

1. Purpose and Background

The BHF have agreed to support the development of an infrastructure to plan and co-ordinate world class cardiovascular clinical research through the BHF Clinical Research Collaborative (BHF CRC). The BHF CRC was launched at the British Cardiovascular Society (BCS) Annual Conference in June 2019, and a Chief Operating Officer (COO) and Clinical Lead (CL) appointed. Hosted by the BCS, over a three year period the BHF CRC will bring together multidisciplinary affiliate groups (such as BACPR) to prioritise and develop research questions, and will assist in liaison with research funding bodies – ultimately aiming to help generate a national cardiovascular research portfolio.

The BHF CRC has identified seven core work streams for the three year period:

- **Establishment of the BHF CRC structure**
 - Engage existing specialist/sub-speciality groups, and encourage appropriate integrated working across groups to streamline research (cross pollination)
- **Facilitate effective meetings**
 - Provide meeting space, administrative support and reimbursement of travel expenses for groups to meet (ideally 3-4 times per year)
- **Develop an initial IT infrastructure**
 - Provide practical and contemporary IT support for groups (website, database, file sharing)
- **Conduct sponsored sessions at national meetings**
 - Secure widespread involvement and dissemination, and share success
- **Provide discretionary funding to support project development**
 - Support high priority projects with need for specialist support (e.g. statistician input)
- **Develop and support projects of high priority and national/international importance**
 - Aim for at least 75% of groups to have initiated plans for at least one substantial study
- **Promote patient and other service user involvement in the portfolio**
 - Encourage all groups to have appropriate and informed patient representation

Committed to advancing research into prevention and rehabilitation of cardiovascular disease, the BACPR have thus established a clinical study group (CSG) to work as part of the BHF CRC. The initial aim of the CSG is to establish research priorities within the field.

2. Aims and Objectives

To establish research priorities for the prevention and rehabilitation of cardiovascular disease, the BACPR's CSG for the BHF CRC will undertake a project which will:

- Identify unanswered research questions ('gaps') within the current evidence base
- Ascertain perceptions of these research questions across a range of stakeholders (this will include representation from clinicians, academics, and patients and family members)
- Work with stakeholders to agree a refined list of research priorities
- Share this list of research priorities with the cardiovascular community
- Take the list to appropriate funding bodies for consideration (i.e. commission relevant calls for funding bids)

3. Methods

The proposed stages that will be undertaken to attain the objectives have been derived from Delphi¹ and James Lind Alliance methodologies². The approach is iterative, and may be refined at any stage in response to its findings, through consultation and agreement within the steering group (virtual meetings).

A facilitator will be appointed, who will work with the steering group to lead on aspects of data collection, management and assimilation. The CSG lead will retain oversight of the project overall.

Step 1: Identification of Research Questions

Existing sources of information about research uncertainties will be searched. These will include research recommendations contained within systematic reviews and clinical guidelines, protocols for systematic reviews being prepared, and registers of ongoing research. The sources may include:

- NHS Evidence (www.evidence.nhs.uk)
- Cochrane database
- NICE and SIGN (guidelines and research recommendations)
- National Audit of Cardiac Rehabilitation reports
- PROSPERO database (of systematic reviews in progress)
- Other relevant guidelines including American College of Cardiology, European Society of Cardiology and American Heart Association

The facilitator will co-ordinate this data collection and will share this with the CSG. The CSG will meet to review these data and generate a comprehensive list of unanswered research questions within the evidence base. For ease of data management within subsequent steps of the project, the list is likely to be arranged into topic areas.

Step 2: Identification and Invitation of Partners

Through peer knowledge and consultation, potential partner organisations will be identified and agreed upon by the steering group. These will include representation from the BACPR membership (clinicians and academics), and patients and family members. The partners will be contacted by the steering group and invited to participate in the project – the invitation will clearly outline the project's objectives, methods and proposed outputs.

Step 3: Ranking the Research Questions

The CSG will create an online 'ranking' survey which will include the list of existing gaps within the evidence base and ask the respondent to rate the relative importance of each one (importance overall, and in relation to the others within its topic area). The survey will be sent to the partners identified within **Step 2**, and they will be asked to share this widely with their stakeholders in order to achieve dissemination across the cardiovascular prevention and rehabilitation field.

The facilitator will collate and analyse these data, and the CSG will meet to streamline the initial list of research uncertainties based upon the survey findings. This streamlined list will remain comprehensive at this stage (containing e.g. 30 items), and will be stratified according to the responses provided by clinicians, academics and patients / family members.

Step 4: Refining the Research Questions

A second online 'refining' survey will be developed by the CSG, containing the streamlined list of unanswered research questions. This survey will be structured mainly as open-ended question(s) to enable the respondent to provide their perceptions of the specifics of the unanswered research questions. The survey will be sent to all who responded to the 'ranking' survey, and the facilitator will collate and analyse these data, and share with the CSG.

