceive the BHF ACC role?

Key findings

Patients viewed ACCs as efficient, kind and welcoming and all who had previous experience of the service agreed that their appointment was a wonderful improvement. They were particularly happy with the ACCs’ clarity of explanation that made treatment seem less intimidating and the condition more understandable.

Being cared for by an ACC reconciled many patients with the healthcare system, which previously they had often found impersonal and confusing.

Many expressed profound relief at finally having found someone who would look at them and their condition in a holistic way. Common themes were:

Accessibility

Patients appreciated having easier and quicker access to help and advice. The telephone help lines the ACCs established were particularly valued. All interviewees praised the new level of accessibility this provided, and were impressed with the reliability of the ACCs’ response to phone calls and emails.

In one example, a patient from Devon who was taken ill whilst abroad was able to get specialist advice from an ACC based in a tertiary centre via an email to the GP in France, who reported that this had prevented the arrhythmia patient being admitted to hospital.

“If I left her a message, she always contacts me promptly and without fail”.

“To be able to have a discussion on the phone is so useful; it’s not as difficult as making an appointment”.

“…when she needed to check something with the consultant, she said she would get back to me, and then she did. She always contacts me straight back- it’s quite incredible. They are conscientious and really exceptional”.

Personalised care

Many patients pointed out that the new service was more efficient because they now had a designated contact person instead of scattered and unco-ordinated contacts. The ACC acted as an access point to and guide through the system. Some commented that a result was that they felt less anxious, knowing that someone was thinking about all aspects of their treatment.

“If it wasn’t for my specialist nurse, I wouldn’t have anyone to talk to about all this”.

“I think it’s a good thing to have somebody like (nurse), to be honest. Because … you don’t want to ring the specialist every two minutes, because they are too busy. And you don’t want to bother them with every little niggly question that you have”.

“Who else am I gonna talk to? A doctor hasn’t got the time to talk to me, a specialist is not there to talk to, I’ve got to have an intermediary, and she is it”.

“The communication is one of the greatest improvements, with the BHF nurse. Patients have a nurse’s name, so it’s personal; a name and a number. I hope it will be perpetuated and extended to other parts of the country. I think it’s marvellous”.

“It’s the personal face of the NHS”.
“There’s nothing they could have done that they didn’t do. In my view, it would be impossible to have anything better.”

“They’ve all got a sense of humour, they’re always polite, and they give you the feeling they all care. I feel like I am the only patient they have. Out of 10, I’d give them 11.”

Educating patients
Patients entered the service with different levels of knowledge; some patients with long-term heart conditions stated they were knowledgeable about their condition, but for others the symptoms had been sudden and they were keenly aware of their information deficit and of the powerless feeling this entailed. They greatly appreciated the chance to ask questions, ranging from simple to complex. They contrasted this with the education they received from doctors, remarking that doctors often lacked time for explanations, or that they found their explanations too technical. They were often loath to waste a doctor’s time with simple, but to them important, questions about their condition, the treatment or the hospital. ACCs were seen as taking as much time as was necessary to get the information across and to listen to the patients’ concerns.

“I was given reassurance, and it was pointed out what could happen…I was given all the information; I was told the truth. The choice, at the end of the day, was left to me.”

Improved quality of life
Patients cited many ways in which their life had improved through the ACCs’ presence. Not only had they been given help with the major issues but also practical support in enabling them to understand and subsequently better manage their condition.

Many examples were produced. One patient derived comfort from the “relaxing tape” given to her by the ACC, another acknowledged how important it was to her to get some help with life’s practicalities, e.g. before she went on holiday her ACC would help her find the nearest hospital she could go to in an emergency.

“I mean, talking to her on the phone, she is absolutely indispensable. She is wonderful. She gives you so much time, she gives you confidence, she gives you reassurance, all the things that the specialist doesn’t have time for”.

“I think what they do best of all is that they reassure you in that they let you know that if there’s a problem, they are there to help”.

Recommendations
- There were some patients who felt that the educational materials they had received did not cover all the questions they had about the practical implications of the condition.
- Patients mentioned the lack of detailed booklets explaining what you could and could not do with an ICD as the current booklets were seen as too general.
- Some patients were only introduced to the ACCs after having had one or more failed cardioversions and commented that they would have liked to have had the opportunity to meet the ACC earlier on.
5. How did the physician perceive the BHF ACC role?

Key findings

The consultants were highly supportive of the ACCs stating that they had brought significant improvements in many aspects of the care provided.

**Improving efficiency**

Consultants were pleased with the protocols and patient pathways that ACCs had implemented. Several consultants said that what used to be a somewhat ad hoc and random service had been rationalised and now regularly attracted compliments.

