Phase 1 evaluation of Lothian's Nursing, Midwifery and Allied Health Professions (NMAHP) Clinical Academic Research Careers (CARC) Scheme

Report for NHS Lothian

October 2013

Professor Dominic Upton

Dr Penney Upton

Dr Rosie Erol

Mrs Felicity Penn

Psychological Sciences

Institute of Health and Society

University of Worcester

1

Contents

Acknowledgements

Executive Summary

The Clinical Academic Research Careers (CARC) Scheme for Nurses, Midwives and Allied Health Professionals (NMAHPs) in Lothian was launched in 2010, as part of the NHS Lothian NMAHP Research Framework. It is funded and managed by a partnership between NHS Lothian, NHS Education for Scotland (NES), University of Edinburgh, Edinburgh Napier University and Queen Margaret University.

Aim: To assess the processes involved in setting up and managing the scheme and progress and achievements to date.

Method: A mixed method approach was used which included a document review; a questionnaire completed by four post-holders; a questionnaire sent to R&D and NMAHP Directors across NHS Scotland (43% response rate); and semi-structured interviews with key stakeholders. A total of 27 interviews were conducted with post-holders (4); steering group members (8); management group members (6); demonstration site staff (8) and one external stakeholder.

Results: *Outcome measures*

Two demonstration sites had been funded to date, with progress being made in terms of conducting research studies, applying for additional research funding, dissemination and training. It was considered to be too early to have achieved any measurable impact on practice. At NMAHPs Director level, there is limited awareness of Clinical Academic Career schemes across NHS Scotland or of the NHS Lothian CARC Scheme.

Post holder views

Post-holders felt well supported by academic and clinical staff, and they welcomed having dedicated time to conduct research, along with opportunities for research training and personal development. Working under the 'CARC' identity was seen to be valuable. However, the degree of integration between the clinical and research roles was sometimes less than expected. Challenges faced included managing time between clinical and academic roles; negotiating the different systems of the partner organisations; securing backfill for their clinical role; and having limited influence on the direction of research.

Stakeholder views

There was overall support for the CARC scheme, with on-going commitment to the programme from all strategic leads. The Scheme facilitated stronger relationships between partner organisations, supported research focused on practice development, and provided a basis upon which to build clinical academic pathways for NMAHPs and support further research capacity and capability. There was some frustration at the length of time it had taken to get the scheme operational, and aligning the priorities of the academic partners with NHS Lothian in some areas. Selection of post-holders had been a challenge, with a limited pool of suitably qualified NMAHPs within Lothian; it was recognised that more flexible approach to recruitment, along with a rigorous selection process, would attract the best candidates to the CARC posts. However, the Scheme has demonstrated enough flexibility within the model for it to be applied in different settings.

Considerations for Future Development: Sustainability was seen to be a significant risk to the scheme, in terms of maintaining activity and building on the achievements made to date. Suggested considerations for future development included:

- Agreeing a plan of sustainability including identification of potential new CARC sites;
- Wider publicity, and dissemination of achievements and lessons learnt;
- More flexibility in recruitment, including wider advertisement of CARC posts within NHS Lothian, and elsewhere;
- Greater alignment with other elements of the clinical academic career pathway and integrating with other degree options;
- Simplifying administrative processes, for example by facilitating the adoption of the CARC model in other clinical areas.

Further evaluation, at the end of the current funding period will be useful to assess achievements against outcome measures.

Professor Dominic Upton
Dr Penney Upton
Dr Rosie Erol
Mrs Felicity Penn
Institute of Health and Society
University of Worcester

1. Introduction

1.1   Background to the development of Clinical Research Careers for NMAHPs

Nursing, Midwifery and Allied Health Professionals (NMAHPs) comprise the largest section of the NHS workforce. Practising in a diversity of settings, NMAHPs work closely with patients from across the lifespan who have varying health, social and educational needs. An important aspect of the NMAHP role is the appraisal and use of research evidence to inform practice, and the comparison of treatment results within a framework of clinical governance in order to ensure the delivery of quality care. However, it has been recognised that the research skills which staff possess are often either under-used by the NHS, or not applied in a strategic way to benefit service improvement (NHS Lothian, 2010a). It has also been noted that there have been too few opportunities to prepare NMAHP's for a career in research (Girot, 2011).   This has led to the suggestion that integrating suitably qualified NMAHP clinical academic researchers into healthcare settings would have a beneficial impact on both patient care and public health (Kim, 2009).

This need to build an NMAHP workforce of highly skilled research staff, and to invest in research opportunities, has been recognised across the UK (DoH, 2012; Scottish Government, 2009). According to the Association of UK University Hospitals (AUKUH, 2013), a collaborative approach between the NHS and Higher Education Institutes (HEIs) is likely to provide the most effective means to developing career and training pathways for clinical academic NMAHPs.

1.2   Research Capacity and Capabilities of NMAHPs

1.2.1   Current Capacity and Capabilities

It has been suggested that NMAHPs exposure to evidence based practice and research skills is patchy during undergraduate studies (NHS Lothian, 2010), with differences in curricula across the country having been observed (UKCRC, 2007). Consequently, the concern that newly qualified NMAHPs have limited research literacy has been raised. Furthermore only small numbers of NMAHPs complete postgraduate research degrees, with those that do following personal areas of interest rather than clinical service priorities. Of those midwives and nurses working in UK University Hospitals, fewer than 1 in 10 have a research degree (Burton et al., 2009).

A number of barriers to the uptake and completion of postgraduate studies among NMAHPs have been identified including: the perception of doctoral study as an isolating or lonely process (Mason and McKenna, 1995); the challenges of either balancing part-time study with a full clinical caseload,

9

or taking a salary sacrifice to complete full time studies; and the inability of traditional doctoral studies to integrate theory, practice and research as necessitated by current clinical practice (McKenna and Kitson, 1997). One response to these obstacles has been the development of the professional doctorate, which has shown great potential for professionals such as NMAHPs who are concerned with the promotion of evidence-based practice (Ellis and Lee, 2005).

1.2.2 Research Roles and Expectations

Whilst opportunities to work as a Clinical Research Nurse (CRN) exist, these are often temporary posts, linked to specific projects, and with limited potential for career development (Coulson and Grange, 2012). These nurses often report feeling isolated and having only limited opportunities to use their clinical skills. In contrast, Nurse Researchers are usually academics or educators who work within HEIs rather than in clinical settings. In both scenarios, integration into clinical teams is limited; the opportunity to pursue a career combining both clinical and academic work has been identified as a gap that must be addressed not just for nurses, but across all NMAHP occupations (UKCRC 2007).

1.3 Development of Clinical Academic Careers in Scotland

Despite the emphasis on the promotion and conduct of research as a core NHS role for all professions, and the potential that clinical NMAHP researchers have for driving patient-centred research forward, NMAHP research career schemes lag behind those of clinical scientists, medics and dentists. Investment in research carried out by these professional groups far outstrips that provided for NMAHP research (Rafferty et al. 2003) and a clear need to improve access to clinical academic research schemes for NMAHPs has been identified.

In Scotland, the 2001 Research Assessment Exercise (RAE) identified challenges and gaps in research for NMAHP subjects, including a lack of experienced researcher leaders and limited research training. This alerted the Scottish Higher Education Funding Council (SHEFC), Scottish Executive Health Department (SEHD), Chief Scientist Officer (CSO) and NHS Education for Scotland (NES) who proposed to address these concerns by supporting major collaborative networks or clusters of NMAHP research partners, to include HEIs and NHS Trusts. The aim of this approach was to promote strong, sustainable and internationally recognised Scottish NMAHP research that would engage with the needs of the health sector using evidence based practice. Two policies - 'Choices and Challenges' (SEHD, 2002) and the 'Allied Health Professions Research and Development Action Plan' (SEHD, 2004) – underpinned this approach, with the intention of acting as key facilitators for the development of capacity and capability to take NMAHP research forward.

One example of this, the NMAHP Research Training Scheme (NMAHP RTS), was launched in 2003, and supported NMAHPs in the completion of research training to doctoral level while still retaining a place in clinical practice. However, rather than taking up a clinical research post on completion of their doctorate, the majority of post holders went on to work in the university sector.

NMAHP RTS was followed by a Strategic Research Development Grant, which aimed to develop the capacity and capability of NMAHPs further through the establishment of three regional consortia comprised of HEIs and NHS Board partners. The aim was to create opportunities for strengthening NMAHP clinical academic careers through the provision of research posts within areas of relevance to NMAHP policy and practice. The initiative proved to be a great success with over 35 full time equivalent posts being funded.

In 2009 the CSO launched the Scottish Academic Health Science Collaboration (SAHSC), which built on existing partnerships with four university medical schools (Aberdeen, Dundee, Edinburgh and Glasgow). The aim of this collaboration was to develop a world-leading platform to attract research funds, facilitate leadership of an evidence-based culture and generate clinical academic research posts to support patient orientated research. However, despite the progress made in developing capacity and capability, a lack of clarity regarding the research career pathway for those who had completed NMAHP fellowships was evident, and the need for a clearly defined national approach was recognised (NES 2011).

1.3.1   Clinical Academic Research Career Framework

As the focus on NMAHP clinical research careers has widened, there has been increasing recognition that the range of roles and expectations vary widely across the UK in terms of both the balance between research work and clinical practice, and support for those following a research career path (UKCRC, 2007; midwifery 2020, 2010; DoH, 2006a). This contributed to the development in Scotland of the National Guidance for Clinical Academic Research Careers for NMAHPs (NES, 2011). The Guidance provides a consistent overarching career development framework for NMAHPs wanting to pursue a career in clinical research.

This Clinical Academic Research Career (CARC) Framework sets out minimum expectations in terms of academic and clinical support and balance of time between research and practice, whilst maintaining alignment with the NHS Knowledge and Skills Framework (DoH, 2004) and the NHS Career Framework for Health (Scottish Government, 2009b). It is also informed by the educational attainments and credits guidelines as set out by the Scottish Credit and Qualifications Framework (SCQFP, 2007) and NHS workforce development policies such as *Modernising Nursing Careers* (DoH,

2006b). In this way, the framework enables staff to progress in a direction that meets workforce, service and individual needs.

The Framework comprises five levels, each broadly comparable to the Agenda for Change job profiles for bands 5-9. The scope of responsibility, and anticipated research knowledge and skills are clearly defined for each level, and map onto the Career Framework for Health nine levels of core skills and competency (see Appendix 1).

1.3.2 Clinical Academic Research Career Scheme

The CARC Framework was put into practice through the CARC Scheme, launched in 2010 in Lothian. The aim of the scheme is to:

> *"… enable NMAHP practitioners working in a range of clinical and academic environments to establish a single integrated career route that combines clinical practice and research rather than having to choose a career in one or the other".* (NES, 2010)

Prior to the launch of the scheme, clinical academic posts for NMAHPs in Scotland tended to be developed on an ad hoc basis, driven typically by individual interests or the availability of temporary funding, rather than identified areas of need. In contrast the CARC Scheme took a strategic approach to post development, focusing on research of relevance to priority service areas.

In England a similar scheme was implemented, the Collaborations for Leadership in Applied Health Research and Care (CLAHRC) scheme was created in 2007 and created a total of nine funded collaborative partnerships between a university and surrounding NHS organisations. This £90 million pilot scheme was successful and led to the launch of a competition for up to 12 new CLAHRCs with up to £10 million available each over five years. This funding would be matched from another partner organisation. These schemes have produced a number of benefits including producing a range of measurable improvements including reduced length of stay and lower re-admission rates, an increase in both capacity and capability in the NHS and academia.

1.4 NMAHP Research in NHS Lothian

The CARC scheme is one of a number of initiatives intended to advance the quality, quantity and coherence of NMAHP research in Lothian. The introduction of the scheme should therefore be seen within the wider context provided by the Lothian NMAHP Research Framework (2010- 2015), developed in response to the CSO strategy on 'Investing in Research, Improving Health'. The purpose of this Framework was to build *NMAHP* research capacity and capability over a five year period (NHS Lothian, 2010b). The Framework focuses on implementing applied research designed to

lead to improvement in priority service areas, whilst also creating a culture of inquiry and evidence-informed decision making, and developing clinical research career opportunities.

2. Lothian CARC Scheme

Officially launched in NHS Lothian in May 2010 for a five year pilot, the scheme was funded by NHS Lothian, NHS Education for Scotland, and three partner universities including:

- The School of Nursing, Midwifery and Social care, Edinburgh Napier University;

- The School of Health in Social Science, University of Edinburgh;

- The School of Health Sciences Queen Margaret University, Edinburgh.

The CARC scheme is one of a number of initiatives under the NHS Lothian Framework to develop clinical and academic research competencies, as well as producing a clear career pathway for NMAHPs. The CARC schemes overarching principles are "to ensure that healthcare delivery is informed by quality research" (CSO, 2003), and to promote a "collaborative and integrated approach to service improvements" as set out by the Scottish Governments strategy (2007) '*Better Health, Better Care'*. The scheme will also contribute to NHS Lothian's ambition to become one of the 25 leading healthcare providers globally (Lothian NHS Board, 2009).

2.1 Process Development of the Scheme

2.1.1 Funding

The CARC scheme's funds are managed by NHS Lothian's R&D office Accountant. The funds are provided by a one off payment from NES of £40,000 at the beginning of the scheme followed by annual contributions of £30,000 by NES,£60,000 by NHS Lothian R&D Office, and £20,000 by each of the three university partners (University of Edinburgh, Edinburgh Napier University, Queen Margaret University Edinburgh) for a period of 5 years. (see Table 1).

Table 1: CARC Scheme funding

	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
NHS Lothian Research and Development Office		£60,000	£60,000	£60,000	£60,000	£60,000
Edinburgh Napier University		£20,000	£20,000	£20,000	£20,000	£20,000
University of Edinburgh		£20,000	£20,000	£20,000	£20,000	£20,000
Queen Margaret University		£20,000	£20,000	£20,000	£20,000	£20,000
NHS Education for Scotland	£40,000	£30,000	£30,000	£30,000	£30,000	£30,000
Annual totals	£40,000	£150,00	£150,00	£150,00	£150,00	£150,00
Total Funding						£790,000

There is a budget surplus of approximately £75,000 over the lifetime of the scheme which will make it possible to extend some post holder contracts where indicated. However, it is proposed that post holders should generate income through successful applications of research grants.

2.1.2 Leadership and Management

Early Development of the CARC Scheme

The initial decisions to develop a Clinical Academic Research Careers Scheme within NHS Lothian was developed during 2008 and 2009, initially by the AHP Research and Development Facilitator and the Lead Practitioner for Nursing at the time along with the Director of the Centre for Integrated Healthcare Research as a response to the Finch report within Lothian.

A proposal was drafted, and agreement sought from the R&D Director within NHS Lothian. The proposal was accepted by the NHS Lothian Executive Management Team in February 2010. At the same time, each University Partner was approached, to secure agreement as to how the scheme would work, including the contribution of each partner to fund the scheme. NHS Education for Scotland was also approached as an additional partner. All partners agreed on the principle of the scheme and funding was agreed for a 5 year period.

Initial plans for the scheme were to invest in three posts in three demonstration sites, with a post at Masters level, PhD and Postdoctoral level. However, on review, in particular with regards to the level of funding agreed, it was decided to focus on the PhD and Post-doc posts.

The Scheme was launched on 6th May 2010, and publicised across NHS Lothian.

Management and Steering Groups

The CARC Scheme management group was established with partner organisations to develop the Lothian CARC pathway, operationalise the pilot through bi-monthly meetings, and report annually to a steering group.

The steering group is held annually to oversee the broad direction of the CARC Scheme and its management group.

A timeline of key events and decisions taken since the start of the CARC scheme is shown in Appendix 2.

2.1.3   Selection of Demonstration Sites

The aim of was to select demonstration sites that could support a research programme for post-doctoral and PhD students as part of an established research/practice group. Sites were selected based on initial applications which detailed a clear plan for the proposed research, including a description of the research environment, feasibility of the project and plans for sustainability. Three demonstration sites – Critical Care, Substance Misuse and Weight Management - were chosen following a criterion based review.

2.1.4   Appointment of Post-holders

Level of Research Posts

Initially the CARC scheme aimed to provide a research career pathway for six NMAHPs, two at each demonstration site to comprise one at senior level (with a part time PhD focus) and one at advance practitioner level (post-doctoral clinical research fellows). However, due to the limited pool of post-doctoral Advanced Practitioners, this was changed to four senior level Practitioners and two Advanced Practitioners.

Each post-holder would have a NHS Board line manager to whom they would be accountable, and an academic supervisor/director of studies who would be a senior research academic in one of the three partner universities. Advanced Practitioners would also act as a research mentor to the Senior Practitioner post holders. Positions were open only to those employed as an NMAHP within NHS Lothian who had an interest in an area of relevance to the post specialism and some research

experience. The post holder's time was to be divided equally between clinical practice and completing research activity. In addition, each university would register their Senior Practitioners for a PhD. It was hoped that some of the post-holders' activity could be included in the three universities' 2014 Research Excellence Framework (REF) submissions.

Senior Practitioner

Clinical academic posts at Senior Practitioner level (level 6) were for 5 years with internal secondment, and would register for a PhD. The Knowledge Skills Framework post outline proposes that:

> *'The Senior Practitioners will have a combined clinical and research role where they will contribute to patient/client care and develop their research skills through undertaking PhD training and contributing to other clinical research studies'.*

Advanced Practitioner

Clinical academic research posts at Advanced Practitioner level (level 7) were to run for 3 years with internal secondment, with a possibility to extend to 5 years dependent on individual performance review. Advanced Practitioner post holders were intended to function at post doctorial level and hold joint status with one of the universities (e.g. Honorary Clinical Research Fellow at Edinburgh University; and Research Fellow at The Edinburgh Napier University). According to the Knowledge Skills Framework post outline:

> *'The Advanced Practitioner will have a combined clinical and research role where they will contribute to patient/client care and lead and design clinical research studies. Advanced Practitioners will be post-doctoral researchers in one of the NMAHP professions to develop a research portfolio through working as a chief investigator on small grants and/or collaborator on large grants. Advanced Practitioners will also be expected to lead changes within clinical practice and contribute to service development through integrating research findings into existing clinical practice'.*

2.2   Demonstration Sites

Table 2 summarises CARC posts within demonstration sites.

2.2.1 Critical Care/University of Edinburgh

Title: 'Improving Recovery from Critical Care – a Clinical Academic Collaboration'

The programme of research: Development of research and practice in the area of treatment and rehabilitation of survivors of intensive care; Making social theory relevant to practice.

The programme of research proposed centres on two project areas:

Project 1: 'Information for patients about their time spent in ICU', which aimed to identify, implement and evaluate an intervention to provide patients with information about their period in ICU during critical stage of illness and treatment.

Project 2: 'Redesign of clinical rehabilitation services towards outcomes that are defined by survivors and their families and other informal carers' which aims to design cost effective and patient and carer centred services for rehabilitation and on-going support for ICU survivors and their families.

2.2.2 Substance Misuse/Edinburgh Napier University

Title: 'Understanding recovery: Partnerships, pathways, relationships and outcomes'.

The project: How people's lives can be changed as a result of service redesign in alcohol and drug services. The overall aim was to assess the extent to which the new service development plan 2010-2013 promotes recovery, partnership working, greater utility of services and a reduction in waiting times.

The overall aims are to assess the extent to which the new Service Development plan 2010-2013 promotes: partnership working between services and with service users; a culture of recovery among service providers and between service providers and service users; greater utility of service among substance users; recovery among substance users; a reduction in waiting times.

2.2.3 Weight Management/Queen Margaret University/NHS 24/Edinburgh Napier University

Title: 'Development and evaluation of a self-management platform for weight management'.

The programme of research: Redesign and further develop the current health service provision for weight management with the first project focusing on the development of a centralised self-referral service and self-management platform for overweight/ pre-obese adults (tier 1 and tier 2). The second project will focus on using telehealth to support individuals managed within tier 3 and 4 of the Lothian NHS care management model for overweight and obese adults.

Project 1: 'The development and evaluation of a self-referral, self-management platform for the weight management of Tier 1 and 2 individuals'. With the aim to develop, pilot and evaluate a centralised self-referral and self-management platform.

Project 2: 'Impact of telemetry enabled self-monitoring and education in weight management: A feasibility study', which will aim to explore the impact of self-monitoring telemetry system on health

behaviours and relevant clinical outcome measures primarily in the management of tier 3 and patients subsequently entering tier 4.

Table 2: CARC Post and Demonstration Sites

Clinical demonstration area	Partners	CARC Posts	Start date
Critical Care	NHS Lothian University of Edinburgh	Advanced Practitioner Senior Practitioner	Jan 2011
Substance Misuse	NHS Lothian Edinburgh Napier University Edinburgh University	Advanced Practitioner Senior Practitioner	Dec 2011
Weight Management	NHS Lothian Queen Margaret University NHS 24 Edinburgh Napier University	Senior Practitioner Senior Practitioner	Yet to appoint[1]

---

[1] At the time of writing the evaluation, a PhD student had been provisionally appointed.

3. Method

3.1 Design

A mixed method approach was used to understand whether the CARC programme was progressing as intended; to understand the processes by which it has been implemented in practice; and the extent to which this has followed the original implementation plan. The evaluation also aimed to understand the development processes and interaction between partner organisations and explain how the programme works in practice. Tangible outcome measures and outputs from the research process were also measured. However, at this early stage of the Programme, some of the desired outcomes will not yet have been achieved.

3.2 Ethics

NRES ethical approval was not required for this project as it was classed as audit/evaluation rather than research. However, ethical approval was gained from the University of Worcester Institute of Health and Society Ethics Committee.

Participants agreeing to take part were informed of the purpose of the research, given the opportunity to ask questions, and informed that they would remain anonymous as far as possible. They were asked to provide consent verbally before each interview, including giving permission for the interview to be recorded. Participants were also given the opportunity to withdraw from the research process at any time.

