Delivering the aims of the CLAHRCs: evaluating CLAHRCs’ strategies and contributions

Interim report: Phase I

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Preface

This interim report has been written by the RAND Europe/HERG evaluation team for the National Institute for Health Research (NIHR) Service Delivery Organisation (SDO). The SDO’s goals are to identify and refine the research needs of the National Health Service (NHS) management community, to commission research that will be of greater value to that community, and to promote effective use of research.

The report therefore has a reporting function (informing the SDO of our work to date) and it has an analytical purpose (providing an opportunity for us to outline our current analysis). We hope that the second purpose both supports learning within the ‘CLAHRCs community’ and stimulates a critical engagement with our analysis. The analytical dimension should therefore be seen as a provisional and emerging position.

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Nine CLAHRCs were established in 2008, with funding for up to £10m for five years. 
Our evaluation approach is based on understanding the causal mechanisms through which CLAHRCs intend to deliver benefits. The existing literature is rich and suggestive but lessons are difficult to transfer to the CLAHRCs. The literature identifies logic models as a useful way of understanding complex interventions such as CLAHRCs. In phase 1 of our evaluation we applied this approach to the CLAHRCs as they became established and started to deliver change.

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This report marks the completion of the first phase of research by the evaluation team from RAND Europe and the Health Economics Research Group (HERG) at Brunel University. The evaluation is one of four evaluations funded to assess aspects of nine Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) established in October 2008 by NIHR, each funded for up to £10m for five years. CLAHRCs aim to strengthen collaborations between universities and local NHS organisations so that patient outcomes are improved through the conduct of applied health research and its implementation. These collaborations share a common purpose but fulfil them in diverse ways, according to local circumstances and the priorities of the local health and research communities. The nine CLAHRCs and their host organisations are: 

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In an evaluation approach designed to develop as the CLAHRCs themselves establish their ways of working, we have begun to explore the various
processes and structures being set up to improve the local capacity to undertake and use research. In phase 2 we shall examine specific aspects of these approaches in more detail; at this stage our aim is to make sense of what the CLAHRCs initiative is beginning to deliver and how this relates to the wider literature.