“They have predictably increased my personal workload - but disproportionately so (i.e. less than the proportional increase in activity we have achieved) - a small price in my mind in comparison to how they have enabled myself and my colleague to build a more successful service.”

“They have made a great difference. During a recent audit it emerged that my clinic is embarrassingly better than the rest; so many orders of magnitude better.”

“The two ACCs we have are intelligent, sensible and enthusiastic individuals who add value to the service”.

**Longer appointments**

Patients used to complain about having to wait hours for a consultant, who subsequently only spent five minutes with them. Since the appointment of the ACCs, these complaints had virtually disappeared as ACCs spent much longer with patients.

“They allow us to see more patients in clinics - they are more reliable, conscientious and consistent in their work than “here today, gone tomorrow” registrars.”

**Impact on readmissions**

Some consultants remarked that in some cases the introduction of ACCs helped to reduce hospital admissions as in the past consultants were forced to urgently admit patients as the only way to get around the crippling waiting times.

**Impact on patients’ support**

Consultants found it very difficult to find time to counsel patients and give them information and they viewed the ACCs as the perfect solution to fulfil this role. The out-of-hours response was also mentioned as having improved care.

“I think that because of their nursing background they are more patient focussed and having them as a patient advocate helps us offer a more rounded and holistic service”.

“I think they compliment what we do and their skills of empathy, understanding and support surpass most doctors’.”
Recommendations

- The consultants were concerned that the ACCs were becoming overwhelmed and commented that they needed more of these extremely valuable posts.

“We are eager for the continuation and expansion of this programme. Our hospital is keen to set up nurse-led clinics but feel they cannot do this with a single nurse, as the service would have to be running 52 weeks a year, so we are trying to get two, or ideally, three nurses. The main barrier that is holding us back is the NHS. A less responsive body to deal with is hard to imagine…”

“I don’t think our service would still be here if she hadn’t arrived.”
6. Did the BHF ACCs improve the patients’ quality of life?

Key findings
We found high levels of anxiety and depression amongst patients. Nearly a third were at the ‘borderline’ or ‘clinically anxious’ cutting points and 18% at the borderline or clinically depressed level at their first assessment. At the follow-up, the number who were borderline of clinically anxious has declined a little to 25% (p = 0.04); there was no significant change in the number who were borderline or clinically depressed.

Graph 1: Change in levels of anxiety
HADS Anxiety at Assessment 1 and follow-up

Graph 2: Change in levels of depression
HADS Depression at Assessment 1 and follow-up
The interviews with patients suggested that patients’ worries were reduced by contact with the ACC.

**ILLUSTRATIVE PATIENT QUOTES ON ANXIETY**

“Of course I was anxious. Who wouldn’t be? I think that’s what they do best of all is that they reassure you in that they let you know that if there’s a problem, they are there to help. I felt less worried about it after seeing the nurse and so did my wife.”

“If you’ve got an illness, that’s the one thing you need, it’s for someone to say “Don’t worry about it, just ring us up and we’ll sort it for you”; really puts your mind at rest that sort of help”.

“They put my mind at rest because I was a bit worried and they gave me enough time to ask questions. If they hadn’t been there I think I would have just given up”.

**Did patients’ health related quality of life improve?**

The Dartmouth COOP quality of life scales ask about physical fitness, feelings, daily activities, social activities, pain, overall health, social support and overall quality of life. All the subscales showed an improvement between assessment one and follow-up. The largest improvements were seen in the physical fitness (p= 0.001), feelings (p=0.001), daily activities (p= 0.002) and overall scales (p= 0.002).

The Euro Qol 5D (EQ5D) instrument was used to measure patients’ health state and to ascribe appropriate values across five dimensions (mobility, self-care, usual activities, pain/discomfort and anxiety/depression). The EQ5D total score showed an improvement of 0.025 (p=0.003) between assessment one and the follow-up. This degree of change indicates that if the change observed was maintained this would equate to an additional two weeks of perfect health per year.

Some of this improvement may have occurred due to the treatment and as the patients came to terms with their diagnosis or treatment. However, the interviews made it clear that the patients ascribed part of the improvements to the intervention of the ACCs. They described numerous occasions where the ACCs’ support had encouraged them to be more active and increase their daily activities and their overall health.

**PATIENTS’ COMMENTS ON QUALITY OF LIFE**

“It is a very effective (service) and I think it’s vital. I think it’s effective in keeping patients with ICDs positive and thinking about looking after themselves and living a lifestyle that’s beneficial.”