3.3 Procedure

3.3.1 Stage 1 – Document Review

Initial work involved desk research to gather and review background and contextual information about the CARC Scheme. This included a brief search of the published academic literature on the implementation and evaluation of other clinical research career schemes across the UK, including work done more specifically within Scotland, looking across clinical disciplines.

The background of the CARC Scheme at a local level was explored through a review of policy documents relating to the development and implementation of this programme from NHS Lothian. Administration and management related information for the Scheme were reviewed throughout the evaluation process. These included minutes of meetings at a strategic and operational level, dissemination activity, training records, progress reports, and other relevant information at an individual and organisational level, both within NHS Lothian and each of the demonstration sites.

Evaluation team members also attended and observed the bi-monthly management meetings for the duration of the evaluation.

3.3.2 Stage 2 – Gathering Stakeholder Views

The second stage of the evaluation involved a consultation exercise to gather views from key stakeholders involved the CARC Scheme from both an academic and clinical perspective. This was to provide a better understanding of the extent to which the aims and expectations of the Scheme were being met, and the impact of the Scheme on the individuals involved, on the teams in which they work, and at a wider organisational (HEI and NHS) level.

Two approaches were used to gather the views of the key stakeholders: Two questionnaires and qualitative interviews. The first questionnaires was sent to each of the post-holders to enable them to provide information relating to the more quantifiable measures for the evaluation (for example identifying research activity and outputs) and their experience of, and satisfaction with, the Scheme. This also investigated the career pathways followed by each participant prior to and since embarking on the CARC Scheme, so as to identify any links between their clinical practice and research activity.

The second questionnaire focused on understanding the awareness of the NHS Lothian CARC Scheme outside of the Lothian area. This was developed and sent to R&D, Nurse and AHP Directors in the other NHS Boards across NHS Scotland. This was to investigate their awareness of the development of clinical academic research career pathways in general, the extent to which these have been considered, implemented and supported in their own Board area, and the knowledge and awareness of the Scheme in NHS Lothian.

Semi-structured interviews were conducted with key stakeholders and post-holders, which explored their understanding and experience of the CARC Scheme, the development of the scheme and the outcomes so far. All interview participants were aware that the evaluation was taking place. Each participant was contacted by email initially, with a follow up phone call where necessary, to explain the purpose of the research and arrange a suitable time to take part in the interview. Face-to-face interviews were mainly conducted at the interviewee's place of work.

3.4 Participants

A total of four post-holders completed the questionnaire giving a 100% response rate. Thirty-five R&D, Nurse and AHP Directors within NHS Boards across Scotland were sent an on-line questionnaire, 15 of these completed the questionnaire giving a response rate of 43%.

The following groups of stakeholders listed in Table 3 were identified for semi-structured interviews; the final list of individuals approached was drawn up in consultation with the project lead.

Interviews with all the post-holders and operational management group members, in addition to 4 demonstration site leads were conducted face-to-face. The remaining interviews were conducted by telephone (see Table 3). A total of 27 interviews were conducted.

Table 3: Interview Participants

Participants	Number of face-to-face interviews conducted	Number of telephone interviews conducted	Total
CARC Steering Group members	1	7	8
Operational Management Group members	6	0	6
NHS Staff	2	1	3
HEI staff	1	4	5
CARC post-holders	4	0	4
Other external	0	1	1
Total	14	13	27

3.5 Analysis

Quantitative data was analysed through appropriate descriptive statistics, using Excel software where necessary. Data relating to research and clinical activity was collated for each team and as a whole, and summarised as appropriate.

The interviews were transcribed in full, coded and analysed using framework analysis (Lacey and Luff 2007, Srivastava & Thomson, 2009, Spencer & Ritchie, 1994). The analysis followed the five key stages of framework analysis. The first stage was familiarisation, which involved listening to the interview recordings and reading through transcripts, to identify key themes. The second stage involved developing the framework, based on the interview schedule, plus additional themes that emerged from familiarisation with the transcripts. Indexing and charting of the data were then undertaken, linking the data from the different participants to themes and emergent sub themes. Interpretation of the data then followed, looking for patterns within the data and identifying the key issues raised. This approach enabled an understanding of the participants' views and perceptions with regards to the processes of implementation and achieving the outcomes of the CARC Scheme. These results were mapped and presented in the context of the findings from the initial review of contextual information, policy and literature which was conducted in stage 1, along with other measurable outcomes of the Scheme, to provide an overall evaluation of the CARC Scheme to date.

21

4. CARC Outcomes and Impacts

4.1 CARC Outcome Measures

A number of outcome measures to be monitored and assessed during the life of the CARC scheme have been identified (See Table 4). This evaluation covers the early stages of the CARC programme, commencing in January 2011 (appointment of first post-holders), until the end of June 2013. A number of outcome measures are therefore not yet relevant. However a statement of current position has been provided for each outcome based on information in post-holder questionnaire, site progress report and interviews with key stakeholder (Table 4).

Table 4: Summary of Outcome Measures from the CARC Scheme.

CARC Outcome Measure	Summary of current position
Number of NMAHP staff achieving research training in the form of higher degrees	To date two people have engaged in PhD programmes under the CARC scheme. One staff member recently resigned, so there is currently one person enrolled on a PhD programme through CARC.
Number of NMAHP staff who develop advanced level clinical and research skills and experience to become eligible to take up NMAHP consultant or senior academic posts	Four NMAHP post-holders have been employed through the CARC scheme to date, including two at Advanced Practitioner level, although all have yet to complete the programme.
Proportion of staff entering clinical academic (research) career pathway who choose subsequently to continue on this career route	No-one has as yet completed the programme. However, one of the post-doc staff is coming to the end of her period of being funded by CARC and has been successful in applying for an extension to continue in the role for a further year.
Number of discrete research studies completed	4
Number of publications in peer reviewed scientific journals	6
Number of studies resulting in demonstrable change in practice/service delivery in NHS Lothian	1 so far (Substance Misuse demonstration site: Parenting support and drug use study - data and info from the projects used to inform various documents published to assist and support health professionals) 3 studies are underway within the Critical Care demonstration site that will have a demonstrable change on practice/service delivery once completed.
Amount of income generated by successful research grant applications	7 successful funding applications completed whilst employed under the CARC scheme; 3 as Principal Investigator (£60,532) and 4 as co-applicant (£34,804). All

CARC Outcome Measure	Summary of current position
	of these have come from the Critical Care demonstration site.
	Total income generated: £95,336
Patient views on changes in service delivery emanating directly from these studies	Each site has developed plans for patient and public involvement, which have been approved by the management group.
Job experience and satisfaction perceptions of those entering the pathway	See section 5
Views of multi-disciplinary teams in specific clinical areas where NMAHP clinical researchers have been practicing	See section 6

4.1.1 Number of NMAHP Staff Achieving Research Training in the Form of Higher Degrees

To date, there have been two NMAHP staff undertaking research training in the form of a PhD, through the CARC scheme (Substance Misuse and Critical Care demonstration site). One member of staff recently resigned after completing 17 months in the programme (Substance Misuse demonstration site). This post has now been re-advertised. Thus only one individual is registered for a higher degree.. Two full time PhD posts have been advertised for the Weight Management demonstration site, and one candidate has been given a provisional offer of a post.

4.1.2 Number of NMAHP Staff who develop Advanced Level Clinical and Research Skills and Experience

Four NMAHP post-holders have been employed through the CARC scheme to date. All have developed further research skills and attended training courses to develop their research skills. However, as the scheme is still in its early stages, no-one is yet in a position to move into an NMAHP consultant or senior academic post.

4.1.3 Proportion of Staff Entering Clinical Academic (research) Career Pathways who choose subsequently to continue on this Career Route

No-one has yet completed their CARC role tenure; thus no one has moved on to other roles. However, one of the post-doc staff is coming to the end of her period of CARC funding and has been successful in applying for an extension to continue in the role for a further year.

4.1.4 Number of Discrete Research Studies Completed

A number of research studies being conducted by CARC staff members are currently in progress. According to the responses from the post-holders, one study and three literature reviews have been completed, all within the substance misuse demonstration site. The studies that are being undertaken, along with their current status are shown in Table 5.

Table 5: Discrete Research Studies Undertaken in each Demonstration Site

Demonstration Site	Name of Study	Status	Dates
Critical Care	EPIC: Development of an online resource to support recovery after Intensive Care	in progress	April 2013- present
	RELINQUISH: A longitudinal qualitative study of healthcare and support needs among survivors of critical illness at up to a year following hospital discharge	in progress	Oct 2010 - present
	RECOVER: an RCT of enhanced rehabilitation among ICU survivors	in progress	2010 - present
	Critical care diaries: a qualitative study	in progress	Jan 2013- present
Substance Misuse	Literature search focusing on recovery literature (mental health and addictions), models of care (recovery-orientated) and effective psychosocial interventions (to promote recovery in addictions).	completed	Jan 2012 - May 2012
	Literature review on couples therapy for the treatment of alcohol and drug dependence	completed	May 2012 - Dec 2012
	Literature review on parenting interventions for substance dependent parents	completed	Dec 2012 - June 2013
	Parenting support and drug use study (HSRU grant) - started prior to CARC	completed	Oct 2010 - Feb 2013
	Feasibility study on the use of TOPS in Primary Care	in progress	June 2012 - present
	Research proposal for qualitative study to explore service user and service provider views and experiences of responding to the risk of Neonatal	in progress	June 2013 - present

Demonstration Site	Name of Study	Status	Dates
	Abstinence Syndrome (NAS)		
	Grant proposal rationale for RCT feasibility study to test the effectiveness of behavioural couples therapy (BCT) and a bespoke parenting intervention (Parents Under Pressure Programme)	in progress	June 2013 - present

4.1.5 Number of Publications in Peer Reviewed Scientific Journals

CARC staff members have had six journal articles published or accepted for publication in peer reviewed scientific journals since the start of the CARC scheme. Five of these have come from the Critical Care demonstration site, and one from the Substance Misuse demonstration site. The papers are as follows:

Critical Care Demonstration Site Publications:

Conway Morris, A., Anderson, M. Brittan, N., Wilkinson, T.S., McAuley, D.F., Antonelli, J.C., McCulloch, C. et al (2013) Combined dysfunctions of immune cells predict nosocomial infection in critically ill patients. *British Journal of Anaesthesia* (doi:10.1093/bja/aet205)

Ramsay P, Huby G, Rattray J, Salisbury L, Walsh T and Kean S (2012) A longitudinal qualitative exploration of healthcare and informal support needs among survivors of critical illness: the RELINQUISH protocol. BMJ Open (doi:10.1136/bmjopen-2012-001507)

Walsh TS, Salisbury LG, Boyd J, Ramsay P et al. (2012) A Randomised Controlled Trial Evaluating a Rehabilitation Complex Intervention for patients following Intensive Care Discharge. The RECOVER study. BMJ Open (doi:10.1136/bmjopen-2012-001475)

Ramsey P. (2011) Health-related quality of life: implications for critical care interventional studies and why we need to collaborate with patients. Current Opinion in Critical Care 17(5):510-514

Walsh TS, Lapinlampi TP, Ramsay P et al. (2011) Responsiveness of the frontal EMG for monitoring the sedation state of critically ill patients British Journal of Anaesthesia 107(5):710-718.

Substance Misuse Demonstration Site Publications

Chandler, A., Whittaker, A., Cunningham-Burley, S,. Williams, N. McGorm, K., Mathews, M. (2013) Structure, substance, stigma: Parents in the UK accounting for opioid substitution therapy. *International Journal of Drug Policy* (doi:10.1016/j.drugpo.2013.04.004)

4.1.6 Number of Studies Resulting in Demonstrable Change in Practice/Service Delivery in NHS Lothian

One of the studies being undertaken was reported to be having an impact on her practice/service delivery. This was the Parenting Support and Drug Use study, funded by HSRU, which began prior to the CARC scheme but continued once the post-holder was in post. A number of ways in which the research has had an impact on practice have been identified, such as contributing to working groups, development of training material for healthcare staff and post holders clinical work. These include the following:

- as a member of the Scottish Government Steering Group for the revised National CAPSM Guidance: Getting Our Priorities Right;

- as a member of working group to revise Lothian's interagency CAPSM guidelines: Getting it right for children and families affected by parental problem alcohol and drug use;

- as lead author on Lothian's 2nd edition: 'Substance Misuse in Pregnancy: a resource pack for professionals in Lothian';

- as lead author on Lothian's CAPSM practice toolkit;

- in designing and delivering a range of staff training programmes e.g. 'A harm reduction approach to working with pregnant drug users';

- in clinical supervision work with Lothian's Child Protection Advisors;

- in her role as Primary Care Facilitator writing educational material for GPs and other community healthcare staff.

Other post-holders highlighted where they believed their work would have an impact on clinical practice or service delivery once further progress had been made on the specific studies.

4.1.7 Amount of Income Generated by Successful Research Grant Applications

The Advanced Practitioner in the Critical Care demonstration site has been involved in successfully applying for funding totalling £95,336 since being employed under the CARC scheme. There have been seven successful applications, including two for travel to a conference in Australia. Three of these have been with the post-holder as PI, and four as a co-applicant. Details of these are given in

Table 6. A further six applications for funding that the Advanced Practitioners from both demonstration sites have written or contributed to, were unsuccessful.

Table 6: Successful Funding Applications during the CARC Scheme.

Title of Application	Date	Amount (£)	Funding Body	Post-holder Involvement
What matters most to patients receiving long-term ventilation in the community?	Jan-13	28,680	Edinburgh and Lothian Health Foundation	co-applicant
'Nursing at the extremes': raising awareness among health care managers and policy makers of ICU nurses' emotional labour	Jun-12	3,124	College of Health and Social Science Knowledge Exchange Grant	co-applicant
Development of an online resource to support recovery after Intensive Care (EPIC study)	Jan-12	56,232	NHS, Scottish Intensive Care Society, Edinburgh Critical Care Research Group	PI
Developing a support group for patients and families after Intensive Care	Dec-11	1,000	St James Place Foundation	co-applicant
Recontextualising the critically ill body from different perspectives	Oct-11	2,000	ESRC Festival of Social Science event	co-applicant
Recovery and support at home after critical illness: learning from practice, research and nursing leadership in Australia (travel)	May-11	2,800	General Nursing Council	PI
Recovery and support at home after critical illness: learning from practice, research and nursing leadership in Australia (travel)	May-11	1,500	British Association of Critical Care Nurses	PI
TOTAL		**£95,336**		

4.2 Other Research Activity and Outcomes

In addition to the outcome measures specified by the CARC scheme, other research- and dissemination-related activities have been undertaken by the post-holders that should be included when considering the overall picture of the progress made by the scheme since its inception. These include research training undertaken, conferences and seminars attended, networking and teaching activity. Most of these activities have been recorded in the progress reports provided by each demonstration site at 6, 12 and 24 months, with additional information taken from post-holder questionnaires and interviews. These are discussed in more detail below.

4.2.1   Attendance at Conferences and Seminars

The post-holders have been active in disseminating their work, and in some cases the CARC scheme itself, through attendance and presentation at a total of 31 conferences and seminars during their employment under the CARC scheme. These range from locally organised seminars to international conferences. The majority (n=15) of these were held within Lothian, either through NHS Lothian, University of Edinburgh or Edinburgh Napier University. Thirteen were held elsewhere within the UK and a further three were International conferences held outside the UK. Details of the conferences attended by each post holder are shown in Appendix 3.

4.2.2   Research Training

The post-holders have all undertaken research related training activities, with a total of 51 individual courses or training activities being highlighted. For the Senior Practitioners, the training programme followed was more focused around the general PhD training programme run by either Edinburgh Napier University or the University of Edinburgh, as appropriate. The Advanced Practitioners undertook specific training courses relating to their research interests rather than a more general research programme. Details of the training undertaken by each of the post-holders are provided in Appendix 4.

4.2.3   Other Research/Networking Opportunities

In addition to the attendance at conferences and seminars and taking up training opportunities, all the post-holders have taken advantage of engaging in other research and/or networking opportunities. Both of the post-holders in the Substance Misuse demonstration site were involved in the NMAHP research community network, and the NMAHP Addictions Research Cluster meetings. They were both involved in setting up and presenting at Substance Misuse Directorate lunchtime seminars. The Advanced Practitioner was also a member of the NHS Lothian Substance Misuse Directorate, the Nursing & Midwifery Department Research Group at the University of Napier and was involved in the Scottish Alcohol Research Network group.

Likewise in the Critical Care demonstration site, both post-holders are members of the Scottish Interdisciplinary Research and Liaison (SCCIRL) group, and also involved in the Edinburgh Critical Care Research Group (ECCRG). Other research related activities include attending research lectures and seminars, NMAHP research community meetings and supporting the nursing and healthcare joint research seminar series. The Advanced Practitioner also sits on the Steering Committee for the Intensive Care Priority Setting Partnership and for the COMET initiative, a national collaboration aimed at identifying and developing core outcome measures for use in critical care studies. Most recently, the Advanced Practitioner was invited to present her work to the Nurse Directors meeting

in NHS Lothian, which generated a positive response in terms of potentially identifying other areas in which the approach used in her work could be applied.

4.3   Monitoring Progress and Learning Outcomes

Progress through the scheme was monitored by means of progress reports provided by each demonstration site at 6, 12 and 24 months following the appointment of the post-holders. These reports provide details of the activities undertaken over the review period by each of the post-holders in the site, including their personal learning and development outcomes, and describe how activities undertaken have influenced practice. They also outline a brief plan of work over the forthcoming review period. The reports submitted by the demonstration sites were accepted by the management group, with additional clarification where necessary, about the progress being made against planned activities.

In addition to the CARC progress reports, the post-holders undertook an annual review with the university partner. They also had a personal and professional development review to monitor progress against the NHS KSF, which is linked to the job description for each of the posts. The generic job descriptions detail the core and specific dimensions of the role which link to the KSF, with a description of how progress through the dimension is characterised. According to the CARC progress reports, progress in both university and NHS annual reviews was approved, although details of these were not provided to the evaluation team.

A further assessment of progress was made through the process of appraising performance of the Advanced Practitioner in Critical Care with reference to the criteria for an extension to the secondment to the CARC Scheme. The criteria for extending the secondment of the Advanced Practitioners to the Scheme for a further year were agreed by the management group. These were as follows:

- At least one research grant application made during their CARC Scheme secondment period;
- At least one peer-reviewed journal publication secured during their CARC Scheme secondment period;
- A realistic plan for research which will be of national/international importance;
- The potential for translation of their research and integration of this into clinical service and practice;
- Clinical and academic support for their research and career development plans.

The review provided evidence that progress had been "highly satisfactory", and the Advanced Practitioner was then invited to apply for an extension to the secondment.

4.4 Analysis of Director Questionnaire

4.4.1 Background Information

The questionnaire was developed to help understand the extent to which clinical academic research career pathways are being considered and supported across NHS Scotland and to investigate the awareness of NHS Lothian CARC scheme. The questionnaire was sent to 35 NHS directors (NMAHP and R&D directors) across Scotland covering which covered all 22 NHS Boards excluding NHS Lothian. A total of 15 respondents completed the questionnaire giving a 43% response rate, with 11 health boards represented (50%). The majority of respondent's job roles were AHP Directors (n=9; See Table 7). None of the R&D Directors responded.

Table 7: Characteristic of Respondents

		Number of Responses (N=15)
NHS Board	NHS 24	1
	NHS Ayrshire and Arran	1
	NHS Borders	2
	NHS Fife	1
	NHS Grampian	2
	NHS Greater Glasgow and Clyde	1
	NHS Highland	1
	NHS Lanarkshire	3
	NHS Orkney	1
	NHS Tayside	1
	NHS Western Isles	1
Job Role	Nurse Director	1
	AHP Director	9
	NMAHP Director	2
	AHP Lead	1
	Research Governance Co-ordinator	1
	Associate Director of Nursing and Clinical Governance	1

4.4.2 Opportunities for NMAHPs

Respondents were asked what opportunities are funded by their Health Board for NMAHPs to pursue a career in research. As shown in Table 8, studying for masters with a research component was the opportunity reported most frequently by respondents to be funded within their health Board. Whereas there were the opportunity that was least reported was post-doctoral research.

There appeared to be more funded opportunities for AHPs in all areas; however this may have been due to a greater number of AHP Directors who responded to the questionnaire.

Table 8: Respondents Reporting Funded Opportunities for NMAHPs to Pursue a Career in Research.

	Nurses	Midwives	Allied Health Professionals	Total NMAHPs
Clinical Research Nurse/ Practitioner	4	3	5	12
Study for Masters, including research component	6	5	9	20
Study for PhD	2	2	5	9
Study for PhD combined with clinical practice	2	1	5	8
Post-doctoral research	1	1	3	4

4.4.3 Awareness and implementation of NHS Education for Scotland's National Guidelines for Clinical Academic Careers for NMAHPs in Scotland

Respondents were asked if they were aware of the NHS Education for Scotland's National Guidance for Clinical Academic Research Careers for NMAHPs in Scotland. From the 12 respondents who answered the question, eight (67%) representing four NHS Boards were aware of the guidelines, with four being unaware. NHS Health Boards who were unaware of the guidelines were NHS Highlands; NHS Orkney; NHS Ayrshire and Arran; and NHS Western Isles. Two Boards (Borders and Lanarkshire) indicated that this guidance had been implemented within their Board, and had a clinical academic career scheme for NMAHPs (Lanarkshire) or nurses and midwives (Borders) in place.

4.4.4 Opportunities to Combine Academic Research alongside Clinical Practice

Respondents were asked what opportunities are available for NMAHPs within their Board to combine research alongside clinical practice (See Table 9). Opportunities were highlighted at all levels once qualified, and also for student AHP practitioners. A greater number of opportunities to combine academic research and practice were identified at Senior Practitioner level for all NMAHPs, and also at consultant practitioner level for nurses and midwives. Again there were higher response rates for AHPs for all levels, which again could be due to the higher number of AHP Directors who responded to the questionnaire.

Interestingly these opportunities to combine both academic research alongside clinical research were not necessarily linked to NHS Education for Scotland's guidance as many NHS Board who had not implemented these guidance within their Board still have opportunities to pursue this career path, including, NHS Tayside; NHS Ayrshire and Arran; NHS Orkney; NHS Grampian; NHS 24.