Step 5: Partner and Stakeholder Workshop

A workshop will be arranged by the CSG and all key partners and stakeholders invited. The purpose of the workshop will be to generate a 'top 10' list of research priorities for cardiovascular prevention and rehabilitation. Attendee invitations will ensure an appropriate representation across the field. To ensure objectivity and fairness, the workshop will be led by an external facilitator, supported by the project facilitator and CSG lead. The methods used within the workshop may include focus groups, expert panels and the nominal group technique, however to ensure that the most appropriate format is chosen, the methods will be decided upon after completion of **Step 4**. The workshop may be held virtually, depending on covid-19-related distancing and travel guidelines at the time. The workshop findings will be assimilated and summarised by the two facilitators and CSG lead and shared with the steering group and workshop attendees before wider dissemination.

Step 6: Dissemination of Findings and Translation to Research

It is anticipated that the findings of this project will be shared widely within the field, and will be reported to funding and research agenda setting organisations, such as the NIHR and major research funding charities. CSG members and partners will work together to develop research questions from the 'top 10' priorities, and will seek to collaborate with the other specialist/sub-speciality groups within the BHF CRC to develop integrated research questions and projects, where appropriate. The project will also be published through a descriptive report in Plain English, and in the form of an academic paper.

4. CSG Membership*

CSG members have been selected from across BACPR and the wider field:

- Dr Aynsley Cowie - *BACPR Co-opted Council Member (Past Scientific Officer); Consultant Physiotherapist NHS Ayrshire & Arran (Group Lead)*
- Prof Susan Dawkes - *BACPR President; Professor in Cardiovascular Health, Edinburgh Napier University; Honorary Research Consultant, NHS Lothian*
- Dr Kathryn Carver – *BACPR President Elect; Heart Failure Lead Nurse; Cambridge University Hospitals NHS Foundation*
- Dr Simon Nichols - *BACPR Council Member (Past Scientific Officer); Senior Research Fellow, Sheffield Hallam University*
- Sally Hinton - *BACPR Executive Director; Physiotherapist*
- Dr Hasnain Dalal - *BACPR Co-opted Council Member (Primary Care); Honorary Clinical Professor, University of Exeter*
- Prof Rod Taylor – *Chair of Population Research, University of Glasgow; Co-Director of Exeter Clinical Trials Unit, University of Exeter*
- Sheona McHale – *Past BACPR Council Member; PhD Student, Edinburgh Napier University; Fitness Instructor*
- Sarah Brown – *Lay / patient representative BACPR*
- Prof Patrick Doherty – *BACPR Past President; Chair in Cardiovascular Health, University of York; Director of the BHF National Audit of Cardiac Rehabilitation*
- Dr Jenni Jones – *BACPR Past President; Physiotherapy Lecturer – Brunel University London*
- Dr Tom Butler – *BACPR Scientific Officer; Senior Lecturer in Nutrition and Dietetics - University of Chester*
- Dr Joseph Mills – *BACPR Past President; Consultant Cardiologist – Liverpool Heart and Chest Hospital*

[*In line with the CSG ToR, these individuals will comprise the CSG until at least the end of 2021]

5. Project Timeline

ACTIVITY	2020-21																	
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Project plan finalised	■																	
Step 1: Literature search		■	■	■	■	■												
Step 1: Comprehensive list developed					■	■	■											
Step 2: Partner identification and invitation					■	■	■											
Step 3: Ranking survey dissemination						■	■	■										
Step 3: Ranking survey analysis						■	■	■	■	■								
Step 4: Refining survey development							■	■	■	■	■	■						
Step 4: Refining survey dissemination									■	■	■	■	■	■				
Step 4: Refining survey analysis									■	■	■	■	■	■	■			
Step 5: Workshop												■	■	■	■	■		
Step 5: Workshop analysis													■	■	■	■	■	■
Step 6: Dissemination of findings																		→

= virtual CSG meetings
 = 1:1 virtual meetings with CSG lead and project facilitator

6. Resources Required

It is anticipated that £4,973 will be required to enable delivery of the project to include (as per the timeline):

Regular meetings:

- of the CSG
- between the facilitator and CSG lead

Undertaking of all six methodological steps (inclusive of the facilitator dedicating 3 hrs / week to the project for the 18 month duration):

- Step 1: Literature search
- Step 3: Ranking survey data collation and analysis
- Step 4: Refining survey data collection and analysis
- Step 5: Workshop facilitation and analysis
- Step 6: Report preparation

This will include all stationery costs.

This financial support has been agreed by the BHF CRC.

7. References

[1] Fletcher AJ, Marchildon GP. Using the Delphi Method for qualitative, participatory action research in health leadership. *International Journal of Qualitative Methods* 2014; 1-18

[2] Walker AM, Selfe J. The Delphi technique: a useful tool for the allied health researcher. *British Journal of Therapy and Rehabilitation* 1996; 3:677-80

[3] James Lind Alliance. *The James Lind Alliance Guidebook* (Version 8) 2018 [updated November 2018]. Available from: <http://www.jla.nihr.ac.uk/jla-guidebook/>. Accessed 23rd October 2019