“Without the support of them (ACCs) and the information that they can give you and the confidence that they can give you, a lot of people – maybe not myself, but a lot of other people would be very unsure and concerned, and may not then maintain the proper kind of lifestyle”.

“They got me walking, they got me helping, you know, checking everything else, explaining things to me, I can’t fault them really, you know, good as gold”.

**Recommendations**

It is clear that a significant proportion of patients remain disabled by anxiety or depression. One of the ACCs’ wishes was for better access to psychological services for these patients.
7. Did the appointment of the BHF ACCs help reduce costs and hospital readmissions?

Key findings
After adjusting for days at risk, temporal effects and probability of readmission, on average each patient in a hospital with an ACC experienced half a readmission less than those in a hospital without an ACC. The reduction can be conceptualized as the ACC preventing one extra readmission for every two patients under their care.

In terms of readmission rates each ACC saves the NHS £29,357 per year in addition to all costs associated with the post.

Recommendations
The recommendation in the National Service Framework for Coronary Heart Disease to create an ACC role appears justified and all arrhythmia services should include one or more ACCs as part of their MDT.

Even in the relatively better staffed services ACCs were aware that more patients could benefit from their services and that there was still further work required in setting up systems and protocols, especially for those at risk of sudden cardiac death and those with implanted devices. Services should be extended to ensure that all patients are offered individualised education and support.

Further improvements in efficiency might be produced if the ACCs were freed from some of the secretarial work they have to undertake, nurse prescribing was extended, ACCs were freed from the more routine administrative work in running clinics and allowed to use their specialist knowledge by leading clinics.

Once well established, the popularity of the ACC role often challenges their ability to spend sufficient time with each patient, realistic workloads should be established and further ACCs employed once this limit is reached.

It is clear that the psychological needs of some patients are not being met. The incidence of anxiety and depression amongst arrhythmia patients is high and the ACCs make little impact on those recording clinically significant levels of need. The ACCs are aware of a need to further develop their skills in this area and for enhancing local psychological services.
**Conclusions**

All the sources of information in this evaluation confirmed that the ACC role significantly improved the arrhythmia services in which the ACCs were placed and may also have reduced the cost of providing the service.

Benefits were recorded in patients’ anxiety and health-related quality of life, the patients’ satisfaction with the NHS, the efficiency of clinics and in readmissions when compared with other similar hospitals. We have estimated that this may have resulted in a cost saving of £29,537 per annum for each ACC employed.

Patients and consultants greatly valued their work, both praised the ACCs’ role in communicating with patients, in ensuring a holistic service and in acting as a key worker and a single point of contact. Consultants reported that they were able to be more productive as the ACCs took over some of the routine clinical work and often introduced improved pathways and protocols.
10 reasons to appoint a BHF Arrhythmia Care Co-ordinator

1. This evaluation has shown that the NHS saves £29,357 per year over and above the costs of employing a BHF ACC, by avoiding admissions due to the ACC service.

2. Nurse-led rapid access arrhythmia clinics and pre and post procedure clinics have led to freeing up of valuable consultants, registrars and GPs time.

3. BHF ACCs diagnose AF in people previously unaware that they had the condition, and thus may reduce numbers who might go on to suffer and die from a stroke.

4. BHF ACCs are trained to monitor AF, plan the patient’s care pathway and prescribe the appropriate medication under agreed protocols, thus further reducing the risk of stroke.

5. Cardio version is an established treatment strategy for some patients with AF. Some BHF ACCs manage a caseload of cardio version patients, undertaking pre and post procedure clinics, patient assessment and titration of anticoagulation therapy prior to performing the direct current cardio version (DCC) itself.

6. BHF ACCs play a key role in providing ongoing support and education to patients with ICDs (Implantable Cardioverter Defibrillators). ACCs run pre and post device clinics providing education, support and reassurance about what physical activity is safe, what to do when the device fires and practical advice on travel and insurance.

7. BHF ACCs are key to ensuring a co-ordinated approach to integrated, holistic patient care. Based in primary, secondary or tertiary care they deliver clinics and act as a specialist resource for GPs, other HCPs, patients and carers.

8. Undiagnosed and untreated arrhythmias can cause a high level of anxiety for patients and their carers. BHF ACCs have specialist knowledge and advanced communication skills, they are well placed to reduce patients’ and carers’ anxieties in relation to their condition and can refer on as appropriate.

9. BHF ACCs increase patients’ knowledge and confidence, helping patients manage their health and navigate services more effectively.

10. Patients and carers find telephone support from ACCs very reassuring and this can contribute to early intervention and reduce patient anxiety.
BEATING HEART DISEASE TOGETHER