Table 9: Opportunities for NMAHP to combine Academic Research alongside Clinical Practice.

	Nurses	Midwives	Allied Health Professionals	Total NMAHPs
Student Practitioner	0	0	2	2
Practitioner (level 5)	3	3	4	10
Senior Practitioner (level 6)	4	4	5	13
Advanced Practitioner (Level 7)	3	3	4	10
Consultant Practitioner (Level 8)	4	4	4	12
More Senior Staff (Level 9+)	1	2	3	6

4.4.5 Clinical Academic Career Scheme for NMAHPs

Respondents were asked if they have a clinical academic career scheme within their Health Board. NHS Lanarkshire and NHS Borders both have a scheme in place, as well as implementing NHS Education for Scotland's guidance.

NHS Lanarkshire's Scheme was aimed at Nurses, Midwives and Allied Health Professionals, and has been running for 1-2 years with approximately six practitioners.

NHS Border's Scheme was aimed at Nurses and Midwives, and had been running for less than one year; numbers of practitioners on the scheme could not be reported as the scheme had just been developed and approved this year, and staff were working on implementation plan.

Those who either did not have a clinical academic career scheme in place for NMAHPs or didn't know if there was one, were asked if they intended to implement one within their Board. Only one Board (NHS Ayrshire and Arran) indicated that they were going to implement a scheme within their Board, whereas seven respondents did not know.

4.4.6 Awareness of NHS Lothian's Clinical Academic Research Careers Scheme

Respondents were asked if they knew about NHS Lothian's Scheme. All of the respondents were unaware of the NHS Lothian's CARC scheme.

4.5 Summary

- The outcome measures show that progress in terms of research training activity, grant income, commencing new studies, and publications has been made within the demonstration sites that are up and running;

- It is not possible to make any statement about how this compares to other research groups, and whether it is as expected, since no targets were set concerning expectations at this stage of the scheme;

- There is still some way to go to achieving outcomes in all areas;

- There is little awareness of the NHS Lothian CARC Scheme across NHS Scotland at NMAHP Director level. The awareness at R&D Director level is unknown due to lack of responses.

5. Post-holders Experience of the CARC Scheme

5.1 Background Information

At the time of the evaluation (May 2013), three people were in CARC funded posts, with a fourth person having recently resigned from the CARC scheme. As this person was in post for the time covered by this evaluation, her interview and questionnaire responses have been included.

One of the aims of the CARC scheme is to link clinical practice and academic research. For the Critical Care demonstration site, the clinical role of both post-holders is research focused, and hospital based. For the Substance Misuse demonstration site, the Advanced Practitioner is employed as a Nurse Facilitator, with the Senior Practitioner being a Specialist Community Mental Health Nurse; both work from a community-based clinic. A summary of the background for the post-holder teams in each demonstration site is shown in Table 10.

The fours post-holders each completed a questionnaire which covered the outcome measures reported in section 4.1. Post-holders were also asked to indicate the extent to which they perceived the CARC scheme had met their initial expectations for various measures, and what the main challenges and benefits of their participation in the CARC scheme were. The post-holders also took part in semi-structured face to face interviews which lasted an average of 38 minutes (ranging from 17 to 57 minutes). The data from the post-holder questionnaire and the interviews have been integrated to give an overview of the post-holder experience of being part of the Lothian CARC scheme. Given the small number of post-holders in scheme, the quotes used to illustrate the points made are not labelled, to preserve a degree of anonymity.

Table 10: Background Characteristics of Post-holders

	Critical Care demonstration site		Substance Misuse demonstration site	
Academic Role	Advanced Practitioner	Senior Practitioner	Advanced Practitioner	Senior Practitioner
Clinical Role	Research Fellow	Critical care Research nurse	Nurse Facilitator	Specialist Community Mental Health Nurse
Age	40-49	30-39	50-59	40-49
University Site	UoE	UoE	Edinburgh Napier Uni; UoE	Edinburgh Napier Uni; Associate student at UoE
Clinical Setting	Hospital	Hospital	Community clinic	Community clinic
Main Clinical Role	Research	Research	Quality improvement	Patient focused
Years Qualified as a Nurse	24	11	30	17

5.2 Awareness and Expectations

5.2.1 Research Experience Prior to CARC

All of the post-holders had some experience in research prior to joining the CARC scheme – the two Advanced Practitioners both had PhDs, and also undertook research as part of their clinical roles. Of the Senior Practitioners, one had studied for a Masters degree and the other had gained research experience through her clinical role:

> "Research experience was mainly in my clinical role… I hadn't done any further education like that in terms of research, but because of my clinical role on a daily basis is basically facilitating the research programme in critical care, so I had hands-on experience of research in that way."

5.2.2 Publicity about the Scheme

The post-holders found out about the scheme mainly through informal channels and word of mouth rather than an official advert or other publicity. However, a meeting was held prior to the application process for one demonstration site, to provide further information and answer any questions for those interested. One respondent mentioned how useful this had been. The post-holders noted a degree of anticipation and uncertainty about Scheme, particularly around when it was going to be advertised and who would be eligible to apply:

"I think it was at one of the research nurse forums which happened maybe twice a year that I first heard about this scheme being developed … I remember at the time there was all this hype about it, and it's coming, it's coming, and nobody knew when it was going to get advertised."

"I found out about it through [name], she was the one who was promoting it within our department … Obviously there was an official email and application process, so I found out about it through that, but there was a lot of informal discussion, speaking to other people, and then we went along to a meeting."

"Well I knew all the kind of research facilitators in NHS Lothian, I knew that they were devising this pilot"

5.2.3 Reasons for Applying

All of the post-holders were enthusiastic about their reasons for applying for the role, in particular having the opportunity to combine clinical work with research:

"I really like that idea, because I've never been interested in going into full-time academia. Equally in terms of my nursing career I've never been interested in management.....I've always been really interested in the idea of mixing kind of clinical [and] academic work"

"I was interested in research right from the word go … I always wanted to do something, but just the opportunities haven't been there."

"the opportunity to do a PhD and have it funded I mean that is a benefit beyond belief. You know, it's paid for, you get to do it in your work time."

5.2.4 Experience of the Application and Interview Process

The experience of the application process differed for each of the post-holders. For the first site to advertise for posts, the Critical Care site, there was confusion over closing dates and problems accessing the information from the NHS website:

"I think it was just [advertised] internally, and from what I remember it was a very short timeframe … So from what I remember that was quite stressful the actual application"

"I think it was a fairly bog standard application process … it was really difficult to access on the website, but I'm not quite sure what had happened. It had gone on the NHS website and it was really difficult to find. There was some, there was some confusion about closing dates as well I remember"

These issues seem to have been addressed by the second round of applications for the Substance Misuse site, as both post-holders thought the application process was straightforward.

The interview process differed in each round of interviews. For both posts in the Critical Care site, there was a panel interview and a presentation, whereas for the Substance Misuse site, it was just an interview. The post-holders did voice some surprise about there not being any other form of assessment to take up the CARC posts within the Substance Misuse site, indicating that previous interview experiences had been "very rigorous" compared to this process. The number of people on the interview panel was seen to be intimidating in one case:

> "then there was an interview process which involved all the partnership in the bid plus CARC management reps."

> "I would guess there was at least, I would think eight people on the interview panel, so it was quite daunting. … I do interviews quite well, so the only thing was even I felt it was daunting to have that many people."

5.2.5 Understanding of the Aims of the Scheme

The post-holders were asked what they understood the aims of the CARC scheme to be. There was some variation in the responses. These included having an opportunity to conduct high quality research within the NHS; establishing a clinical academic career path; capacity building; staff development and linking research to clinical practice:

> "it would be capacity building exercise so that over probably a long period of time NMHAPs would be gradually getting more on par with psychology and medics in terms of research within the NHS"

> "I actually think it was more about the kind of staff development. I think that's where the focus was, rather than doing a bit of research that was then going do your service a big change."

> "I suppose it's a lot of that, you know, getting a chance to do some robust, high quality, methodologically, theoretically grounded research that will actually really make a difference to patients."

5.2.6 Expectations

The questionnaire asked post-holders to rate the extent to which their expectations of the CARC scheme had been met on a scale of 1 to 10 (with 1 being not at all, and 10 being completely). Responses are summarised in Table 11. Support received from academic supervisors and

opportunities to learn new research skills were considered to be the factors that had met expectations of post-holders the most. Enabling writing articles/papers for publication and impact of the CARC scheme on wider clinical practice were considered to have met post-holders expectations to a lesser extent.

Interestingly, some of the post holder's expectations were not met with the support they received by their clinical line management whereas this had fully been met for other post holders.

Table 11: Extent to which the CARC Scheme has met Expectations

	Mean Scores (SD)	Range
Support you received from academic supervisors	9.3 (0.9)	8 - 10
Opportunities to learn new research skills	8.5 (1.3)	7 - 10
Opportunities to work with partners	8.3 (2.9)	5 - 10
Support you received from other research colleagues	8.0 (1.8)	6 - 10
Making adequate progress in your research area	8.0 (2.4)	5 - 10
Opportunities to implement new research skills	7.8 (2.2)	5 - 10
Overall satisfaction with the Scheme	7.5 (2.1)	5 - 10
Support you received from other clinical colleagues	7.3 (2.2)	5 - 10
Support you received from clinical line management	7.3 (3.1)	3 - 10
Impact of the CARC scheme on your clinical practice	7.0 (1.0)	6 - 8
Impact of the CARC scheme on wider clinical practice	6.0 (2.8)	4 - 8
Enabling you to write articles/papers for publication	5.5 (0.7)	5 - 6

In the interviews, the post-holders described their initial expectations of the scheme in more detail, and of their role. There was some ambiguity about what was expected initially, and it took some time to establish the direction of the work to be carried out. Most of the post-holders indicated an expectation that there would be a substantial overlap between the clinical role and the research role. There was also concern about managing time when combining the clinical and academic roles:

"I think my idea was that I would be working in a collaborative team with the clinical department and the academic people involved to develop a kind of programme of research that could be sustained and that I could lead on in the Directorate. So that was my expectations that I would be doing quite a lot of that work with their support."

"I think my expectations were that my work was going to put more, they were going to place more expectations of me than they did. I thought that my workplace would guide me more."

It took some time to work out the specific direction of the research programme in each demonstration site; this was generally discussed once the programme was up and running and the post-holders appointed, and involved some degree of negotiation based on understanding the expectations and requirements of each partner at a site level. This was highlighted by both Advanced Practitioners:

> "I don't think we got off to a particularly good start, and that was maybe because there was lots of different agendas that we needed to kind of get to the bottom of to find I suppose a common area of work that everyone was willing to sign up for."

> "There was a lot of it that was kind of up in the air at the beginning, a lot of things seemed to feel quite vague. To me the sort of vagueness was characterised by the number of meetings that I had to have with different people that had different roles and different expectations. So that to some, I mean I suppose that's inevitable with a brand new scheme with different partners and different agendas."

5.3 Practicalities of the CARC Role

5.3.1 Academic Support

All the post-holders reported having a generally positive experience of academic support received from the Universities, in terms of supervision and guidance appropriate for each role. The main criticisms were of having too many people involved with an interest in the Scheme at the outset, and maybe a lack of clarity and guidance about which direction to take initially. These issues seem to have been resolved to some extent as the Programme has progressed:

> "I got so much support that I felt very claimed, I felt very supported. I enjoyed the experience"

> "So yeah there's lots of positive things that have come of it and I think with the academic input especially from [the academic supervisors] the work we're doing is pretty high quality and quite rigorous, you know, can't get away with bluffing away."

> "to be honest when I first started I felt a bit overwhelmed by all the people that were involved and interested, so I think any more support now, you know, it would have been too much, but I think what I've got is really good and it's a good balance."

However, there have been some gaps, and the academic input has not always met the expectations of the post-holders:

"I think that's because I don't think anyone really made [one academic staff member] aware that [they] should potentially have been a bit more involved…. So there was a slight lack of clarity around that which has resulted in some kind of miscommunication I think and missed opportunities to develop the whole clinical academic thing more broadly really"

5.3.2 Clinical Support

There has been a mixed perception of the clinical support provided; post-holders in one demonstration site were generally satisfied with the level of clinical support, with post-holders in the other demonstration site experiencing less consistent support for the Scheme:

"I'd say the main support would be my clinical nurse manager in [my clinical area] and my supervisors, and that's really where I get my main support from. And I guess in my clinical role as well, being flexible."

"Well I've got lots of managers, probably too many…I've had a string of line managers in the time of the CARC scheme…And some have been interested in the CARC scheme itself, some haven't"

"I think I've had fantastic support. I've had great mentoring; I've had great opportunities to develop myself. I definitely feel much more confident in kind of where I'm going in terms of my programme of work. I guess I feel a lot more confident in my own abilities as well."

5.3.3 Networking & Peer Support

There seems to be a good informal peer support network, especially for the PhD students, with the CARC post-holders joining in the existing PhD programmes within the universities:

"the whole research community, postgraduate students and all that claimed me as part of the whole kind of community and culture, it was just that once I got a desk and you're in the room you're like everybody else and you're just part of the gang."

Although the research work of the Advanced Practitioners and Senior Practitioners in each demonstration site does not appear to be closely linked, the post-holders in each site do offer support to each other. In the Substance Misuse site, the Advanced Practitioner acts as one of the PhD supervisors for the Senior Practitioner. This is not the case in Critical Care, where there is more informal support:

"most of my support was from the post-doc community in [university name], whereas [the Senior Practitioner's] support was within the postgrad department in [university name], you know."

"but now and again if we're in on the same day at Uni she'll pop down to the office. But she has sent me various bits of paperwork and things to have a look at and ask various questions"

There does not appear to be a great deal of communication or peer support between post-holders in each of the demonstration sites:

"And part of it was when we first met them was useful, because they'd been up and running for about nine months before we started...But it was interesting, because there wasn't a lot we could learn from, because their situation was completely different to ours in terms of the setup of their service and what their starting point was. But nevertheless in terms of our identity and all the rest I think it was good to meet up."

5.3.4 Partnership Working – Managing Expectations of Partner Organisations

A key point made by the post-holders about working in partnership through this scheme was around understanding the different needs and priorities of each of the partner organisations. This included submission to the Research Excellence Framework (REF) for the Universities:

"I mean for the universities their interest is how can this scheme help them with REF, you know, so they're looking at grant applications and publications. The Clinical Directorate's not interested in REF at all, they're much more interested in what's clinically relevant and what can the Directorate cope with in terms of R&D requirements and what political drivers and NHS priorities do they have to address first. So there's different agendas"

"NHS they want kind of pragmatic shopfloor stuff that's going to make a difference right now and academia obviously they want publications, grants, impact all of that kind of stuff, so that's been tricky."

Despite apparent differences in some cases, it was recognised that the CARC scheme has been successful in building on and strengthening existing links between the clinical and academic work:

"But I think we've developed really strong links between [our demonstration site] and the University, I think, that's started to build, so I think that's working well."

"I think our site has worked I think pretty well, because all the people involved want it to work and are really kind of keen to make it a good piece of work. So it's the kind of willingness behind it."

5.3.5 CARC Scheme Management

The overall management of the CARC scheme was not a prominent issue for the post-holders, although the post-docs had a greater understanding of the scheme overall, and are more aware of the work done to set up and manage the scheme:

> "I mean I think one thing that probably has been significant about the CARC scheme in making it work, it's probably not immediately visible, is all the kind of infrastructure behind it. You know, it's kind of there's lots of people beavering away behind the scenes in terms of the kind of wider CARC management group and the support that the CARC management group have given each demonstration site.   I think that's probably underestimated how integral that has been to getting the scheme off the ground and sustaining it, continuing it, reviewing it."

5.3.6 Balancing Academic and Clinical Roles

It was anticipated that there would be a substantial degree of overlap between the research and clinical roles, with existing line management from the NHS side, and joint supervision of the research from the clinical and academic partners. It appears that the level of overlap between the roles was less than expected in a number of cases, in terms of the management of the role and the focus of the research being undertaken.

In terms of line management, one post-holder indicated that clinical line management through her clinical job was different to the clinical lead for the research side – the CARC role was seen as an add-on to her clinical role, rather than it being more integrated. The need for greater clarity of roles amongst the various people involved in managing either the scheme or the individual post-holders was also highlighted:

> "So in my clinical role I'm managed within that, so that's all taken care of. In the CARC role, the clinical nurse manager from [my clinical area], she's like my line manager, so I go to her with any … HR things or bits and pieces like that, I've been using her for that support."

> "[in] our job descriptions … it clearly said that my line manager was the same line manager for my clinical post. But there was some confusion about the role of the clinical lead for the CARC scheme, because that person doesn't have any supervisory or managerial role over me necessarily. … So that there is a role for them, but it's not necessarily about managing or supporting me necessarily, more the scheme I would say."

Likewise, the idea behind the CARC scheme was to have a research programme that could be linked in to the clinical practice of the post-holder. Although there was overlap for some individuals, this was not always seen to be the case in practice.

> "to me the whole notion of the CARC scheme is can you find a way to kind of marry the clinical and academic work, and actually for me that's not really panned out. There could be a lot of reasons for that, which are a bit complicated, but at the moment my CARC work, my two and a half days CARC and my two and a half days [clinical work] are pretty much entirely separate."

> "And although [my academic supervisors] supposed to be heavily involved in the CARC Scheme from the university side, they're very peripheral to our [clinical] activities. We're very much in [one clinical area] and they seem to be very much in [another clinical area], so our paths don't really cross to some extent. So there is that element of it."

Different approaches had been adopted by post-holders towards integrating and balancing the time spent between the two halves of the CARC role, although time management remained an issue:

> "I see it all as one job ... I don't try and balance my NHS time with my University time as far as I'm concerned it's all one... I've had so much flexibility and freedom and autonomy, it's been really lovely. I've really enjoyed that aspect of it."

> "I have allocated days to do my research."

> "I guess the NHS and the University both have half of you, but both want more than half of you."

One of the post-holders had particular problems in getting back-fill for her clinical role, and had concerns about fulfilling her clinical role at the same time as trying to cope with the academic demands. This contributed to her decision to leave the scheme. She did stress the point that every effort was made to try and fill the clinical role:

> "The biggest and the main reason I left was that I had to go back for my job, and so I was doing half my job and half uni, and I had to get somebody else to do the other half of my job, ... so basically I was doing a whole time job and doing the PhD at the same time, and you just can't really do that. ... It wasn't the CARC scheme or the directorates fault as everything was done to fill the post. They advertised the post several times"

There were advantages to having an association with more than one organisation, such as having a choice of where to work, depending on what needed to be done. However, working between two different organisations was seen to hold a number of disadvantages too, mainly in having to negotiate different systems in different places:

> "it's a challenge negotiating two funding systems, so obviously coming from an NHS background and then having to work through the way the University does things it's completely different. It's a bit of a pain in the backside. And there's two performance review systems they have. My whole NHS one here and then I've got the academic annual review and then I've got the CARC one as well."

There is also a need to manage what is expected from each role (academic and clinical), in particular being clear about the responsibilities associated with the academic position:

> "Well that's been a little bit tricky, because I do feel that there are certain individuals at the University that think oh she's our part time, you know, half of her belongs to us, what is she doing, we can get her to do some teaching. You know they're so hard pressed I think it's a case of grabbing a body, she'll do."

> "But certainly with my post the focus is very much on the research training and doing this PhD"

5.3.7 Training Opportunities and Personal Learning Development

All of the post-holders had undertaken a number of training opportunities. These were identified as meeting a particular gap in knowledge, through recommendations by colleagues or supervisors, and in the case of the Senior Practitioners, through the PhD training programme run by the Universities:

> "my supervisors were quite good at pointing me in the direction of maybe you want to undertake this course or try this or. And really quite flexible, you know, doing these courses with or without credit depending on what else that was going on in my role at that time."

> "I actually did a really useful course that was down in Oxford... it was something that was flagged up, and that was on interviewing actually. It was a two-day intensive course, and that was really good. I think that's probably the one thing that I've really used or taken through with my research."

Developing a formal programme of training for the Advanced Practitioners was more difficult in practice; it was more useful to select specific activities where gaps in knowledge or practice were identified, and to learn 'on the job':

"it would have been nice to have had a programme of training, but then you're doing such bespoke stuff that I don't know if that would have worked."

"I think probably the most useful ones are kind of, you know, the bog standard helping you to write grant proposals all of that kind of stuff."

"But my interest is also broadening my experience of who I work with, who I can collaborate with, and so I'm actually learning much more in-depth research skills through the process of what I'm doing"

The CARC scheme has provided the time and opportunity to attend training courses – either through the Universities or elsewhere – that otherwise they would not have been able to attend:

"the CARC scheme has allowed me under the CARC hat to go off and to attend quite a lot of research training programmes and stuff like that."

"I mean I've gone to some of the postgraduate training that they've offered, but I've tended to kind of book in to like the Wellcome Trust training programmes, looking into doing a course on systematic reviews, you know, things like that, that actually those two universities don't provide."

5.3.8   HR and Employment Issues

A number of issues around HR and employment were raised by the post-holders, though these have largely been overcome.

All the post-holders remain full time employees of NHS Lothian, which has caused some concern as to the status of the post-holders within the Universities; a particular issue concerns the Advanced Practitioners, and their access to resources and email account. Again this has been addressed on an individual basis. This has been less of an issue for the Senior Practitioners, who have registered with the university at PhD students:

"Yeah there was a lack of clarity really around my status at the time. I wasn't sure for a long time whether I was NHS or Uni and it took me a while to discover that I was technically all NHS, but that the Uni paid half my wage and that I was a visiting person, rather than a member of staff, and that had implications for various permissions and privileges and stuff like that."

5.4 Outcomes and Sustainability

5.4.1 Opportunities for Dissemination

The post-holders have taken up opportunities to disseminate information about their work and about the Scheme, through academic publications, presentation at conferences, and seminars within both academic and clinical forums:

> "So yeah there have been opportunities to go and present my work or where I'm up to within that kind of [academic] environment. Not so much I'd say clinically."