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<th>Description</th>
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<tbody>
<tr>
<td>BBC</td>
<td>Birmingham and Black Country (CLAHRC) Behavioural Medicine, Organisation Science and Applied Research Synergy in the Trent Region</td>
</tr>
<tr>
<td>BOAST</td>
<td>Behavioural Medicine, Organisation Science and Applied Research Synergy in the Trent Region</td>
</tr>
<tr>
<td>BRC</td>
<td>Biomedical Research Centre</td>
</tr>
<tr>
<td>BRU</td>
<td>Biomedical Research Unit</td>
</tr>
<tr>
<td>CFIR</td>
<td>Consolidated framework for implementation in research</td>
</tr>
<tr>
<td>CHF</td>
<td>Chronic heart failure</td>
</tr>
<tr>
<td>CKD</td>
<td>Chronic kidney disease</td>
</tr>
<tr>
<td>CLAHRC</td>
<td>Collaboration for Leadership in Applied Health Research and Care</td>
</tr>
<tr>
<td>CLRN</td>
<td>Comprehensive Clinical Research Network</td>
</tr>
<tr>
<td>COPD</td>
<td>Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>CP</td>
<td>Cambridgeshire and Peterborough (CLAHRC)</td>
</tr>
<tr>
<td>CQRS</td>
<td>Quebec Social Research Council</td>
</tr>
<tr>
<td>CQUIN</td>
<td>Commissioning for Quality and Innovation</td>
</tr>
<tr>
<td>CRD</td>
<td>Chronic respiratory disease</td>
</tr>
<tr>
<td>CRN</td>
<td>Clinical research network</td>
</tr>
<tr>
<td>CUILU</td>
<td>Combined Universities Inter-professional Learning Unit</td>
</tr>
<tr>
<td>C&amp;W</td>
<td>Chelsea and Westminster Hospital</td>
</tr>
<tr>
<td>EBM</td>
<td>Evidence-based medicine</td>
</tr>
<tr>
<td>GM</td>
<td>Greater Manchester (CLAHRC)</td>
</tr>
<tr>
<td>GP</td>
<td>General practitioner</td>
</tr>
<tr>
<td>HEI</td>
<td>Higher education institution</td>
</tr>
<tr>
<td>HERG</td>
<td>Health Economics Research Group</td>
</tr>
<tr>
<td>HIEC</td>
<td>Health Innovation and Education Cluster</td>
</tr>
<tr>
<td>HTA</td>
<td>Health Technology Assessment</td>
</tr>
<tr>
<td>IMP</td>
<td>Implementation Methods Programme</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
</tr>
<tr>
<td>KPI</td>
<td>Key performance indicators</td>
</tr>
<tr>
<td>KTE</td>
<td>Knowledge transfer and exchange</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>LNR</td>
<td>Leicestershire, Northamptonshire and Rutland (CLAHRC)</td>
</tr>
<tr>
<td>LRN</td>
<td>Local Research Network</td>
</tr>
<tr>
<td>LTC</td>
<td>Long-term condition</td>
</tr>
<tr>
<td>LYBRA</td>
<td>Leeds, Yorkshire and Bradford (CLAHRC)</td>
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<tr>
<td>MHT</td>
<td>Mental health trust</td>
</tr>
<tr>
<td>MRC</td>
<td>Medical Research Council</td>
</tr>
<tr>
<td>NDL</td>
<td>Nottinghamshire, Derbyshire and Lincolnshire (CLAHRC)</td>
</tr>
<tr>
<td>NHS</td>
<td>National Health Service</td>
</tr>
<tr>
<td>NICE</td>
<td>National Institute of Clinical Excellence</td>
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<tr>
<td>NIH</td>
<td>National Institutes of Health</td>
</tr>
<tr>
<td>NIHCE</td>
<td>National Institute for Health and Clinical Excellence</td>
</tr>
<tr>
<td>NIHR</td>
<td>National Institute for Health Research</td>
</tr>
<tr>
<td>NPM</td>
<td>Normalisation process model</td>
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<tr>
<td>NW London</td>
<td>North West London (CLAHRC)</td>
</tr>
<tr>
<td>PA</td>
<td>Personal assistant</td>
</tr>
<tr>
<td>PCMD</td>
<td>Peninsula College of Medicine and Dentistry</td>
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<tr>
<td>PCT</td>
<td>Primary care trust</td>
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<tr>
<td>PenCLAHRC</td>
<td>South West Peninsula (CLAHRC)</td>
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<tr>
<td>PenTAG</td>
<td>Peninsula Technology Assessment Group</td>
</tr>
<tr>
<td>PMC</td>
<td>Programme management committee</td>
</tr>
<tr>
<td>PPI</td>
<td>Public and private initiative</td>
</tr>
<tr>
<td>QI</td>
<td>Quality improvement</td>
</tr>
<tr>
<td>QUERI</td>
<td>Quality Enhancement Research Initiative</td>
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<tr>
<td>RCT</td>
<td>Randomised control trial</td>
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<tr>
<td>SCT</td>
<td>Secondary care trust</td>
</tr>
<tr>
<td>SDO</td>
<td>Service Delivery Organisation</td>
</tr>
<tr>
<td>SHA</td>
<td>Strategic health authority</td>
</tr>
<tr>
<td>SHSRC</td>
<td>Sheffield Health and Social Research Consortium</td>
</tr>
<tr>
<td>SWPCRC</td>
<td>South West Peninsula Clinical Research Collaboration</td>
</tr>
<tr>
<td>TIA</td>
<td>Transient ischaemic attack</td>
</tr>
<tr>
<td>T2DM</td>
<td>Type 2 diabetes mellitus</td>
</tr>
<tr>
<td>UHL</td>
<td>University Hospital of Leicester</td>
</tr>
<tr>
<td>UKCRN</td>
<td>United Kingdom Clinical Research Network</td>
</tr>
<tr>
<td>WeLReN</td>
<td>West London Research Network</td>
</tr>
<tr>
<td>WMSHA</td>
<td>West Midlands Strategic Health Authority</td>
</tr>
</tbody>
</table>
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We thank our scientific advisory group, comprised of Professor Peter Jones, Dr Chris Henshall, Professor Justin Keen and Professor Martin Buxton. Their insight and experience has been of great benefit to us. We have also benefited from a helpful balance of challenge and support from the CLAHRC directors. Dr Steven Wooding and Dr Ellen Nolte have provided very helpful quality assessment advice, responding to tight deadlines with good humour. We should especially like to thank the forty-eight interviewees referred to here and the almost one hundred people who participated in our workshops. Finally, we would like to thanks the leaderships of the CLAHRCs themselves for their time, enthusiasm and support.
Executive Summary