> "[it was] arranged for me to speak at the NHS Nurse Directors meeting… she was great actually it was actually quite surprising to be invited to something like that."

> "part of my role is meant to be about developing a leadership role for research within the department and supporting a development of a research culture within the department and so forth. So we felt that what we do is try and make the work we're doing a little more high profile and organise seminars and research mornings where we encourage other people to present and do quite a lot of those kind of activities … we're slowly kind of raising the profile."

5.4.2 Translating Research into Practice

The post-holders have had little opportunity to date to put the outputs of their research into practice, and influence service delivery. A couple of examples were given where opportunities have arisen, such as sitting on working groups and research networks, and contributing to material for staff training. Also one example was given of starting a knowledge exchange forum in one clinical area, which has been initiated by the post-holder and is now organised by other nursing staff:

> "And to be honest that started off as a kind of research kind of knowledge exchange type thing, but I have very little to do with that now. They've kind of taken that completely on themselves and they're running with it, which is fantastic."

There was also an example of being able to apply the new skills and better understanding of the research process gained through the CARC scheme in practice, and likewise bringing existing skills to the CARC role:

> "it's not until you're actually doing it yourself and seeing how much work and the things you can come up against trying to get your own research up and running… And I guess they

complement each other, because the skills that I've learnt as a research nurse I've been able to apply to my CARC post, so it's a two-way thing."

5.4.3   Building Research Capacity within NHS Lothian

The post-holders acknowledged that they had gained additional research skills through CARC, and been able to access opportunities that would not have been available to them previously:

"I've been able to get involved in other things that I wouldn't ordinarily have in different areas, so it has broadened my interests and potential methodologies definitely."

There was also some uncertainty as to the wider impact of the CARC scheme so far on building the research capacity and capability within NHS Lothian. Trying to change the attitudes towards research was seen to be a slow process:

"I'm not sure how successful it is in terms of building a culture around research for NMHAPs, because still the vast majority of people who come to the seminars are doctors and psychologists."

"I think most clinical staff and even the people in my clinical team see research as something other.... Definitely not a priority … yeah it's pretty much bottom of the pile."

5.4.4   Sustainability of CARC and the Clinical Academic Research Career Pathway

The post-holders indicated in general that the scheme should continue and be expanded to other clinical areas to give others the opportunity to undertake research:

"I think it's a really good thing, I think there should be more of it around and more demonstration sites or more sites."

However, their main concern was around succession planning, and the opportunities that were available once their involvement in the scheme had come to an end.

"for me I just see this five-year plan at the moment and getting my PhD done and, it's hard to think beyond that just now and I don't know what will be there at the end of it, what the structure will be and how I can continue to put the skills that I've learnt into practice. "

"I am really concerned that, you know, the succession planning I don't know when, if and how it's working and what that means for people like me"

The possibility of extending the secondments for a further year was available to the Advanced Practitioners, so long as they met the extension criteria agreed by the management group:

"they've put out a kind of criteria for extension of that for a possible further year based on meeting certain criteria. So depending on how I do depends on whether I could be offered an extension."

The post-holders did not think there had been enough focus on how to maintain a career in clinical academic research once their contracts on the CARC scheme had come to an end:

"So that career pathway hasn't really been established, you know. So they need to get their heads round how to do that. … So I think they really seriously need to think about what they're going to do in terms of making that work longer term."

On the whole, the post-holders wanted the opportunity to continue to combine their clinical career with research relevant to their practice. It was also felt that having had the opportunity to conduct research into a particular clinical area, developing an extension or follow up clinical post which allowed the research findings to be put into practice would be beneficial:

"I don't see myself going back to just be purely [in my clinical role], because I feel that I've developed my skills further than that. But also I don't see myself then just leaving the clinical area and just sitting in an academic home, because that's never something that I've wanted. You know, I think being able to combine the two is a good thing."

"But then again that's the NHS I've been stuck on the same pay scale for, there's nowhere for me to go, that's part of it as well, there's nowhere for me to go. You know, I'm at the highest I can go on that."

"Unless there's a kind of clear pathway for me to go onto I'm not really interested in more of the same. … So I think they really seriously need to think about what they're going to do in terms of making that work longer term."

In general, it was felt that few opportunities existed outside of the CARC scheme to pursue a clinical academic research career. It was suggested that the creation of a combined research/academic nurse consultant role would help address this:

"Research posts are difficult to come by at [university name]. I suppose the only other things would be readership but … that's very, very long term if not kind of blue sky thinking. So there really isn't anywhere, the career structure really isn't there at the minute so it would be fantastic to have some sort of nurse consultant type posts that are combined, a bit like this."

"Well I would like a consultant nurse post developed … I'm not currently in a position where I really have much authority to really influence a practice. And I think a consultant nurse role with a clear leadership role around clinical excellence plus a clear research role and education role would put me in a much stronger position to take on a leadership role."

5.5   Summary

5.5.1   Key Points

- Overall levels of support from both the academic and clinical sides were seen to be good, as was peer support from other researchers;

- Most post-holders expected to have a greater degree of overlap and integration between the clinical and research halves of their job;

- The opportunities for research training and personal development were welcomed, with the CARC role giving them time to attend courses that they would otherwise have been unable to do; many of the skills gained were seen to be transferrable to their clinical roles.

5.5.2   Key Challenges

Based on the questionnaires and the interviews, the key challenges of the scheme, from the experience of the post-holders, included the following:

- Finding the balance between clinical and academic role, particularly when they are not seen to be integrated;

- Managing the expectations of both NHS and HEI partners, which were sometimes dissimilar;

- Establishing appropriate support and supervision from both clinical and HEI partners;

- Not always being in a position to be able to influence the direction of research;

- Establishing a research leadership role (for Advanced Practitioners);

- Maintaining a focus on the research and not getting distracted by other demands, such as teaching or additional clinical practice;

- Having to negotiate different systems of the different partner organisations to get things done, such as applying for research funding;

- Backfilling clinical posts, especially for those in community based posts with their own caseload;

- Pressure of having to complete a part-time PhD within five years rather than the usual six years for part-time doctorates.

5.5.3　Key Benefits

The benefits of the scheme were acknowledged by all of the post-holders, in particular relating to learning opportunities, building evidence based practice, gaining academic support and accessing opportunities that would otherwise have been out of reach. Specific benefits included the following:

- Having access to a funded research post for NMAHPs;

- Access to learning and training opportunities, with dedicated time for their own research and keeping up to date with the current practice developments relating to their clinical area;

- Having the time and opportunity to implement the learning and knowledge gained in their own clinical practice and (in one case) teaching activity;

- Recognising the opportunities for translating their research into clinical practice, and influence the patient experience, even if this has yet to be implemented in some cases. Being the link between the academic and clinical areas was seen to be an additional benefit;

- Access to and collaboration with a network of peer researchers and other academics, and the greater awareness of alternative methodologies which could be adopted within their research;

- Having access to dedicated academic support and having university affiliation;

- Increased confidence in the skills that have been developed;

- Building on existing partnerships, and developing good partnership working over the time that the scheme has been running;

- Having a locally based scheme, focusing on local priorities, albeit with national level interest and support through NES;

- Working under the CARC identity offered a bit more recognition or influence in enabling things to get done;

- Working in a well-established clinically focused team, particularly for the critical care demonstration site.

6. Views of Key Stakeholders

A total of 23 interviews were conducted with key stakeholders with an interest in the Lothian CARC scheme. Ten face to face semi-structured interviews were held with members of the operational management group and key academic and clinical leads involved in each demonstration site. These interviews lasted 41 minutes on average (range 22-65 minutes). A further 13 interviews (average 18 minutes, range 11-29 minutes) were conducted by telephone, with members of the steering group with a strategic interest in the Scheme, along with other academic and clinical staff members and others with a wider interest in the CARC scheme. The main themes to emerge from the interviews centred around their awareness and expectations of the scheme; investment and support; implementation of the scheme; main outputs and outcomes; benefits and challenges; and sustainability and future direction.

6.1   Initial Set Up of the Scheme

The CARC Scheme was initiated by a team within NHS Lothian. During the initial set-up period, the focus was on developing a model that could feasibly be implemented within Lothian, engaging partner organisations in the Scheme and securing funding.

> "I think there was a period for a few months they were considering all the different options, and at some point the head of school here, the head of school from [university name] back then, and the NES and NHS Lothian partners, they just sat down together to find ways forwards. So there have been discussions, discussions, discussions, and then they formalised this into something." (Demonstration site)

Interviewees also explained the early processes which were involved in developing the CARC model and getting it started. Developing the draft proposal of how the scheme would work was an iterative process, with numerous different administrative processes that needed to be considered.

> "So there was a lot of, probably about a year's work in the development of the model and the negotiation with people, getting feedback, sourcing… I took the lead on all of the HR components for the scheme, so writing the job description, the KSF outlines, getting all that through job evaluation – and that in itself took about nine months." (Management Group)
>
> "initially agree some money to get it, well primarily to get it going and once we offered some money I think the universities also came in with some money to match the investment so it could get things going." (Steering Group)

6.1.1 Engaging Partner Organisations

It was highlighted by interviewees that initially all organisations that were in a position to support and who were interested in this type of scheme were eligible to apply:

"I mean it was supposed to be between NHS and the universities... It was just who else might be in a position to support this and they invited everybody who might be in a position to support this. I don't think there has been any strategic kind of decision, and yet to my knowledge as to how and why certain partners have been, but the main partners are universities and the NHS." (Management Group)

"It was identifying who would be interested in such a scheme of clinical academic research careers." (Management Group)

Furthermore, one of the HEI partners explained that the CARC scheme was a good opportunity for their organisation to engage in:

"Just because we were quite interested in developing more clinical academic careers and to give particularly practitioners the opportunity to study to PhD level and beyond etc. and also, I mean it ticked quite a number of boxes, increased the number of students we had, gave our staff the opportunity to supervise at PhD and postdoc type level." (Steering Group)

6.1.2 Identifying the need for NMAHP Research within NHS Lothian

This sub-theme identified how Interviewees thought there was a need for a clinical academic scheme within NHS Lothian. A number of reasons were provided such as NHS Lothian being one of the largest health Board's; that NHS Lothian is a teaching hospital board meaning that there was a landscape for research and this was therefore seen as a gap by interviewees:

"started to think that the landscape really for research opportunities for clinicians, NMAHP clinicians in Lothian at that point was fairly barren, and we just got together for a discussion really." (Management Group)

"NHS Lothian is a very large health board as you know, it has teaching hospitals within it, a lot of medical research as you would expect and I think it's very important that we have NMAHP research alongside that." (Steering Group)

"It was basically an approach that I had from the nursing directorate and from capacity and capability needs to develop career paths in nurses, midwifes and allied health professionals because it was seen as a gap." (Steering Group)

Interviewees also highlighted the strong support for this type of scheme within NHS Lothian, with roles dedicated to building these careers which was unique amongst Boards across Scotland:

"for Lothian, we had strong support from our R&D Director for taking forward NMAHP careers and from our Nurse Director as well, and I think, compared probably to other parts of Scotland, we benefitted from the fact that we have [people in] post to take forward initiatives like this, and I think we're fairly unique in that in Scotland." (Management Group)

6.2   Awareness and expectations

6.2.1   Understanding of the Aims of the CARC Scheme

The majority of interviewees understood what the CARC scheme aimed to achieve, in terms of developing research to benefit patient outcomes, and to develop the research capacity and capability within Lothian:

"I suppose the main aim is to develop clinical academic research career opportunities for nurses, midwives and allied health professionals. With the main underpinning aim of that is to develop high quality research that addresses patient outcomes, patient experience, interventions that are related to the role of the NMAHP." (Management Group)

"to develop capacity and capability within nurses, midwifes and allied health professionals in the conduct of clinical research. So trying to get more folk involved, get more folk trained and increase the overall volume. I think there's been a criticism that research has been seen to be the domain of doctors and it's been a very difficult historically for nurses, midwives, allied health professionals to get involved and there isn't a really good career structure to enable that to happen, or infrastructure to help develop it." (Steering Group)

6.2.2   Initial Expectations

A number of interviewees explained what their initial expectations of scheme were. There was an expectation that the processes to get the Scheme up and running would be quicker, that all three demonstration sites would be appointed together and that these would run in parallel.

"My initial expectations were that when we went to advert, we advertised for three demonstration sites, and my expectations were that we would appoint all three demonstration sites from the same set of interviews, and everything would go forward in parallel....I felt pretty confident about it." (Management Group)

> *"I think I expected things to happen quicker, but I think that was completely unrealistic on my behalf."* (Demonstration Site)

> *"my expectation was that well I didn't think it would take us so long, I didn't think we'd get to round six before the AHP [site] got up and running. It's still not up and running"* (Steering Group)

Similarly, the problems in recruitment to the sites had not been anticipated, and it was initially expected that there would be more interest around the applications for post-holders:

> *"I mean I suppose I thought it would be much easier to recruit to than ended up being the case. I think I expected there to be an overwhelming interest, particularly in the PhD avenue, I thought there might have been more applicants than there actually were."* (Steering Group)

Two of the interviewees had initial concerns around the benefits of the scheme for their own professions:

> *"I wasn't sure how much I would personally benefit or my profession would personally benefit from it because, just being aware of who the workforce was."* (Management Group)

> *"So it was intended to have reciprocal benefits, although I would say that the emphasis was more on helping clinical staff to establish an academic career alongside their clinical work."* (Demonstration Site)

As well as this interviewees expressed the idea that the process of aligning priorities of the different organisations was a particular challenge that had not been anticipated:

> *"I kind of thought it would be a bit smoother. But I was always aware that there would be a certain degree of difficulty I suppose in particular in aligning the priorities of different organisations"* (Management Group)

> *"So I think, now looking back, I think probably we were naïve to think it would be straightforward."* (Management Group)

> *"I was massively disappointed that we had to have an amendment to the scheme for the AHP CARC because we weren't able to find an area that met our strategic priorities that married with the academic partner's priorities."* (Steering Group)

Of course the truth about it is, this is not my top priority and clearly if I may say so it's not her nurse mangers top priority either." (Demonstration Site)

"I think there's another big factor which is research is so low down people's thinking in their practice job that it's quite difficult." (Steering Group)

There were conflicting thoughts as to the extent to which initial expectations of stakeholders had been met; for some these had been fully met, and they looked for the scheme to grow; others had low expectations of what could be achieved. Three interviewees explained how their expectations had been fully met, with two explaining how they now have greater expectations of the scheme:

"all of those things have happened and we've bigger expectations" (Steering Group)

"My current expectations of the scheme, they are not that high I can give you that in terms of how things are moving and the process" (Demonstration Site)

6.3 Investment and Support

This theme identified the strategic and senior support for the scheme; views on the funding model; and value for money on interviewee's organisation.

6.3.1 Strategic and Senior Level Support

The majority of interviewees identified a high level of strategic support for the scheme within their organisation:

"Well the upmost support from the Director of Nursing in NHS Lothian, the Director of Allied Health Professionals in NHS Lothian…from the Head of School who was always committed to the development of the demonstration site." (Management Group)

"we also have support up to Dean level so that's faculty level in the university and likewise there's very senior structures involved in the NHS side so there's good senior buy in on this one I think" (Demonstration Site)

6.3.2 Views on the Funding Model

A number of the stakeholders indicated that the funding model was good, with commitment from all partner organisations:

"I think it works. I think it's very useful to have a non-local funder like NES in it as well. It gives a bigger picture." (Management Group)

"I think it makes sense in that funding is coming from both the NHS and from academic partners or institutions… I guess there's some flexibility in terms of the criteria of the people that are in post and therefore how some of the funds are being used." (Management Group)

"To my knowledge again everybody's putting in money in the pot, it's a very fair way to do business." (Management Group)

Funding from some of the partners came with conditions on how it could be spent, possibly restricting the flexibility of the scheme to some extent. This may have implications if additional funding is sought in the future.

"It's not, not working; people produced the money from where they could. It's sometimes not ideal; people had conditions on the funding. So the R&D, that funding didn't really have conditions just that it had to be matched to fund the scheme… The funding is a bit bitty. So some funding came from sources that are kind of not renewable; it's funding that was available and it's not necessarily ongoing, that's what we have to look at." (Management Group)

This funding model was seen to be sustainable over the duration of the scheme, with consideration being given to the longer term sustainability of this funding model.

"Also it's got to have sustainability. So whatever funding's put in place it needs to have some long-term plans and some long-term commitment to funding." (Demonstration Site)

"So it's about sustainability, where should the next funding be coming from and who should it be funding." (Management Group)

"I think the funding is very good I think the funding model is quite good although it's expensive… as long as the partners I think are committed to you know contributing money in the way we've carved it up … if however people find that it is too expensive and it hasn't worked that's okay uh then the they may back off from it" (Demonstration Site)

"Also looking to see the shared funding model that we have does that help sustainability because each organisation perhaps has, well they have their own responsibilities but perhaps that makes them have a greater commitment towards success of the scheme." (Steering Group)

6.3.3 Value for Money

The majority of interviewees emphasised that the scheme was good value for money for their organisation; this was especially true on the clinical side, as the NHS contribution to the scheme did not come directly from the clinical area's budget:

> *"I think is a fantastic opportunity for staff, I think, I think it does offer value for money, I think it does … the directorate aren't paying for it."* (Demonstration Site)

> *"I would say as a financial investment its very good value in terms of the potential to [what we can] get out of it for healthcare and other professions involved."* (Steering Group)

> *"I would instinctively like to say yes because I think that it offers value from perspective of, we've not had to put in a huge amount of money per scheme, but we're getting quite a lot in return"* (Steering Group)

> *"Yeah I think it is pretty good value for money from the point of view that for what we're paying"* (Steering Group)

As well as this, some interviewees highlighted that the scheme offered added-value through increased the capability of post-holders, although this was not the view held by all.

> *"their competences and their skill set even just to do service redesign and improvement, they have a much better, they can do literature searches, they understand data, they know how to present data. So they're actually quite a big resource for a team. So yes I think in all of that context I think it does provide value for NHS Lothian."* (Steering Group)

> *"I suppose this is the ability of NHS staff to undertake, develop themselves with a research career which if this wasn't available then they may not be able to do."* (Steering Group)

> *"the University have put in quite a bit of funding to support it, which we could have spent on other things that would build research capacity in staff here and things. So that's room for debate about that as added value."* (Steering Group)

There was also concern that the scheme would not offer longer term value for money if there was no continuing research career pathway for post-holders within NHS Lothian after they had completed the scheme:

> *"I think if we can retain the staff in NHS Lothian, I think that's the next part of it is what's going to happen to these people at the end of it, and I think that's really really important, because if NHS Lothian doesn't pay attention and find something appropriate for these*

people we will lose them into the university structure and that will be money lost." (Demonstration Site)

Furthermore, one interviewee indicated that there are different ways of measuring value for money:

"It depends how you measure value for money… So we can't actually REF the publications and the grants that person does. So in that sense you could say, no it's not, it's actually a poor use of money because we're not getting the return on it. But in another sense it's a very good use of money because we're building a critical mass around a particular topic, we're drawing a PhD student around it, we're working together with developing other grants, so in that respect, yes. So it would depend how you measure it." (Demonstration Site)

Additionally, there were concerns for the weight management demonstration site that there would be little return on their financial investment:

"We were at the point where we may not have been able to take the scheme forward even though we made our financial contribution to the scheme. We were very concerned that we would not reap the value of that financial investment." (Steering Group)

6.4   Process Development

A key part of this evaluation was to understand the processes that had been followed to get the scheme to its current position, and identify what lessons could be learnt from the experience of developing the CARC scheme.

6.4.1   Leadership –Steering Group

The steering group met on an annual basis, with the remit to oversee the progression of the scheme and make decisions on key issues, as well as identifying the means to develop the scheme in the future:

"just to help to develop and support CARC as we move forward… we want to see it expand and develop forward so keeping it close to its objectives. Developing those and change them as we need to and then helping to move it forward." (Steering Group)

"That's looking at the overall, how the scheme's working….have an overview of how the scheme is working and to look at any key issues that come up from the scheme" (Steering Group)

"it's been very much an opportunity just to sort of look at the direction of travel, to things like help setting up an evaluation, and kind of exploring kind of where next." (Steering Group)

"I think it's very positive that the academic institutions and the NHS Lothian are seeing that working together is perhaps one of the positive ways forward." (Management Group)

However, there were concerns that the steering group members did not receive much information in between meetings:

"Probably not as much as I thought that there probably could have been" (Steering Group)

"there's not an awful lot of information." (Steering Group)

6.4.2 Operational Management

The management group met regularly, to oversee operational issues as they arose. The group was seen to be effective.

"overall for me it's worked well in terms of the commitment of the management group and the members within it… so I think that's worked very well." (Management Group)

"that all works very well, so there's been no problems as far as I know." (Demonstration Site)

"I would say that did work quite well"

Having representatives from both HEI's and NHS who were involved on the scheme was important to ensure all views were represented at this level:

"the CARC management committee was established, and that had meant members from each of the HEIs, NHS Lothian, and we meet very regularly and review every aspect of both our own demonstration site that the whole scheme in terms of other demonstration sites coming on stream." (Management Group)

"During the management team meetings there was quite a lot of support and as a working relationship, as a partnership between all the institutions I think it has been absolutely fantastic, no issues whatsoever I could think of." (Management Group)

However, there were concerns that not all the partners had the same level of engagement:

"I think that it did sort of signal a very sort of close working between the organisations. With the exception of the one as I say who didn't really engage" (Demonstration Site)

Two of the interviewees felt that although the scheme had been well managed, the process of getting to the current position had been slow:

"Yeah it's been a bit slow. It's taken a long time but yeah it's been well managed." (Management Group)

"We had a lot of meetings that took up quite a lot of time in terms of the number of meetings and the issues that we debated and discussed. Where it did seem to take a lot of time for three small demonstration sites but I suppose the complexity of what was being done." (Demonstration Site)

6.4.3   Partnership Working

On the whole, the majority of interviewees thought that partnership working had been successful, with many interviewees identifying that there was a lot of support and commitment for the scheme:

"I think certainly in terms of partnership and certainly working with NHS Lothian and NES, I think, you know, we feel we've got good robust dialogues and relationships." (Management Group)

"I think initially partly because it's supported by the partners in it. It's got some really good examples already who are doing well." (Steering Group)

"I don't think there have been any unusual challenges other than you expect when you're trying to bring four different organisations together." (Steering Group)

"So being able to point to the Lothian CARC scheme as an example of how actually we do collaborate and work together has been very useful. So it has that larger strategic helpfulness to it as well." (Steering Group)

However, it appeared that there had been a few issues with some of the partners, particularly around engagement and communication:

"so that was quite problematic when you're trying to build relationships with other services, with other institutions and they can see something happening but they maybe don't know what it is. Clearly they'll make, draw their own conclusions about that which may not be accurate" (Demonstration Site)

"One of the institutions … didn't really engage." (Demonstration Site)

"An obvious challenge is the interface between clinical practice and academe, how to promote that flow of information and support to develop an initiative that took on board expectations from both organisations." (Management Group)

It was suggested that a future challenge for the Scheme would be sustained engagement with all the partners:

> *"I think future challenges are about keeping engagement with all partners and recognising the differences within the partners. That might make it hopefully work better."* (Steering Group)

6.4.4   Demonstration Site Selection

The application process and selection of the demonstration sites was based on robust criteria approved by the management group. Whilst this did not prove problematic for two of the sites, it was more challenging for the third site.

> *"certainly agreed criteria that was developed by the group prior to that first selection. I'm confident that it's a robust process and that the criteria is used to make I think sound judgement and decisions"* (Steering Group)

> *"two of the academic institutions had been awarded demonstration site status quite readily based on the first wave of applications, but for the third site there was quite a lot of modification of the framework of the scheme for that institution to come up with a demonstration site plan that was eligible."* (Other stakeholder)

Some of the academic partners found the application process for the demonstration sites to be a lengthy, laborious process, with inadequate feedback when asked to resubmit:

> *"I thought it was quite onerous for what it was you know it was only one post doc and one PhD and there a kind of long application form, and then there was a presentation factored in through two iterations of a presentation for the you know that I think we presented to the 15 people around the table so you know it was probably a fair process, but maybe a bit odious for what it was at the end of the day."* (Demonstration Site)

> *"Very lengthy. The first time we did it we had to re submit it four times, 3 or 4 times... It became quite fragmented in terms of who was forwarding and what was happening really. So we had to re submit the application again and then change the application so it was quite a long process and not that straightforward."* (Demonstration Site)

Others found the process more straightforward:

"I think it was always quite speedy, but from what I remember it was all relatively straightforward to us …. I think that that process was fine. I don't recall there being any real issues with that. " (Demonstration Site)

Having the set-up within each demonstration site of two practitioners working alongside each other was seen to be a beneficial aspect to the Scheme.

"What's quite distinctive about this scheme is the pairing of postdoc and PhD student in a similar field. So that's quite good to do that. You get a bit more critical mass from that." (Steering Group)

6.4.5   Recruitment of Post-holders

Many concerns were highlighted by interviewees with the current HR processes around candidate selection. One of these was that the CARC post had been advertised in the wrong place which had made progress slow:

"I don't know if the advertisements went out in the right place and they seem to take a long time…I don't think it's progressing as quickly as people would like." (Management Group)

It was found that there was a limited pool of suitably qualified NMAHPs in NHS Lothian to recruit from, particularly at post-doctoral level; those that were eligible did not always want to apply:

"But I think the challenge when you say about selection has been that the pool from which to select is quite small and the reason for that is (a) people with the postdoc already having a PhD and (b) having the clinical background. So that I think is right in terms of selection." (Management Group)

"I thought there might have been more applicants than there actually were. I mean I can't remember how many we did actually see but. I can't, I seem to remember that we weren't totally overwhelmed with applications" (Steering Group)

"There was also some nuances of, the people who did have PhDs for example were all in senior positions and did not necessarily want to drop to part-time and did not necessarily want to receive less salary." (Steering Group)

"Because as you probably know that there have been issues for identifying suitable individuals to undertake these roles. And although on paper there are a number of people there, but the practicalities make it almost impossible to recruit." (Management Group)

Recruitment to the CARC scheme was restricted to those currently employed within NHS Lothian, which in some cases was seen as a drawback due to the limited pool of suitably qualified NMAHPs:

> *"We've sought to make a little bit of an amendment as well in order to be able to recruit. This is one of the disadvantages of the scheme in a way is that people have to be already employed within NHS Lothian"* (Steering Group)

> *"the employment restrictions have meant it's been difficult to attract any new staff who might be suitably qualified."* (Management Group)

> *"I would have it wider and I would have at least a couple of individuals identified, so at least I know there is a pool there, and that would have informal discussions with these individuals, so I know that they're interested."* (Management Group)

One interviewee was concerned that post-holders could apply from any clinical area, rather than from necessarily in the same area as the research:

> *"But from my point of view, it now goes out to recruitment within NHS Lothian and actually the person taking up the role, either the studentship or the postdoc fellowship, could come essentially from anywhere in NHS Lothian."* (Steering Group)

Extending the scheme to employ those from academic background could also be considered:

> *"We've got people from clinical practice coming into universities, but what about the other way around, where's that traffic? Is that appropriate, should that be part of the scheme? We both felt very strongly that it certainly should be and that there should be some movement the other way."* (Demonstration Site)

Furthermore, interviewees indicated that the structure used for selecting participants needed to be refined:

> *"So it's just that if we're going to continue it, we have to really bed down how we're going to work and the structure that will be put in place, particularly about identifying applicants."* (Steering Group)

> *"the selection process has been extremely longwinded and traumatic at times, because the structure was inadequate from the start."* (Steering Group)

The need for a more consistent, rigorous process of assessment for candidates was noted:

> *"should have been a more challenging set of tasks for selection. And we're relooking at that now… So for instance we're looking at each of the people doing some specific writing related*

63

to critical appraisal and synthesis of some papers and so on, which didn't happen previously, and I think in retrospect that was a mistake." (Management Group)

"I think one of the things that we've decided is that we need to assess more robustly which candidate we select." (Demonstration Site)

The majority of interviewees explained that negotiating the NHS HR systems to get posts advertised had been a lengthy and complex process, taking up a lot more time than had been anticipated:

"I kind of assumed I think wrongly that our HR systems, that I would just say the CARC word and they would say oh yes we know all about that and this is what you have to do ... that stage was just torturous and of course you know it wasn't what I had signed up for at all in terms of what I was anticipating I was having to do ... definitely felt like it took more of my time at that stage than I had anticipated.." (Demonstration Site)

6.4.6   Academic and Clinical Support

From the interviewees perspective, post-holders support appeared to have been positive, with regular meetings and reviews from both NHS and HEI staff:

"meet regularly with the postdoc, in a sort of mentoring and advisory role. And we do that regularly to review her developments, particularly in relation to funding and publications and integrating with teaching activities in nursing studies." (Management Group)

"I meet with them as and when, you know, we do have a regular sort of PDP appraisal type meeting, but I see them sort of ad hoc as well." (Demonstration Site)

"I think it has, it's actually been pretty good. I mean they've obviously had their academic supervision provided by the universities. They've had supervision from people running the schemes… And the choice of sites have been so that they've got clinical supervision – that actually has helped I think. I think that's been good that they are embedded and the clinical support is there." (Management Group)

There was concern from academics about the level of support from the clinical side due to competing priorities.

"There is plenty of support from the universities and to support the academic aspect of the role; however, I'm not quite sure whether this is the case in the NHS, not because people do not want to support these individuals, but the practicalities of the clinical service. I mean if

for example there is a massive caseload they might be asking these individuals do more in their clinical practice" (Management Group)

Adopting a single performance review process for CARC posts was suggested, to simplify the process of monitoring progress and comply with review requirements of both the university and NHS.

"there's been quite a reporting requirement for them all in terms of progress reports to the scheme, to their supervisors. I think that's been fairly challenging for them." (Management Group)

"we perhaps could have been a little bit clearer about that from our end and a bit clearer about performance indicators. I know that NHS are very clear about theirs, but perhaps we should have agreed them as one set for that person so that they're not being appraised by two different elements. So they're not being appraised and performance indicated by NHS Lothian and by the University" (Demonstration Site)

6.4.7 Combining Research and Clinical Practice

This sub-theme identified what interviewees thought around the combination of research and clinical practice.

Concerns were raised by the interviewees around the difficulties of managing the workload of both clinical and academic roles and how this is not always practical:

"I think clinical academic careers are very challenging careers, so I think there has to be a recognition of that, and I know that because I work in medicine and support clinical academics in part of my management role. So it'll be no different in the context of the CARC scheme." (Demonstration Site)

"So the workload balance between clinical and academic work might go pear shaped sometimes." (Management Group)

"you're taking somebody from the clinical environment with the hope of maintaining one part of their life for three years they're there and also developing them academically. That means things like backfill which is notoriously difficult to achieve and working part time for researchers which I think they find quite tricky to do because the caseloads and managerial commitments ect. but achieving that balance between maintaining one foot in the clinical side and also one foot in the academic side whilst developing their academic careers is quite difficult and it requires good management, good collaboration between the NHS and the academic centre." (Demonstration Site)

It was thought that the lack of integration between clinical and academic roles within different organisations was an issue; these were often seen as two different roles:

> *"So perhaps that could have been done more as joint venture, because it's a whole person and you know it's one job, but it's split between two."* (Demonstration Site)

> *"they also belong to the NHS organisation and culture, and that they almost end up feeling like they strongly identified with one but perhaps less so with the other, and being able to be more than one kind of practitioner can be quite challenging. And to be able to step across those boundaries and come into academia and feel comfortable and to be able to function I think has been quite a challenge and we didn't anticipate it would be quite so challenging."* (Demonstration Site)

> *"I think there's always a kind of a pressure when you're really trying to do two jobs in some way… I suppose similar commitments where you're trying to have your job and to commit to something else. I mean I don't think its necessarily unique to this scheme, but there's always going to be a bit of a problem I think trying to balance a clinical workload with a research one. Some people manage that and other people don't."* (Steering Group)

Similarly, concerns were expressed by interviewees that some of the post-holders had different areas in which they were working within both clinical and academic fields.

> *"because she's doing her data collection on another organisation we're not kind of seeing some of the day-to-day benefits of having her on the floor"* (Demonstration Site)

> *"I suppose one of the things I'm not clear about and chosen not to have the debate about really is how closely the work relates to other work that's she's doing in her NHS paid employment."* (Demonstration Site)

However, a minority of interviewees thought that combining clinical and academic work worked well with few problems:

> *"as far as I'm aware the 50/50 thing I think for the post-holders has been manageable."* (Management Group)

6.4.8   Publicity and Awareness Raising

Interviewees thought that the scheme had been publicised well, particularly in NHS Lothian, by means of a regular newsletter, emails and a research day:

"I think in the NHS they did make quite a lot of effort to publicise it and we did hold a day, there was a research day where it was kind of launched as well. I suppose it's the age-old thing, you can put the information out, but you can't make people take it on board." (Demonstration Site)

"I think that at least here in Lothian it has been advertised widely, I mean people know about this… particularly NHS Lothian they did their best to advertise the scheme throughout." (Management Group)

However, there was general agreement that more needed to be done to publicise the scheme widely with an additional national focus:

"one of the things I think I should do is more publicity around it, more awareness raising around it outside of the NMAHP world so more people would know about it and although it has had a bit of recognition nationally but not as much as I think it should have had." (Steering Group)

"I think it was done well locally and it has had national attention as well, whether it needs a little bit more or whether it needs more in the right places so it actually hits the policymakers…So I think it's getting that publicity into the right places and making sure the right people know about it and how they're working" (Demonstration Site)

"I think there's a bigger PR message to do." (Steering Group)

6.4.9   Adapting the CARC Model

Interviewees suggested that greater flexibility was needed in ensuring the CARC scheme could be implemented, and identified ways in which the model could be adapted. It was thought that the scheme could be opened up at Masters level as there were too few practitioners with PhDs in NHS Lothian interested in applying for the scheme:

"I think that there is more scope to develop nurses' research aptitude more at masters' level." (Demonstration Site)

"think that the level should be more flexible rather than doc or post-doc." (Management Group)

"The scheme itself did not take on board how many practitioners there were with PhDs within NHS Lothian. So from the start it was almost set to fail." (Steering Group)

It was thought that before starting another CARC scheme there should be a defined plan from the outset, with clearer understanding of what each partner could contribute:

> *"So I think it's important in retrospect to have a much better defined infrastructure that brings the academics, the managers and the post-holders and other stakeholders together to talk about how it's embedded, what's the longer-term vision, what's the longer-term sustainability, right from the outset. Rather than it being a bit ad hoc"* (Management Group)

> *"I would be absolutely clear from the outset that in terms of ensuring that the academic partner had the capability to deliver the academic side of the partnership. Both in terms of numbers and strategic plan and interest,"* (Steering Group)

6.4.10 HR and Administrative Issues

It was agreed by the majority of interviewees that HR issues had been a particular challenge, which was predominantly around the operational processes:

> *"I think probably the frustration is a lot of the hiatus with the third site has actually been around our HR systems and processes, which as I said, you know from my early experience in the scheme, that in this organisation and I think it's true of NHS organisations in general is a huge barrier to making progress."* (Management Group)

> *"And there's the blockages, but I think you work in NHS you become very adept at working round them."* (Demonstration Site)

> *"It's like any large organisation the NHS have procedures to go through so you recruiting people may take wee bit longer than you know other places. Always about the timing because you want people to start at a given time where they you know they got university work to do as well so it has to co-incide with academic years as well."* (Steering Group)

Additionally, there had been frustration with HR around the advertisement of posts, specifically around the advertisement of posts and employment restrictions:

> *"HR messing up with the advert so it was called something completely different, you know, how frustrating is that"* (Management Group)

> *"So we were all ready to go to advert well over a month ago and then there's been delays and another wave of delays in the NHS Lothian end, so we're not quite going out to advert yet which is getting very frustrating because now we're not going to get people in for the beginning of the academic year which would have been ideal. So it's quite administratively complex it seems within the NHS Lothian end."* (Steering Group)

"It partly was that the launch of the scheme coincided with huge employment restrictions within NHS Lothian – which have gone on to some extent!" (Management Group)

Longer term issues around job security were also an issue for potential post-holders:

"There were also challenges around the sort of contractual arrangements for individuals and in the current climate people are maybe not keen to compromise their security from a job point of view." (Demonstration Site)

6.5 Outputs and Outcomes

6.5.1 Overall Impact of CARC

Just getting the scheme up and running was seen to be a significant outcome for the CARC programme:

"I would say we have one. You know, I think there's no doubt about it that that is a huge benefit. We were the first in Scotland, one of the first in the UK, therefore I think that is beneficial to Lothian in general in terms of putting us on the map…. we, I suppose, demonstrated our capacity to secure funding, to come up with a model, to put it into operation and to evaluate it and look and see is this a model a way of working that works." (Management Group)

"That it's a flagship. That it's part of the yeah NHS Education for Scotland, Scottish Government strategy, clinical academic research careers, it's part of a UK strategy, and Lothian are leading, are a flagship, so I would say that's one of the benefits." (Management Group)

"We did it. It exists! In truth there hasn't been another scheme like it in Scotland" (Steering Group)

It was acknowledged that it was taking a long time to achieve outputs and outcomes, and to some this was disappointing:

"We are not seeing the output from that and we are still not seeing the output from it, from quite a high investment." (Steering Group)

"Oh definitely expecting more, I think. " (Demonstration Site)

Others acknowledged that getting to the stage of generating academic outputs and achieving any impact clinically would take time:

"it's probably slightly early to be saying well we've got some outputs " (Steering Group)

"But it's probably too early to measure the success because obviously the PhDs will still be on-going and one of the criteria for awarding the funding was that the sites would show sustainability, but obviously we can't judge that until perhaps the sort of next wave of research applications that might be generated by the demonstration sites based on the funding that they've had initially from the current scheme." (Other Stakeholder)

"It's early days, it's small scale, and I do think for these things to make any lasting impression they have to be continued longer." (Management Group)

However, many stakeholders believed that the scheme would be successful – there is an overall optimism that given time, the CARC scheme will deliver what it set out to do eventually:

"It's a fairly slow process, but I think the signs are promising." (Management Group)

"Well, it's appointed staff, that's for sure. It's got some programmes going on. Staff seem to be producing research. The problem with an assessment at this stage it's more about did you put people in place, did you get things going rather than have you published any papers and has anyone become a professor yet, because those sorts of things obviously take many years to develop." (Steering Group)

"It has quite a lot of potential; it certainly needs to be continued. I'm not quite sure whether it has contributed significantly. I don't think we will be able to see the benefits of that now." (Management Group)

6.5.2   Publications

Peer reviewed publications are a tangible output from the Scheme, pointing to the achievement of the demonstration sites in generating valid research results. Both sites have generated published outputs.

"she has a number of publications, which I'm sure you've got details of, and there's more in the pipeline. So they're one concrete measure of outputs." (Management Group)

"looking at the post doc posts that we have we've been very pleased with the post doc we think that she may contribute to a ref submission that's coming up." (Demonstration Site)

"I would expect to see a publication by now…. all that is being reported in the management team, but I haven't seen any outputs, no significant outputs. The work [that] has been done needs to be published." (Management Group)

6.5.3 Income Generation

Generating additional income was one part of the job description for the Advanced Practitioner role. This has met with some success within the Critical Care demonstration site, and work is on-going within the Substance Misuse site to prepare funding applications:

"In terms of grant income, she has been successful in bringing in, not massive grants but sort of medium-sized grants from internal sources." (Management Group)

"So with our postdoctoral person, she is very busy generating applications for new studies that are highly relevant to the service that will widen collaborations beyond the groups that are collaborating now at Napier and at Edinburgh." (Demonstration Site)

6.5.4 Other Outputs and Outcomes

In addition to the publications, income generation and research studies, there have been additional research outcomes, such as seminars, knowledge exchange activities and other events. These go some way to promoting the research culture within NHS Lothian, and building an interest in the Scheme:

"And also the findings, knowledge exchange activities that we've been involved in that I would see as outcomes from the scheme." (Management Group)

"she's been very active with in terms of presenting her work in conferences and meetings, including the seminars that we've set up the seminars between academia and the National Health Service and also international conferences, so on that kind of front we're really quite pleased with the output that we've had from the post doc researcher and she's also engaged a lot with the kind of helping develop the culture of research in the National Health Service and in the local universities." (Demonstration Site)

"I mean there's quite a lot, there's a lot of interface within the clinical teams, there's, they've been doing presentations" (Steering Group)

There has also been some success in influencing and informing the chief nurses through presentation of the Critical Care work at the nurse directors meeting:

"So out of that discussion we are now and now we're going to have a seminar specifically around that and [translating] the findings of that into practise. That's a real concrete example in terms of chief nurses picking up something the research has talked about and applying it to their own day job as it were and in terms of how we can learn from that." (Steering Group)

A wider interest has also been generated and discussions have started the need for a clinical academic research career scheme:

> "for me the main benefit is the cultural shift, the relational shifts that have gone on, you know, the kind of various spinoff benefits that I see happening as people are actually in the same room discussing various types of initiative. Just because this got them together really largely speaking in the first place, there's been a focus for further work." (Management Group)

> "I think the issue really is about we have to have a very good relationship between all the partners and all keep moving in the same direction. And I think we've had to wander, we've had to meander, because that's where we've been taken with the many defaults that we've had. So we've all learned a huge amount and that's been a good process." (Steering Group)

> "Getting multi-institutional buy-in, creating routes in which it's possible for clinical staff to engage with research activity and things at this kind of level." (Steering Group)

6.5.5   Impact on Practice Overall

The overall impact on clinical practice has been limited to date, and this was acknowledged by many of the respondents. There was some disappointment that there had not been a greater influence on practice; this highlights the need to manage expectations of what could be achieved in the time available:

> "I think for me that's been a little bit of a disappointment because I expected more kind of direct [impact], but then that was perhaps my lack of understanding of what we're actually trying to achieve here." (Demonstration Site)

> "There haven't been a lot of outcomes to learn from yet so we still have more to do with that as things emerge and we're able to show some translation." (Steering Group)

> "it's probably slightly early to be saying well we've got some outputs and we can see how, you know, how that could influence clinical practice or actually has, so I would be expecting to be able to say that in the next year or two." (Steering Group)

> "I don't think there's been many overflow out into practice as yet. But I'm not surprised at that given that it does take time to build a research culture within particular specialist groups." (Steering Group)

"yeah, I mean you can see the way things are influencing practice there. So [the Advanced Practitioner]'s previous research is beginning to influence practice, but that's possibly even slower than getting to the publication stage." (Management Group)

More time was needed to work out how best to make use of the information that is being generated through the research projects, along with recognising the links between research and practice:

"You know, there's a lot of good information there, but how do we actually translate that into something that's going to work for our patients that are coming through?" (Demonstration Site)

"more general awareness also of research and the impact that that knowledge can have on service [delivery]." (Demonstration Site)

One problem in getting research into practice was that it was seen to be difficult for someone with a research background, albeit clinical research, to then try and influence practice. Other ways of influencing practice are worth considering:

"they felt perhaps overstretched in that capacity because this is somebody comes from research background and not practice… So to come back then and influence practice, they don't have that kind of background. … that's something that perhaps needs a little bit more attention and thinking about well what other ways could that be done if that individual's not necessarily coming from the background that would enable a sort of traditional practice development route." (Demonstration Site)

6.5.6 Impact within Individual Demonstration Sites

Critical Care

There has been good progress in the Critical Care site, with the main research projects progressing well, and getting to a position where it could start to have a greater influence on practice:

"clearly the sort of public patient, you know, family involvement in the development of an online resource for people recovering in the community from intensive care. I think that's super and it wasn't anticipated even by the people in that area at that time. So that's very much kind of an engagement and a kind of progressive developmental process that has happened with a number of studies that have sort of fitted together. So that's starting to literally change how things are done in that particular care pathway." (Management Group)

"I think there are elements of that that are being translated into practice in terms of patient, setting up, there's a patient experience group in Critical Care." (Management Group)

"I think that for the CARC, for the first one, for the Critical Care one, I think there are lots of benefits. You know, they've actually demonstrated that they've been able to build a programme of research even more robustly … they've really been able to add to that and make it much bigger, which I think is a huge benefit." (Steering Group)

Influencing factors within this site included having a strong clinical lead; academic support from staff who also had an interest in clinical practice; an existing research culture with suitably qualified and interested people already involved in research, albeit in a clinical capacity rather than academic, who were in a position to apply for the CARC roles; having some degree of overlap between the clinical and research roles:

"I think the clinical lead people in the sites are the really key role. Because I think that service pressures are such that there's always a tendency for sort of research issues to take lower priority and stuff, and so people have to make quite active conscious efforts to help with that integration process. And I think the academics need to and have learnt that how you really have to be flexible with that and appreciative of what's going on in service in order to fully kind of integrate that." (Management Group)

"I think for Critical Care, you could argue well that infrastructure to some degree existed because there was already quite a strong interdisciplinary research community. And I think that's one of the reasons why they were the only ones that were successful because they were in a position where they had nurses who were doing doctorates, or were completing doctorates, and therefore they could apply" (Management Group)

"other aspects that were important in terms of assuring success was the support of both the postdoc and the doctoral level post, and so with the doctoral level post there's doctoral supervision in place within nursing studies, and the two supervisors also have a role in clinical practice" (Management Group)

"I think that for Edinburgh the area they have selected there was quite a lot of work that was going on already there in this particular area. An individual just slotted in and they carried their work forward, and I think their site is very very successful and grows arms and legs." (Management Group)

"And some of the work she's doing in both jobs there's overlap between some of the work. So that is quite easy and that makes it so much easier from my perspective to manage it, because it's very much in-house if that makes sense." (Demonstration Site)

Substance Misuse

The CARC scheme has enabled a new area of research to be introduced within the Substance Misuse directorate, which would not otherwise have been developed:

"I think for Substance Misuse it's created a new entity that didn't exist before, and therefore I think it's given a focus on research that didn't exist before" (Management Group)

"I don't think anything would have happened in Substance Misuse [without CARC]." (Management Group)

Staff members within the Substance Misuse Directorate are becoming more receptive to ideas about how the research underway can be used to achieve the biggest impact in practice:

"I think that directorate is very open to the impact of the work the CARC scheme people do" (Demonstration Site)

Other factors having a more negative influence on the progress made within this site include changes in management in the Substance Misuse Directorate, introduction of challenging targets within service delivery; and the current research interests of the academic lead.

"Because of everything else that was going on and hitting targets and significant kind of management changes in, in circumstances that were extremely difficult and not well understood I think." (Demonstration Site)

"I don't think that at the time that the CARC was awarded [the academic lead] was doing anything on Substance Misuse… So that's why I think it will take longer here to become compared to Edinburgh Uni, which picked up like that, because there were so many things in that area going on at that time." (Management Group)

Weight Management

The Weight Management demonstration site was created essentially for the purpose of getting the CARC funding, and did not exist with the current partnership before the scheme was developed:

"With the Weight Management thing, I mean I know it hasn't started yet, but that wouldn't have happened [without CARC]" (Management Group)

Finding the right clinical area to submit as a demonstration site was seen to be a challenge, with problems in matching up academic and clinical expertise:

"So that was more challenging in terms of that alignment process between what NHS Lothian AHP-land might want to be engaged in and the expertise or interest from the university side of the fence. I think that's the main thing. They've always been willing, always wanted to make this thing work, make it a success. It was just a matter of finding a way, you know,

some proposal or programme or content which was sufficiently of interest on all sides."
(Management Group)

"on the basis of what I've heard they found it really difficult to recruit individuals. And again we're going back to the area issue, there might be someone in Queen Margaret who is interested in this area to take this forward, but it was not matched with appropriate expertise in the service to make that happen, so I'm not quite sure whether their background before they go for something like that whether they had any people in mind." (Management Group)

It has been very difficult to recruit, as there is no suitably qualified pool of AHPs who want to apply for the postdoctoral posts in the scheme. To address this, the CARC model has been adapted within the Weight Management site to have two Senior Practitioner (PhD student) posts, rather than one senior and one a

Advanced Practitioner post:

"I think the particular challenge if you like around selection has been about the pool of people at grade 7 to then do postdoctoral, take a postdoctoral fellowship, ... there wasn't the pool particularly the allied health professionals" (Management Group)

"But in a way having two PhDs we're back to sort of training up people. I think there was a particular set of circumstances around that, that decision as well, but it certainly was a challenge and I suppose it's not the perfect solution but it was the solution that we eventually agreed on." (Steering Group)

6.6   Building Research Capacity and Capability within NHS Lothian

The CARC scheme has started to contribute to building the research capacity and capability within the clinical areas covered by the two demonstration sites within NHS Lothian that were up and running, albeit relatively slowly. There is a growing awareness of the CARC Scheme and what it is trying to achieve:

"I think it contributed enormously. I think it's given, it's created I suppose the beacon of what we're aiming towards. If you ask, not every nurse in the organisation will know about it clearly, but hopefully our senior managers will say, if we sort of said what is Lothian doing towards, well we've got this Clinical Academic Research Career scheme" (Management Group)

"the Director of Nursing within Lothian has always been very very supportive of this scheme. And so I think now is really really important about seeing how, you know, it's partly her and

her senior nurses to actually see how we can do more knowledge transferring support for capacity building." (Management Group)

"I think that the clinical side has done very well indeed and its raised the profile research and encouraged the research culture to grow inside the National Health Service" (Demonstration Site)

"if it's starting to build clusters of NMAHP research excellence, then that can only be a positive thing." (Management Group)

The CARC model has attracted attention from other clinical areas, and has gone some way to help identify additional sites that could be in a position to adopt this model, thereby creating the opportunity for transferability and building capacity within NHS Lothian. The success of this will depend on whether the new sites can adopt this approach and adapt it accordingly:

"So I would say that that too is an outcome, looking at different ways of setting up CARC schemes and different specialties, i.e. dementia, which is a top agenda both for NHS Lothian and the Scottish Government." (Management Group)

"The studentships as I say I think have worked really well and great benefits, particularly for service side as they develop that capability and capacity there, and I think they'll get a lot out of those, and hopefully we'll see that and think about having that as a recurrent way of working." (Demonstration Site)

If the scheme is to be expanded into other areas, there is a need to consider the impact of restricting the recruitment of suitably qualified staff from within NHS Lothian was identified, along with recognising the potential benefit from recruiting from a wider pool of NMAHPs:

"So there was quite a lot of discussion at the beginning was there any scope for going outside NHS Lothian. And there were big discussions about that. And then it was decided that this is about capacity building within NHS Lothian." (Management Group)

"I think one of the issues there was it was all around capacity of posts that if it was about NHS Lothian it was about recognising the posts that already existed." (Management Group)

6.7 Sustainability

6.7.1 Sustaining the Current Scheme

The stakeholders on the whole were keen to see the CARC scheme continue in some form, taking into account the lessons learned to date. Various suggestions and ideas were made by all

stakeholders of what needs to be considered to facilitate the sustainability of the Scheme. One key point was to ensure that the Scheme was flexible enough to react to problems as they arose, and could be adapted to the needs of individual sites:

> "Number one is that flexibility thing, is to have everybody signed up to a somewhat looser proposal. So there's more wriggle room for how we employ people." (Management Group)

> "I think if you're too prescriptive then often you end up forcing people to do things that they are not that enthusiastic about, that's not a good model." (Steering Group)

Having flexibility within the model to consider other levels was suggested, such as bringing in CARC research at masters level, as well as PhD and post-doctoral level:

> "And does the scheme just continue to fund these two levels? There's other funding been provided for the Master's level just at the moment." (Management Group)

Securing the support of existing partners would go some way to ensuring the current Scheme was sustainable. It was thought that there was sufficient interest from existing partners, with a senior level commitment to the continuation of the Scheme. Sustainability is linked to the importance of supporting existing sites and identifying appropriate new CARC sites, that are linked with longer term priorities for the NHS and the universities, which will ensure strategic level interest in supporting and sustaining the research within these areas:

> "there's that commitment at senior level and at the moment there's a financial commitment so sustainability looks pretty good" (Demonstration Site)

> "I think all the other four partners would commit to further funding for this sort of thing. I've no doubt about NHS Lothian. I have very little doubt about neighbouring University of Edinburgh, I'm not too sure QMU, it would depend on the nature of what the proposal was, I think, and the extent to which we can guarantee it's going to pan out well, but it's difficult." (Management Group)

> "I think the approach that's been taken by Lothian I think it's more likely to be sustainable longer term because they've chose the important clinical areas and they've taken a team approach rather than just looking at individuals" (other stakeholder)

> "Well I hope we will continue with it. I very much hope we will because originally it was only three sites and now we have added on the dementia one which has extended it." (Management Group)

"Other services areas that aren't directly related to the three sites where the funding currently sits for the CARC scheme, other people are coming with a proposal for setting up a similar model, I guess it's very encouraging." (Management Group)

Effective partnership working is necessary for the sustainability of the CARC Scheme, either with existing partners, or through bringing in additional partners:

"There might be an argument for widening the universities involvement further beyond the local three so there's more scope to develop collaborations." (Management Group)

"I think future challenges are about keeping engagement with all partners and recognising the differences within the partners. That might make it hopefully work better." (Steering Group)

"So I think a lot of it comes down to the academic partners that you're with to be honest." (Steering Group)

Having the right infrastructure of clinical and academic support was seen to be important, and having a clearer understanding of the roles and responsibilities of each partner. Streamlining the monitoring processes would be useful, such as creating joint assessment frameworks between the two roles, and understanding the alignment between clinical and academic side:

"We perhaps could have been a little bit clearer about performance indicators. I know that NHS are very clear about theirs, but perhaps we should have agreed them as one set for that person so that they're not being appraised by two different elements. … perhaps that could have been done more as joint venture, because it's a whole person and you know it's one job, but it's split between two. So perhaps it would have been more integrated for them if that were done jointly." (Demonstration Site)

Recruitment of post-holders to the scheme was a major challenge that had arisen, and one that needs to be addressed if demonstration sites are to continue, or new sites are going to be set up under the CARC umbrella. Suggestions for reaching a wider pool of well qualified practitioners who would be interested in applying for CARC posts included advertising more widely beyond NHS Lothian, or opening up the Scheme to other professions not currently eligible:

"Whether we continue to face the barrier of there not being post-doctoral people that we can appoint and therefore we have to modify the scheme, but that's going to cost more. And maybe we're going to have to face that. So is it about we bring people from outside NHS Lothian into posts, and if so, how are we going to fund that, could we work collaboratively with other Health Boards or with other academic partners." (Management Group)

"Because some of the challenges in the dementia one is there really aren't very many nurses and allied health professionals who already have a PhD in dementia care research field, let alone working in NHS Lothian, let alone want to do a three-year half-time postdoc fellowship. So you know actually having all those ingredients in the right place is quite a challenge." (Steering Group)

"Learning Disabilities, Cancer, Mental Health, they all really wanted to have schemes. But what we've been constrained by particularly is the fact that we don't have nurses and AHPs with doctorates in the organisation." (Management Group)

"it's about what have we learned from a demonstration site, and is the sustainability about doing more of the same maybe in a different way, but looking at different specialties like for example cancer, oncology." (Management Group)

The suggestion was made to expand the Scheme to include academics and researchers employed within universities, and supporting them in returning to clinical practice to link in with their research:

When we first talked about CARC schemes, it sounded first of all like a fantastic idea, great plan to try and integrate research for people who are in clinical career pathways, give them academic bases, but we just thought where's the reciprocity there? Because we've got people from clinical practice coming into universities, but what about the other way around, where's that traffic? Is that appropriate, should that be part of the scheme? We felt very strongly that it certainly should be and that there should be some movement the other way." (Demonstration Site)

"I think the next time I would probably quite like to look at doing an academic scheme that puts an academic back into clinical practice" (Steering Group)

Looking at longer term sustainability, more work could focus on the wider Clinical Academic Career pathway, in supporting the development of a pool of clinical researchers who would be suitable to apply for the CARC scheme, such as linking in with Masters courses:

"The masters in nursing by clinical research, it's to get new graduates from honours programmes straight into clinical research at band 5 and that we argue is going to create a pool of people who could then go into these CARC schemes. So I think that's quite important." (Management Group)

Likewise, succession planning was recognised as a sustainability issue, to ensure that those finishing the Scheme are employed in roles where they can implement and continue to develop the research skills gained from the CARC scheme:

> "I suppose I've got my other question over the CARC scheme is going to be sustainability of it over time and the degree to which the individuals that have come through the CARC scheme will end up in secure sustainable posts and not be lost.,…otherwise our capacity and capability will never grow, it will just keep on trickling along." (other stakeholder)

> "I mean I think one of the issues is that if clinical staff do a PhD then, you know, where do they go, what do they do, and that there should be opportunities for them to keep their clinical remit whilst developing their research as well. So I think the postdoc side of things is quite important." (Demonstration Site)

> "It would be nice to think in the future that there would be more flexibility between the two settings and that career pathways could move between clinical academic research much more easily – at the moment that is certainly not the case." (Demonstration Site)

Demonstration sites that have been successful in generating income are more likely to be sustainable in the longer term:

> "one of the things about sustainability is to see whether through the scheme, the programmes and the candidates are successful whether they can generate income, because that is something that will be needed to keep things going in the longer term." (Steering Group)

A number of other similar schemes have been or are being developed elsewhere – whilst many lessons have been learnt from setting up this scheme, the success factors of other schemes should be explored to inform the decision making process around sustainability in Lothian:

> "There are a number of other sort of clinical research positions or models of practice throughout the UK, other funding opportunities that exist, and so I guess it may be that it's not the only model, that there are a number of different ways that it can go forward." (Management Group)

> "I think there may be something we could learn from that [CLAHRCs], not necessarily the level of investment but how they are approaching it and what they see as success as well and how they are developing it. I think there are about seven or eight CLAHRCs across the UK …

looking at allied health professionals and bringing them on and bringing capacity. (Steering Group)

6.7.2   Continuing in Clinical Academic Careers

Stakeholders suggested ways of developing opportunities for post-holders leaving the CARC scheme to enable them to continue along a clinical academic career pathway, and developing this pathway more generally. This was seen to be important to retain the knowledge and skills within NHS Lothian:

"if NHS Lothian doesn't pay attention and find something appropriate for these people we will lose them into the university structure and that will be money lost."

"We need to look and think how we, what happens to the people who come off the end with their 3 years and how we which is the issue we had before CARC but in terms of how we support nurses at doctoral level and beyond who are still in practice. How do we give them a career in practice which is also ahead in the research world, we haven't solved that entirely yet." (Steering Group)

There was general support for developing the clinical academic career pathway within Lothian, to continue to build research capacity and capability:

"I think clinical academic careers are very challenging careers, so I think there has to be recognition of that … And so that's an issue for long-term support for these careers, and building infrastructure is one first step in that direction" (demonstration site)

"I think the demonstration sites are a good starting point because they signal intention to have a research career pathway for those professions, because the scheme was assigning posts at PhD level and post-doctorate level, so it shows an intention to create progression." (other stakeholder)

"[This] is the first step in leading to clinical academic careers so that people can maintain their role in practice alongside an academic appointment. So one would hope that in the future that would lead to kind of joint appointments as happens in medicine." (Demonstration Site)

One option was to create new posts at consultant level:

"it may require that new posts are created that allow somebody to become a nurse consultant who takes clinical capacity and research into that new post … So there's

arguments there for resource being needed to be put on the table from both the service and academe." (Management Group)

It was felt to be important to ensure that staff wanting to pursue a clinical research career have relevant training, and links in to the actual opportunities available:

"we sometimes teach people research skills and then we'd get them to do a PhD. And then after they've got the PhD they suddenly find out that the rest of their research career bears no resemblance at all to what they've just been doing – because now they've got to find research funding, and we haven't really taught them how to do that." (other stakeholder)

Mechanisms should be in place to support staff to become future research leaders and make the best use of their expertise. This should be done alongside efforts to ensure research skills gained during CARC are utilised properly and not wasted:

"As you have clinical academic careers, so you're expected to do research and to generate, a cadre of people who have both postgraduate and postdoctoral experience that can then become research leaders and generate research grants to research programmes that fit in with their substantive expertise." (Demonstration Site)

if you invest in people you want to see them carried forward. … these people need to utilise their knowledge and their skills that they have undertaken while they have been on the CARC." (Steering Group)

"I would hope that it would probably be the model itself might be the same whereby you be looking to perhaps continue to identify potential people for PhDs and at the same time be looking at okay somebody's now completed a PhD in the scheme, can we move them into a postdoctoral within this same programme." (Steering Group)

There were some concerns around sustainability – the commitment of some partners was questioned, in relation to the length of time it had taken to get comments and responses on the management group paper on sustainability:

"We haven't had any feedback yet from the universities, are they interested in continuing with this?" (Management Group)

The need to create further opportunities was questioned, as the post-holders all had jobs within NHS Lothian that they would return to on completion of the Scheme:

"we are at the stage now where the postdoc for example is coming towards the end of that funding, so what does it actually mean? They're on secondment; they've got a job; what does that actually mean? What commitment does NHS Lothian have? What commitment do we have to sustaining ongoing promotion and things? Well you could say well we don't. You know, we've created an opportunity and there you go. You have the opportunity, you've still got a job at the end of it, and there's plenty of opportunity to apply for other things. So I'm aware that there are some differing views about that." (Steering Group)

6.7.3   Factors to Secure Further Investment

A number of factors were identified that would need to be considered to secure further investment in the CARC Scheme. There was some question about whether this model of funding would be sustainable in the longer term:

"But again I don't know whether it's a sustainable type of model, whether we would always have to rely on everybody coming up with that amount of money to make the scheme happen again. So if it were to happen again we would quite happily invest in it again." (Steering Group)

"seeking external funding for this kind of venture might be the way forward because there's a limit to how much either institution I think can do these. Also it's got to have sustainability. So whatever funding's put in place it needs to have some long-term plans and some long-term commitment to funding" (Demonstration Site)

Further investment might be forthcoming if the outcomes from the demonstration sites are satisfactory:

"I guess we need to definitely see that there are outputs, that it's worth investing in order to maybe get the universities to put more money in." (Management Group)

Further investment could be secured from bringing in new partners under the CARC identity, so long as clear processes for doing this can be developed:

"But it wasn't very transparent in a way. I don't mean it was covert at all, it wasn't, but I just mean there was no clear, like, this is how to set up another pathway. (Steering Group)

"I would be looking for other funding opportunities for other partners. So I personally would be looking to change the consortia, if I could I would and see how it goes." (Steering Group)

"So it might not be labelled a CARC scheme as such or we might choose that label if people understand what it means, but it would feed into that programme of research, either through charitable funding of some kind or research funding." (Demonstration Site)

"Yes, I think that might also be something we could explore. I mean depends what with the higher education institutions that might involve, or indeed any other potential partners. And perhaps it could include commercial which I haven't really thought about very much." (Steering Group)

6.8   Summary of findings

6.8.1   Key Lessons Learned

The stakeholders highlighted a number of areas where key lessons have been learned, and what factors should be considered either if they were starting a similar scheme from the beginning, or that could be used to inform other areas thinking when setting up a CARC scheme. The main lessons learned were as follows:

- Raise awareness of the Scheme more widely, create greater publicity about the scheme and its aims.

- Engage partners that have similar priorities, are committed to the scheme and can deliver on the academic side of the partnership.

- Advertise the CARC posts more widely, certainly within NHS Lothian and possibly extend this to other Health Boards if there is too small a pool of suitably qualified applicants, to ensure the best candidates can apply.

- Consider advertising to organisations outside the NHS.

- Consider expanding the scheme to include other health professions or to service managers, bearing in mind that there may be other funding streams already in existence to support them, and there may be restrictions due to the funding sources of partners.

- Expand the scheme to cover Masters level too, or have the flexibility to consider this as an option if appointing to other levels is problematic.

- Have clear guidance on the demonstration site selection process and also better guidance on candidate recruitment and selection.

- Simplify the administration of the scheme as far as possible to enable externally funded research in other clinical areas that wish to follow the CARC scheme model, to be adopted under the Scheme identity with minimal delay. As well as to develop clear processes for starting another programme of work under the Scheme, including the requirements for

recruitment and management, building in realistic expectations and timetables to get the research area up and running, and monitoring processes within the scheme.

- Be realistic about the time it takes to set up the administrative structures for this type of scheme, including dealing with HR and employment issues that might arise.

- Evaluate the scheme early on to pick up any process lessons that may emerge.

- Engage all partners in a full discussion about the research priorities to identify potential research sites; once sites are selected, ensure that all partners are aware of the aims of the research and the approach to be used, and have agreed to it.

- Consider the exit strategy at an early stage.

- Don't underestimate the challenges that will be faced in setting up a CARC scheme.

6.8.2 Key Challenges

A number of challenges of the scheme have been highlighted by the key stakeholders. Some of these have been addressed, while some remain as issues that need further consideration. Although a number of challenges have been encountered along the way with the CARC scheme, there was a perception from a number of respondents that this was nothing more than would be expected from a new programme of work involving a large number of partner organisations, and that it should be viewed as an opportunity for learning. The main challenge from this point is how to sustain the progress made to date, and ensure that the benefits and learning from the scheme can be taken forward. The other challenges identified by strategic and management level stakeholders included the following:

- Managing initial expectations, with clinical staff having unrealistic expectations of what could be achieved academically, and academics not understanding the process of translating research into practice. Whilst it was acknowledged that progress had been slow to date, respondents highlighted the need to understand what could realistically have been achieved in the time frame of the CARC scheme.

- Partners involved with the Weight Management site had no tangible benefits from their involvement as yet, due to delays in appointing suitable staff to the Senior Practitioner posts.

- There has been the need to frequently review the processes of the Scheme, and to compromise and find agreement between the partners to work around potential blockages and finding solutions to get the scheme operational.

- Revising the original plan to build in a degree of flexibility.

- A challenge for post-holders was to balance the individual requirements of two part time roles.

- Adhering to the reporting and monitoring processes of the NHS, each partner university and the CARC scheme overall has been seen to be a time consuming process.

- Aligning the priorities of the partner organisations and then, once this is done, working together in the demonstration sites, and agreeing the best approach to follow.

- Managing the clinical priorities of the NHS partners in the demonstration sites and the relatively low priority given to research compared to service delivery.

- Communication, sharing information and managing the flow of information between partners.

- Selection and appointment of suitable demonstration sites proved to be a challenge, with problems around the level of detail required to satisfy the selection criteria, and also with delays causing potential post-holder applicants to lose interest. The selection criteria focused more on the detail of the bid rather than the quality of the potential candidates who could apply.

- Administrative and HR issues around long term secondments, such as job security for post-holders.

- Sustainability was seen to be the major challenge for the scheme, so as not to lose the benefits that had already been achieved.

- Having a relatively small pool of suitably qualified practitioners within NHS Lothian was a recurrent issue; means of addressing this and having a more flexible approach to recruitment were discussed.

6.8.3 Key Benefits and Success Factors

Overall, the CARC scheme has been seen positively within Lothian, by all the partner organisations. There is without doubt overwhelming support for the programme in principle, with all partners agreeing that the aims and objectives of the programme are worthwhile and have been worth pursuing. Whilst the challenges of the scheme have been acknowledged, there are also many success factors and benefits from involvement in the Scheme.

- One of the main success factors of the CARC Scheme was the fact that it was actually in existence, and running in practice. Bringing all the partners together, securing funding, selecting sites and employing people in the CARC posts was seen to be an achievement in itself.

- It brought partners together, thereby consolidating opportunities for NMAHPs within NHS Lothian, and is raising awareness of the need to consider joint academic/clinical working.

- The scheme was also seen to have strengthened relationships between partner organisations, which could potentially lead to further collaboration in the future. It was also seen to demonstrate NHS Lothian's commitment to research and collaboration with HEIs.

- Additional benefits related to the appointment of staff to the research posts, and in particular creating the posts in pairs to ensure support for the researchers and a greater focus on the research in each demonstration site, as part of a programme of work and not being carried out in isolation.

- The Scheme was seen to be a success, according to interview respondents, in terms of securing a commitment to the Programme from senior leadership across the partner organisations, and maintaining a fit with the wider strategic plan within NHS Lothian, and the University partners.

- The CARC scheme has highlighted a potential route for the future direction of clinical academic research and partnership working, and shown the potential for developing further opportunities and the need to sustain the programme.

- An additional benefit was the creation of a pathway for clinical academic careers which previously didn't exist, albeit for a limited time and for a limited number of staff at this point. This was seen as a way forward for the future.

- Having good clinical and academic support was a success factor, who were able to align priorities and keep focused on what the Scheme was aiming to achieve.

7. Discussion

This evaluation aimed to assess the progress and achievements of the CARC Scheme for NMAHPs in NHS Lothian to date. This Scheme is a key part of the Lothian NMAHP Research Framework. It aims to build the research capacity and capability of NMAHPS within NHS Lothian, with a focus on applied research that leads to improvement in practice and service delivery in priority areas.

The CARC Scheme as developed and implemented within Lothian brought together five partner organisations: NHS Lothian, NHS Education for Scotland, the University of Edinburgh, Edinburgh Napier University and Queen Margaret University Edinburgh, to fund and support up to six clinical academic research posts. The planned approach was to support one Senior Practitioner undertaking research at a doctoral level over five years, and one Advanced Practitioner, at post-doctoral level for three years, within each of three clinical demonstration sites. In practice a number of changes have had to be made to the structure of the CARC model in NHS Lothian, to adapt to a number of challenges that have arisen during the implementation of the programme. At the time of the evaluation, three post holders were in post in two demonstration sites, with the third demonstration site about to interview for one Senior Practitioner position.

There is undoubtedly overwhelming support at all levels for the principle of developing a clinical academic research career path for NMAHPs within NHS Lothian, with all partner organisations keen to support the initiative and help it to succeed. There was a good understanding of the aims of the CARC scheme across all respondent groups, and comprehensive support for the Scheme at a strategic, management, and operational level, and also from the post-holders, with acknowledgement of the achievement of getting the scheme up and running, in terms of securing funding and getting the five partners to sign up to the Scheme. There have been a number of challenges encountered since the start of the scheme. These relate primarily to the selection of appropriate demonstration sites, recruitment and selection of suitable practitioners, partnership working and sustainability.

7.1　Publicising and Promoting the CARC Scheme

Efforts were made to publicise the CARC scheme as it was being set up, mainly through presentations within Lothian, conferences facilitated by NES and also more widely through presentations at national conferences, such as the RCN research conference. The scheme has had numerous articles and updates in the HSRU newsletters, and has information on the web pages of most of the partner organisations.

There was some thought that the Scheme should have been promoted more widely outside NHS Lothian, to raise awareness of what was being implemented. Despite some efforts to disseminate information about the scheme more widely, there was no recognition of the scheme from the nursing, midwifery and AHP directors who responded to the survey about awareness and implementation of clinical academic research career schemes, although two other NHS Boards, Lanarkshire and Borders, indicated that they did have similar schemes in place. Other work to embed and enhance clinical academic careers has been described by the AUKUH (2012), although few of these appear to have been evaluated. The CLAHRC Schemes, funded in England by the NIHR, are being evaluated in detail (e.g. Harvey et al, 2011; Rycroft-Malone, 2011), and will provide a great wealth of information that could be applicable to the scheme in Lothian, albeit that these are conducted on a much larger scale and with different funding mechanisms.

7.2   Selection of Demonstration Sites

The selection of demonstration sites was not a straightforward process, and caused more problems for some than had been expected. The criteria for selection were agreed by the management team, and were seen to form the basis of a robust selection process. The overall process was seen by some of the applicants to be fragmented and unnecessarily lengthy to appoint two staff members, with a lot of resources required to prepare the application. However, other applicants did not raise any issues or concerns about the process and saw it as being quick and uncomplicated process and compared it to other similar processes. The main issue in preparing the applications was focusing on finding areas of alignment between the priorities of the academic and clinical side.

There has been frustration around the significant problems and delays in getting the third site up and running. The application for this demonstration site needed several iterations and submissions before a suitable plan was agreed; early feedback was seen to be unhelpful in understanding where the gaps were to enable revision of the bid in preparation for resubmission, although the feedback received later on was viewed as more constructive. Delays in the process were seen to have caused potential candidates to lose interest, adding to the problem of not having a pool of suitably qualified AHPs who could then apply for the posts. The Weight Management site was considered to be less well established in terms of the collaboration between clinical practice and academic research. The concern around the demonstration site selection process raised the issue of how the ideas behind these sites were developed. There have been fewest problems with selection and recruitment for the Critical Care site, which was already well established as a research centre, had existing collaboration between the university and clinical partners and had a pool of well qualified and interested staff members who wanted to apply. Having all these factors in place is difficult, although

provision for consideration of these is covered within the application process. There has been some discussion about the best approach to select suitable CARC sites, based around the experience of this process, and looking to the future about identifying possible new sites for inclusion in this model. There clearly needs to be a match between the clinical work experience of the individuals in post within NHS Lothian, those who have the relevant qualifications to be able to apply for the CARC posts, and the selection of the research areas that are a priority for the partner organisations. Whilst the priority research area and existing partnership should form the basis of the site development for CARC funding, a pool of suitable candidates needs to be identified, especially if this is going to be restricted to current NHS Lothian employees.

7.3   Candidate Selection

Problems in attracting suitably qualified staff members have been encountered in two of the three demonstration sites. For the Weight Management site, the lack of a suitably qualified pool of staff at Advanced Practitioner level who could apply for the post led to the decision to change the model in this site. Thus two Senior Practitioners were appointed rather than an Advanced Practitioner and a Senior Practitioner. Despite making this change, there have still been on-going problems recruiting to these posts. This issue has also arisen with recruitment to the newly created full time PhD post in Substance Misuse, and appears to be emerging as an issue within the new Dementia site too. Despite anecdotal interest in the CARC posts from NMAHPs in NHS Lothian, this interest was not being translated into applications – exploring the reasons for not wanting to take up these posts in more detail may provide some indicators in how best to attract and recruit staff to CARC posts. It may also be the case that the traditional PhD is not the best route to follow for NMAHPs in this case – developing a professional doctorate may be another option to consider[2]. Widening applicants from outside of Lothian may provide an alternative solution.

Agreeing on the strategy for attracting the most suitable candidates to the CARC roles, and encouraging them to apply has generated some discussion between respondents in different partner organisations. There are differences of opinion on how widely to advertise the posts – at the moment the posts are restricted to those currently employed as NMAHPs within NHS Lothian, and within the service area in which the demonstration site is based.

The decision to focus the advertising of CARC posts to the service area was to ensure a degree of integration between the clinical role of the post-holder and the research area, and therefore would

---

[2] http://www.docs.sasg.ed.ac.uk/AcademicServices/Staff/Curriculum/What_is_a_professional_doctorate.pdf

assist with applying the research findings to practice and service delivery. However, most of the post-holders currently in post indicated that there was little overlap between their research work and their clinical work, with different staff members within NHS Lothian managing their clinical and research work. Given this existing disparity between the two halves of the CARC job, some consideration should be given to advertising the roles across the whole of NHS Lothian, and not restricting this to the service area. In this context, the individual practitioner would still be able to gain research skills which could be applied to their existing clinical role, and the potential for building research capacity and capability within NHS Lothian would therefore still be applicable. If there was less integration between the clinical and academic roles, the translation of research outcomes into practice could be facilitated by the clinical lead, thereby maximising the potential for research findings to have application in the wider practice context. This would not be dissimilar to the role of Diffusion Fellows employed within the CLAHRC programme in England, who are senior clinical or managerial staff seconded to the project for one day per week for the purpose of facilitating the translation of research into practice (Rowley et al, 2012). It was also suggested taking a more flexible approach to the profession of those eligible to apply would be beneficial – it was suggested that the Weight Management site might have been more successful if recruitment had been extended to those in nursing, although there was an acknowledged need to have at least one site focused on AHPs.

Alongside this, there have been additional discussions about advertising vacant CARC posts more widely outside NHS Lothian, possibly to include those employed in academic posts, those working within a healthcare setting out with the NHS within the Lothian area, to neighbouring Health Boards, or more widely across the UK. This would be to improve the critical mass of people to ensure the highest calibre candidates apply. Ideas to take this forward included linking this with an existing clinical vacancy within NHS Lothian, although issues around backfilling the non-CARC half of the vacancy and reverting to a full time clinical post at the end of the CARC period would have to be resolved. Given the greater focus recently on developing clinical academic careers across the UK, and on promoting research masters courses to train NMAHPs, thereby producing an increased number of suitably qualified NMAHPs, this adds weight to the argument supporting wider publicity and advertising the CARC scheme outside NHS Lothian.

Once the candidates have applied for the posts, a consistent and robust selection process should be followed across the different sites within the scheme, with clear guidance on candidate selection criteria, and on conducting the interview process, to ensure the candidate has the required level of academic ability.

7.4 Implementation

Whilst some aspects of the Scheme have gone to plan, many of the implementation processes have undergone a number of changes from the initial plans to ensure these are implemented most effectively. Recognising areas of key learning that have emerged from the process is important, as is recognising and capturing good practice to inform others planning to implement similar schemes.

Once the demonstration sites had been selected and post-holders appointed, the process of getting the research up and running seemed to work reasonably well. The post-holders on the whole felt their induction into the academic side of the role went smoothly, although there were a number of practical issues in getting access to university resources for the Advanced Practitioners, as they were not university staff members.

The processes of managing the demonstration sites differed between the two sites; one held regular steering group meetings to discuss progress for both practitioners, the other did not hold overall meetings. One site appeared to have a stronger lead on the direction of research from the academic partners, the other from the clinical side. Partnership working at an operational and strategic level on the whole seems to have worked well, and was considered a success factor of the Scheme, although issues in aligning the needs of each of the partner organisations were still apparent.

The CARC scheme was thought to be value for money, although the direct benefit for the Universities was limited, as the model meant that post-holders are not 'employed' by the universities, despite them funding a substantial part of their salary. This meant they were not able to take advantage of their involvement in the research and outputs produced in terms of the adding returns for the Research Excellence Framework. Other means of supporting or employing the post-holders would change it from being an embedded model of working within NHS Lothian. There has been a relatively modest level of funding from each of the university partners to take part in this scheme, and all (of those involved in sites that are operational) see it as value for money. There could be scope for increasing the level of funding for those areas where the CARC model has been proven to have a greater effect. The source of funding may bring with it certain conditions or restrictions, such as funding specifically for a nursing or AHP post.

7.5 Outputs and Outcomes

The outcome measures show that some progress has been made within the two demonstration sites that are up and running. There have been no outcomes from the Weight Management demonstration site as yet. It is not possible to make any assessment as to whether the progress made is as expected, as no overall targets were set about what was expected by this stage of the

scheme. However, the progress reports submitted by the demonstration sites at 6, 12 and 24 months have been approved by the management group, and therefore it would appear that satisfactory progress has been made. Expectations appear to differ between those in the clinical roles and those in academic roles as to what should have been achieved by this stage – having a realistic timetable of what could be achieved at each stage would have been useful. However, there is still an optimism that the programme will deliver on the planned outcomes, despite an acknowledgement that there is still some way to go to achieving outcomes in all areas.

The majority of stakeholders indicated that they initially expected the three demonstration sites to be operational at around the same time and much earlier on in the process; no-one had anticipated that the selection process of the demonstration sites, and subsequent appointment of post-holders would be as problematic and time consuming as it has been. Ways of overcoming the emerging problems associated with establishing the three demonstration sites have been considered throughout the Scheme by the management group. Allowing some flexibility in finding feasible solutions to these problems has enabled adaptations to the intended CARC model; these have included having a full time Senior Practitioner in the Substance Misuse site for the remainder of the programme, and two part time Senior Practitioners in the weight management site rather than a Senior Practitioner and an Advanced Practitioner. In taking this forward, further flexibility could be considered, for example by varying the proportion of time spent in the research and clinical posts, although this may have implications for the funding split between partners.

Recognising the opportunity to maximise the impact of research findings in influencing practice may come through wider dissemination – certainly the presentation of research from the Critical Care site to the nurse directors meeting appears to have initiated additional discussion and interest in other areas where the findings could be applied.

Despite the length of time it is taking to establish tangible outcomes at this stage, there has also been progress in terms of developing research skills, with all of the post-holders undertaking research training appropriate to their level of experience and to meet the needs of their individual research studies. These have been shown to have been of value in progressing with the research, and have added to the learning and development of the individuals, which they can then apply to their own clinical practice.

Keeping track of the research outputs and outcomes, along with the learning outcomes for the individual post-holders is an important aspect of determining whether the Scheme can be counted as a success. Suggestions to simplify the reporting and monitoring processes were made by

stakeholders, and reiterated by post-holders, who felt that there were too many different reporting mechanisms to complete – for the NHS, for the university and the Scheme itself. There may be scope for finding a joint process of managing this, albeit with the necessary links to the KSF, and with the clinical academic research careers framework.

7.6   Sustainability

Whilst sustainability has been recognised as an issue that needs addressing from the outset, it is only relatively recently that the management group has started to consider planning for the future as the programme progresses towards the end of the funding period. The consideration of short term sustainability of the scheme as it is currently has been prompted to some extent by the Advanced Practitioner in Critical Care coming towards the end of her current CARC post. The criteria for the extension of CARC placement secondments were drawn up during spring 2012 and reflected those of the NRS Career Researcher Fellowship (CSO, 2011); these have been adopted as a means of measuring the standard needed to continue in the CARC posts. The Advance Practitioner was successful in meeting these criteria, and has accepted the opportunity she was offered to continue in her role for a further year.

The majority of respondents across all groups recognised the importance of planning for sustainability. Indeed the biggest challenge, and most significant risk to the Scheme, was if it were to finish at the end of the current funding period, with no plans for sustaining current activity, or planning for work to build on the achievements made to date. The selection of mutually agreed priority areas for the demonstration sites was seen to indicate that the programme of research would be sustainable, with recognised benefits to each of the partners in continuing with this. In particular, the importance of sustaining and broadening the partnership set-up was recognised by respondents.

The sustainability paper prepared for consideration by the management group looked at various options for continuing the scheme, and shows that the need for this type of initiative still exists. Furthermore the demand for research training at this level is set to rise as a larger number of people undertake research training at Masters level and above. It set out a number of recommendations to take the work forward at the end of the current funding period. Concern was raised about the length of time it had taken for a response to the sustainability paper from university partners, and whether this reflected a lack of interest or willingness to develop a strategy for sustainability.

Amongst stakeholders responding to this evaluation, there was an overall agreement that the scheme should continue, albeit with some modifications and flexibility. Options for sustainability

include continuing with the existing demonstration sites, and identifying additional research sites based on the CARC model. Suggestions were made about looking at other clinical areas with established research programmes, such as oncology. A further issue in the selection of additional CARC sites would be around the extent to which this should focus on finding key individuals who have suitable interest and qualifications, could develop their own programme of research in priority areas under supervision, and want to pursue a CARC career pathway.

To continue with the current demonstration sites, consideration needs to be given to whether this will involve the extension of existing contracts for Advanced Practitioners, or appointing new Advanced Practitioners. This may again run into difficulties in finding suitably qualified NMAHPs who want to apply, bearing in mind that it would be some time until the Senior Practitioners will be eligible to apply for these posts.

It was thought that funding the CARC scheme for a further period would be worth considering, once the partners were satisfied that the scheme could produce the outcomes planned, and that issues facing the universities regarding taking advantage of the benefits with links to factors such as the REF being addressed.

In taking this forward, to bring new sites into the scheme effectively and efficiently, there needs to be clear guidelines about the facilitation process, including the considerations that should be made with regards to HR and employment issues, addressing the questions around recruitment and selection. Consideration must also be given to supervision and support provided from both the academic and clinical side, with consideration being given to a joint assessment process. It would need to be made clear how the management of the new site would sit within the current management and reporting mechanisms, whether the membership of the management group would need to be adapted, how the funding mechanism would work, and setting out clear criteria for satisfactory progress and success. Further developments of this scheme need to be considered in the context of the wider research framework of NHS Lothian and ongoing developments made to this.

7.7   Considerations for Future Evaluation

There were a number of limitations which should be taken into account when considering the outcomes of this evaluation. The whole evaluation was undertaken over a short time period, meaning that some potential respondents were not able or available to take part within this timescale. In particular, there was no representation from the academic side of the Weight Management demonstration site. However, this can be addressed in the next phase of the evaluation.

Other considerations for future phases of the evaluation would be to include the spin-off site within this, to see the extent to which the model has been successfully transferred to another clinical area, and whether problems in recruitment have been overcome. The next evaluation should also focus on the post-holders who have completed the scheme, and whether they have continued on a clinical academic research career pathway within NHS Lothian. Also, there should be more of a focus on understanding the impact of the research on practice, and the mechanisms for facilitating this.

8. Considerations for Future Development of the CARC Scheme

The CARC Scheme has continued to develop since its inception, and has gone some way to meeting the aims of the Scheme. It has demonstrated that there is enough flexibility within the model for it to be applied in different settings. The main problem still to be addressed appears to be around recruitment of suitably qualified practitioners who are willing to commit to the Scheme. In order to continue and attract future funding, the Scheme needs to demonstrate where it adds value to each partner organisation as a cohesive, embedded programme with a clear contribution to the clinical academic career pathway, rather than a collection of unrelated research projects. A number of areas for consideration for future development have emerged from the evaluation:

- There is a need to operationalise the CARC strategy by having a clear plan for implementation and expected outcomes. This would include setting clear objectives for the projects and post-holders of what is expected in terms of the outcome measures at the different stages of the programme, taking into account the time to get the research programme up and running. This would help manage the expectations of all the different partners, in terms of what can realistically be achieved in the time available.

- Agree a plan for sustainability, including an exit plan for post-holders. This should build on the existing posts and demonstration sites, and introduce new sites using a similar model, with scope for flexibility and adaptation where necessary. The selection of new sites would depend on the agreement between partners regarding priority research areas, an audit of NMAHPs skills and qualifications, and likelihood of staff members being interested in taking forward such a post. Current sites (and new sites) could adapt to respond to the availability of interested staff – depending on the level of funding agreed, it could be possible to have different pairings of posts, such as a masters student paired with a post-doc.

- Consider wider publicity of the scheme to disseminate what has been achieved in Lothian and the key learning points from the implementation so far. This would inform other areas that are considering developing a similar scheme.

- Advertise vacant posts more widely – the importance of getting the right individuals in post has been highlighted several times during the evaluation, even if this means recruiting from elsewhere; attracting the right people into post will help to increase the research capacity and capability within NHS Lothian. Options to include those employed in academic roles or outside of the health service could also be considered. Promoting and building the benefits of working under the CARC identity may help to attract more applicants in the future.

- Understanding where the potential post-holders can be recruited from within NHS Lothian will ensure the most effective targeting of publicity of vacant posts. This could involve

conducting an audit of NMAHP qualifications within NHS Lothian to identify areas of interest from potential post-holders and mapping which masters courses could feed in to future PhD level roles. It would be useful to understand why those who express an interest do not apply.

- Other options for developing clinical academic research careers at this level could be considered, such as the development of a professional doctorate for NMAHPs, which could build on the strengthened relationships developed as a result of the CARC process.

- The administrative processes need to be simplified to enable externally funded research in other clinical areas that wish to follow the CARC scheme model, to be adopted under the Scheme identity with minimal delay. Draw up clear processes for starting another programme of work under the Scheme, including the requirements for recruitment and management, building in realistic expectations and timetables to get the research area up and running.

- Consider developing a joint performance review process, or adapting the current progress reports, which could be used by NHS and academic partners, as well as CARC management, to monitor the progress of individual post-holders, linked to project-related targets and also to the KSF.

- Consider where this scheme fits into the Clinical academic career path as a whole – map out current ways in and ways out, where this model sits within the wider NMAHP career pathway.

9. References

Association of UK University Hospitals (2013). The Nurse and Midwife Research Clinical Academic: Development, Progress and Challenge, Annual Report of Activity May 2011 to June 2012. Retrieved September 5th 2013, from: http://www.aukuh.org.uk/index.php/affiliate-groups/nmahps/progress-report

Burton C.R. et al (2009) Re-visioning the doctoral research degree in nursing in the United Kingdom. Nurse Education Today 29: 423-431

Chief Scientist Office (2003) *Research Strategy for Health and Healthcare.* Edinburgh: The Stationery Office.

Chief Scientist Office (2011) NRS Fellowship Guidance. Retrieved September 3rd 2013, from http://www.cso.scot.nhs.uk/SuppScience/NRS/NRS_Fellowship_Guidance.pdf

Department of Health (2004) *The NHS Knowledge and Skills Framework.* London: DH

Department of Health (2006a) Best Research for Best Health. A New National Health Research Strategy. DoH, London.

Department of Health, (2006b). *Modernising Nursing Careers: Setting the direction.* Scottish Executive: Edinburgh

Department of Health (2012). *Liberating the NHS: Developing the Healthcare workforce from Design to Delivery.* DoH, Leeds

Ellis, L.B., & Lee, N. (2005). The changing landscape of doctoral education; Introducing the professional doctorate for nurses. *Nurse Education Today 25(3),* 222-229.

Finch, J. (2009) The importance of clinical academic careers in nursing. *Journal of Research in Nursing,* 114(2) 103-105.

Griot, E. (2011) Shaping clinical academic careers for nurses and allied health professionals: the role of the educator. *Journal of Research in Nursing,* 18(1), 51-64.

Harvey, G., Fitzgerald, L., Fielden, S., McBride, A., Waterman, H., Bamford, D., ... & Boaden, R. (2011). The NIHR collaboration for leadership in applied health research and care (CLAHRC) for Greater Manchester: combining empirical, theoretical and experiential evidence to design and evaluate a large-scale implementation strategy. Implementation Science, 6(1), 96.

Kim, M.J. (2009) Clinical academic research careers in nursing: towards global nursing. *Journal of Research in Nursing.* 14: 125-132.

Lacey A. & Luff D. (2007) Qualitative Research Analysis. The NIHR RDS for the East Midlands/ Yorkshire & the Humber.

Leadership in Applied Health Research and Care (CLAHRC) for Nottinghamshire, Derbyshire, Lincolnshire (NDL). *Implementation Science* 7, 40

Lothian NHS Board (2009) Planning for the future. NHS vision for the future. Five year plan 2009-2014. Lothian NHS Board.

Mason, C. & McKenna, H.P. (1995). How to survive a PhD. *Nurse Researcher.* 2(3), 73-79.

McMahon A. & Kitson A. (1997) Supporting R&D: the role of a professional organisation. Part 1. Nursing Standard 12 (11), 36–38.

Midwifery 2020 (2010) Midwifery 2020: *Delivering Expectations.* Edinburgh: Midwifery 2020 UK Programme.

NHS Education for Scotland [NES] (2011), National Guidelines for Clinical Academic Research Careers for Nursing, Midwifery and Allied Health Professionals in Scotland. Edinburgh: NHS Education for Scotland

NHS Lothian (2010a) Clinical Academic (Research) careers Scheme for Nurses, Midwives and Allied Health Professionals in NHS Lothian, Edinburgh: NHS Lothian.

NHS Lothian (2010b) Lothian Nursing, Midwifery & Allied Health Professional (NMAHP) Research Framework 2010-2015, Edinburgh: NHS Lothian.

Ritchie, J. & Spencer, L. (1994). 'Qualitative data analysis for applied policy research', in Bryman and Burgess, eds., Analysing Qualitative Data, London: Routledge, 173-194.

Rowley, E., Morriss, R., Currie, G. & Schneider J. (2012) Research into practice: Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for Nottinghamshire, Derbyshire, Lincolnshire (NDL). *Implementation Science* , 7:40

Rycroft-Malone, J., Wilkinson, J. E., Burton, C. R., Andrews, G., Ariss, S., Baker, R., & Thompson, C. (2011). Implementing health research through academic and clinical partnerships: a realistic evaluation of the Collaborations for Leadership in Applied Health Research and Care (CLAHRC). *Implementation Sci*, *6*, 74.

Scottish Credit and Qualifications Framework Partnership [SCQFP], (2007): *Handbook for the Scottish Credit and Qualifications Framework.* SCQF Partnership, Glasgow.

Scottish Executive Health Department (2002) *Choices and Challenges: the strategy for research and development in nursing and midwifery in Scotland.* Edinburgh: SEHD

Scottish Executive Health Department (2004) *Allied Health Professions Research and Development Action Plan.* Edinburgh: SEHD.

Scottish Government (2007) *Better health, better care: action plan,* Edinburgh: TSG.

Scottish Government (2009a) Investing in research, Improving Health. Edinburgh: The Scottish Government.

Scottish Government (2009b) *NHS Scotland efficiency and productivity programme: delivery framework*, Edinburgh: Scottish Executive.

Srivastava, A. & Thomson, S. B. (2009).Framework Analysis: A Qualitative Methodology for Applied Policy Research. *JOAAG*, Vol. 4. No. 2

UK Clinical Research Collaboration [UKCRC], (2007). *Developing the best research professionals.* Report of the UKCRC Subcommittee for nurses in clinical research (workforce), [Finch Report] London: UKCRC.

10.   Appendices

Appendices 1 – Clinical Academic Research Career Framework

Appendices 2 – Timeline of Key Events

Appendices 3 – Conference and Seminars attended

Appendices 4 – Training Courses Attended by Post-holders

Appendix 1 Clinical Academic Research Career Framework (See Section 1.3.1)

Career Framework for Health Clinical Academic Research Career (CARC)	Examples of Research Knowledge and Skills	Recommended Education and Preparation	Broad Spheres of Responsibility
More Senior Staff Level 9 and above **LATE CARC**	• High level research methodology expertise and governance • Research leadership • Organisational and research management skills	CARC Senior Research Fellow • PhD and post-graduate certificate in research supervision • Accredited leadership training • Extensive postdoctoral research experience	• Strategic lead for NMAHP research delivery and implementation plan • Contribute to Research Excellence Framework (REF) through providing strategic leadership for programme of national/ international research • Responsible for model of doctoral supervision and mentorship of CARC students and fellows. At least 30% in practice or research, but calibrated according to level in career framework
Consultant Practitioner Level 8 **LATE CARC**	• Research methodology expertise and governance • Clinical expertise appropriate to area of practice • Research leadership skills • Mentoring skills • Project management skills	CARC Senior Research Fellow • PhD and post-graduate certificate in research supervision • Accredited leadership training • Proven track record of postdoctoral research experience	• Lead for identifying research priorities and implementation, delivery and evaluation of findings into practice • Lead/contribute to research programme at local/national level • Member of supervisory team and mentor for research-active practitioners At least 30% in practice or research, but calibrated according to level in career framework
Advanced Practitioner Level 7 **MID CARC**	• Developing expertise of different research methodologies and governance • Clinical knowledge and skills related to area of practice • Mentoring skills • Project management skills	CARC Post-doctoral Fellow • PhD and/or Post-doctoral experience • Preliminary supervision training	• Identify research themes relevant to practice area and investigator on programme of research • Co-lead for established research group or network • Mentor early CARCs and contribute to research development of wider workforce and undergraduate and postgraduate teaching education At least 30% in practice or research, but calibrated according to level in career framework
Senior Practitioner Level 6 **MID CARC**	• Developing knowledge of different research methodologies and governance • Clinical knowledge and skills development • Mentoring skills • Writing for publication	CARC PhD Training Fellow • PhD or PhD training scheme • Mentor preparation	• Co-investigator on clinical service research project/s • Work with clinical team to appraise and support implementation of evidence based approach to practice • Contribute to established research group or network • Contribute to research development of wider workforce and undergraduate and postgraduate education At least 30% in practice or research, but calibrated according to level in career framework
Practitioner Level 5 **EARLY CARC**	• Research methodology and governance • Consolidating and developing clinical knowledge and skills • Critical appraisal skills and engaging with research literature • Understanding of organisation research and development strategy	CARC Early Career Training Fellow • MResearch/MClinical Research or PhD training scheme • Flying Start and Mentor preparation	• Involvement (under supervision) in a research project • Support research projects in own clinical area (e.g. to facilitate recruitment); • Contribute to established research groups/networks • Contribute to undergraduate teaching and support implementation of research into practice At least 30% in practice or research, but calibrated according to level in career framework
Student Practitioner (this level is not featured within the national career framework) **EARLY CARC**	Applicable to NMAHP undergraduate education • Research knowledge and skills taught within NMAHP pre-registration programme • Understanding of evidence based practice, improvement, evaluation and audit approaches	Students with CARC potential selected for research-orientated Honours programme with placements in research-intensive clinical areas • Undergraduate degree	• Search and appraise research evidence • Apply research findings during practice learning • Member of established research groups/networks

Appendix 2 Timeline of key events (See Section 2.1.2)

Date	Event
Sep-08	First conceptualisation of model through discussions between representatives of NHS Lothian and Centre for Integrated Healthcare Research.
Oct 08 - Mar 09	Establishment of working group and drafting of the CARC Scheme proposal.
Mar 09 - Feb 10	Widening of working group membership to include Queen Margaret University, Edinburgh Napier University and University of Edinburgh. Consultation on draft proposal. Discussions with potential partners and receipt of verbal commitments to contribute funding to the Scheme over 5 years from NHS Lothian Research and Development Office, NHS Education for Scotland, Edinburgh Napier University, University of Edinburgh and Queen Margaret University.
Feb-10	Final draft of proposal endorsed by NHS Lothian Executive Management Team.
Mar-10	Signing of Service Level Agreement between NHS Lothian and NHS Education for Scotland.
May-10	Official launch of the Scheme. Issuing of first call for applications to become a demonstration site for the Scheme.
Jul-10	Applications Review Panel conditionally funds Critical Care/University of Edinburgh application as the first demonstration site.
Aug-10	Second call for applications to become a demonstration site. CARC Scheme job descriptions approved by NHS Lothian Job Evaluation Panel.
Nov-10	Signing of partnership agreement between NHS Lothian, University of Edinburgh, Queen Margaret University, Edinburgh Napier University and NHS Education for Scotland. Formal constitution of Scheme Management Group and Steering Group. Funding in place to support first demonstration site.
Dec-10	Third call for applications to become a demonstration site.
Jan-11	CARC Advanced Practitioner (Clinical Research) and Senior Practitioner (Clinical Research) in post in the Critical Care demo site.
Mar-11	Review Panel conditionally funds the Telehealth/Edinburgh Napier University application as a demo site with Substance Misuse/Edinburgh Napier University application as first reserve.
May-11	Funding partners approve proposal to amend Scheme such that third demonstration site (involving Queen Margaret University) will comprise two Senior Practitioner (Clinical Research) posts as opposed to one plus an Advanced Practitioner (Clinical Research) post. Withdrawal of the Telehealth/Edinburgh Napier University application. Review Panel conditionally funds the Substance Misuse/Edinburgh Napier University application as a demonstration site.
Jun-11	First Annual Report. First meeting of the Scheme Steering Group. Decision to defer start of the independent evaluation of the Scheme until Steering Group meeting 2012.
Jul-11	First 6-monthly Progress Report received from Critical Care demo site.

Dec-11	Ratification of KSF outlines for CARC posts
	All funders sign the amendment to the Scheme Partnership Agreement allowing third demonstration site comprising two Senior Practitioners (Clinical Research) studying for PhD over a five year period.
	Demonstration Site Applications Cycle 4. One application received from a collaboration of NHS Lothian/Queen Margaret University/NHS24/Edinburgh Napier University titled 'Development and Evaluation of a Self Management Platform for Weight Management'. The application was not funded but the collaborative team was invited to re-submit with recommended changes.
	Appointment of the CARC Advanced Practitioner and Senior Practitioner posts in the Substance Misuse/Edinburgh Napier University demonstration site.
Jan-12	12 month progress report received from the Critical Care Demonstration Site
Feb-12	Plans detailing how demonstration sites intend to engage with patients and the public in their research programmes received from both Critical Care and Substance Misuse sites and approved by Management Group.
Apr-12	Rapid Impact Assessment of the Scheme completed and approved by NHS Lothian Head of Equality and Diversity.
May-12	Management Group develops and distributes guidance on 'Criteria for Extension of Secondments Beyond Three Years' for CARC Advanced Practitioners.
Jul-12	First 6-monthly Progress Report received from Substance Misuse demo site. Re-submission requested providing greater detail in certain areas.
	Re-submitted bid to become third demonstration site from NHS Lothian/Queen Margaret University/NHS24/Edinburgh Napier University conditionally funded pending minor clarifications. Further re-submission expected beginning of September 2012
Sep-12	Second Annual Report.
	Second meeting of the Scheme Steering Group.
Oct-12	QMU Weight Management site finalised
Dec-12	QMU Weight Management site steering group meeting held, job descriptions and adverts prepared.
Feb-13	24 month progress report submitted from the Critical Care Demonstration site
Mar-13	12 month progress report received from the Substance Misuse Demonstration Site.
	Critical Care Advanced Practitioner performance review held.
	Posts for the Weight Management demonstration site advertised.
Apr-13	Evaluation team for phase 1 of the CARC scheme evaluation appointed.
	Paper on sustainability of the CARC scheme circulated to the management group
May-13	Dementia CARC signed off by NHS Lothian.
	Resignation of Substance Misuse Senior Practitioner
	Sustainability paper prepared for consideration by the Management Group
Jun-13	agreement to re-advertise the Substance Misuse Senior Practitioner post as a full time PhD post

Appendix 3 Conference and seminars attended (See Section 4.2.1)

Post-holder	name of conference	type of presentation	title of conference paper/ presentation	date attended	location
AW	Contemporary Drug Problems International conference -	Paper presentation	Square peg in a round hole? Conceptualising parenting support within the context of problem drug use.	21-23 August 2013	Aarhus University, Denmark
AW	CRFR Annual International Conference	Workshop presentation (Co-investigator)	Whose truth? Accounting for longitudinal research with drug-using parents	Jun-13	University of Edinburgh (CRFR)
AW	RCGP National Annual Conference on Drug Misuse	Workshop presentation (Co-investigator)	Parenting support and drug use in primary care	May-13	Birmingham
AW	BSA Annual Conference	Workshop presentation (Co-investigator)	How to stop a baby from 'rattling': Contradictions and consensus in accounts of neo-natal abstinence syndrome	Apr-13	London
AW	NHS Lothian's 8th Annual Child Protection Conference	Presentation	Findings from an evaluation of the implementation of Lothian's CAPSM guidelines	14-Jun-12	University of Napier, Edinburgh
AW	Moral Panics and the Family (ESRC Conference)	Workshop presentation	Intoxicating parenthood: child protection, risk and drug-using parents	23-Nov-12	University of Edinburgh
AW	RCGP annual primary care conference	Poster presentation (Co-investigator)	Surveillance, stability, support: tensions in the provision of parenting support for opioid dependent parents in primary care	Oct-12	Glasgow
AW	BSA Medical Sociology Group Annual Conference	Workshop presentation (Co-investigator)	Mother's helper? Exploring the meanings of methadone and diazepam prescriptions for opioid-dependent parents	Sep-12	Leicester
AW	Scottish School of Primary Care Annual Conference	Workshop presentation (Co-investigator)	Stability, surveillance, support: Tensions in the provision of parenting support for opiate dependent parents in primary care	Mar-12	Glasgow
AW	Substance Misuse directorate annual research meeting	Presentation			NHS Lothian, Edinburgh
CM	Scottish Intensive Care Society Annual	Presentation	the use of critical care diaries	Sep-11	Stirling, Scotland

	Meeting				
CM	RCN International Research Conference	Joint presentation	CARC	Apr-12	London
CM	RCN International Research Conference	Presentation	during and after critical care: exploring ethical issues in studying critical care diaries	Mar-13	Belfast, Ireland
CM	HSS Post Graduate Conference	participant		Apr-12	UoE
CM	NHS Lothian Annual Research Conference			Jan-13	UoE
JR	Post Graduate Conference	Participant		May-12	Marrayfield Stadium
JR	NHS Research Conference	Participant		Jan-13	RIE
JR	Substance Misuse directorate annual research meeting	Presentation			NHS Lothian, Edinburgh
PR	3rd International Congress on Telehealth and Telecare	Oral paper	Patient involvement in an experientially meaningful website to support recovery following critical illness	Jul-13	King's Fund, London
PR	What's New in ICU; an update for NMAHPs in Critical Care	Oral paper	A patient and family focused website to support recovery following critical illness	Jun-13	NHS Lothian, Edinburgh
PR	Lothian Research Excellence Conference	Poster presentation	RELinQuiSh: REcovery following critical illness: a Longitudinal Qualitative exploration of perceived healthcare and Support needs among survivors.	Jan-13	NHS Lothian, Edinburgh
PR	Annual ICU Physiotherapists' Update, London	Oral paper	Patients' experiences of acute hospital rehabilitation following (prolonged) critical illness.	Nov-12	University College London,
PR	What's New in ICU; an update for NMAHPs in Critical Care	Oral paper	RELINQUISH: a longitudinal qualitative study of recovery after Intensive Care	Jun-12	NHS Lothian, Edinburgh
PR	Delivering Better Care, NHS Lothian	Poster presentation	It's not just what you know: Developing a Scottish network of NMAHP researchers in critical care	May-12	NHS Lothian, Edinburgh
PR	Personal Outcomes in	Oral paper	To what extent is personal experience measurable?	Mar-12	University of

					Edinburgh
	Health and Social Care, University of Edinburgh				
PR	University of Edinburgh Seminar Series	Oral paper	Quality of life following prolonged critical illness: a mixed methods study	Dec-11	University of Edinburgh
PR	Australia and New Zealand Intensive Care Society's Annual Scientific Meeting	Oral paper	Getting home after Intensive Care: I'd no idea how hard it would be	Oct-11	Brisbane, Australia
PR	2nd International Workshop on Recovery After Intensive Care	Oral paper	ICU survivors and ward-based care: lost in transition?	Oct-11	Brisbane, Australia
PR	UK Critical Care Research Forum	Oral paper	RELinQuiSh: REcovery following critical illness: a Longitudinal Qualitative exploration of perceived healthcare and Support needs among survivors	Sep-11	Belfast, Ireland
PR	Scottish Intensive Care Society Annual Meeting	Oral paper	RELinQuiSh: REcovery following critical illness: a Longitudinal Qualitative exploration of perceived healthcare and Support needs among survivors	Sep-11	Stirling, Scotland
PR	RCN International Research Forum	Oral paper	What can generic health-related quality of life (HRQoL) measures really tell us about recovery following (prolonged) critical illness?	May-11	Harrogate, England

Appendix 4 Training courses attended by post holders (see section 4.2.2)

Post-holder	training course	date attended
PR	Lothian Health Research Bootcamp: an intensive course aimed at developing research capacity and development.	2011
PR	Social Science, Humanities, Arts and Research at Edinburgh (SHARE): Assessing the impact of your research.	Dec-11
PR	Outcomes Data "Retreat"	Feb-12
AW	½ day training: 'Introduction to questionnaire design'	May-12
AW	½ day training called 'Winning research income: building your strategy'	Nov-12
AW	½ day training: 'The Big Picture: writing an effective literature review'	Nov-12
AW	1 day training: 'Critical appraisal of medical evidence'	Nov-12
AW	1 day training: 'Understanding the basics of randomised controlled trials' (WTCRF)	May-13
AW	3 day residential writing retreat (Napier university)	Jun-13
JR	Literature Searching critiquing the evidence	Oct-11
JR	Qualitative research	Oct-11
JR	Quantitative methods	Nov-11
JR	Using mixed methods research in the context oh healthcare, a practical approach	Nov-11
JR	Qualitative research 2 methods and analysis	Nov-11
JR	Evaluating the effectiveness of interventions for physical and mental health problems	Nov-11
JR	Workshop: analysis qualitative data/thematic analysis	Jan-12
JR	Ethics and Governance Issues in Research	Feb-12
JR	Endnote tutorial	Feb-12
JR	Action Research	Feb-12
JR	Involving Children and Young People in Research and Consultation	Mar-12
JR	Endnote and searching	Mar-12
JR	Discourse Analysis	Apr-12
JR	Use of Endnote	Apr-12
JR	Structuring your PhD workshop	Jun-12
JR	Applying for Research Approvals - using IRAS	Sep-12
JR	Informed Consent and ethical issues in consent (children)	Sep-12
JR	Endnote update	Nov-12
CM	PG Essentials	semester 2 2010/11
CM	Research methods in nursing and healthcare	semester 2 2010/11
CM	study resources for literature reviews	Jan-11

CM	Keeping a bibliography using Endnote	Feb-11
CM	GCP training	Feb-11
CM	writing a literature review	Mar-11
CM	getting started with your PhD	Mar-11
CM	writing process	May-11
CM	Nursing Studies International Summer School	Sep-11
CM	Introduction to research ethics	semester 1 2011/12
CM	introduction to data collection methods in the social sciences	semester 1 2011/12
CM	IRAS training	Oct-11
CM	Masterclass on paradigms and positions within qualitative research	Oct-11
CM	managing your research project	Nov-11
CM	analysing qualitative data	semester 2 2011/12
CM	writing abstracts	Jan-12
CM	preparing for a conference	Feb-12
CM	mind mapping & reading for speed	Mar-12
CM	GCP training	Mar-12
CM	writing from life workshop	Jun-12
CM	Introduction to qualitative interviewing	Sep-12
CM	PG writing workshop	Dec-12
CM	GCP training	Feb-13
CM	writing workshops - creative and academic writing	May-13