Nine CLAHRCs were established in 2008, with funding for up to £10m for five years

This report catalogues work undertaken in the first phase of an evaluation of the nine Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) established in October 2008 by the NIHR. The CLAHRCs aim to encourage and strengthen collaboration between universities and local NHS organisations so that patient outcomes are improved through the conduct of applied health research and its implementation. Each of the nine CLAHRCs, established in October 2008, will receive up to £10m over five years. The names, lead organisations and academic partners are listed in the table below.

<table>
<thead>
<tr>
<th>Name of CLAHRC</th>
<th>Lead NHS Organisation</th>
<th>Academic Partner(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIHR CLAHRC for Birmingham &amp; Black Country</td>
<td>University Hospital Birmingham NHS Foundation Trust</td>
<td>University of Birmingham</td>
</tr>
<tr>
<td>NIHR CLAHRC for Cambridgeshire &amp; Peterborough</td>
<td>Cambridgeshire &amp; Peterborough Mental Health Partnership NHS Trust</td>
<td>University of Cambridge</td>
</tr>
<tr>
<td>NIHR CLAHRC for Greater Manchester</td>
<td>Salford Teaching Primary Care Trust</td>
<td>University of Manchester</td>
</tr>
<tr>
<td>NIHR CLAHRC for Leeds, York &amp; Bradford</td>
<td>Leeds Teaching Hospitals NHS Trust</td>
<td>University of Leeds University of York</td>
</tr>
<tr>
<td>NIHR CLAHRC for Leicestershire, Northamptonshire &amp; Rutland</td>
<td>University Hospitals of Leicester NHS Trust</td>
<td>University of Leicester</td>
</tr>
<tr>
<td>NIHR CLAHRC for North West London</td>
<td>Chelsea &amp; Westminster NHS Foundation Trust</td>
<td>Imperial College London</td>
</tr>
<tr>
<td>NIHR CLAHRC for Nottinghamshire, Derbyshire &amp; Lincolnshire</td>
<td>Nottinghamshire Healthcare NHS Trust</td>
<td>University of Nottingham</td>
</tr>
<tr>
<td>NIHR CLAHRC for South West Peninsula</td>
<td>NHS South West</td>
<td>University of Exeter University of Plymouth Peninsula Medical School</td>
</tr>
<tr>
<td>NIHR CLAHRC for South Yorkshire</td>
<td>Sheffield Teaching Hospitals NHS Foundation Trust</td>
<td>University of Sheffield Sheffield Hallam University</td>
</tr>
</tbody>
</table>
Our evaluation approach is based on understanding the causal mechanisms through which CLAHRCs intend to deliver benefits

An evaluation should provide evidence to explain what was done and what the consequences were. It should also support a judgement about whether this contribution was worthwhile. In pursuit of this aim, our approach is underpinned by developing an understanding of what each CLAHRC is seeking to achieve and why the CLAHRCs think their projects will work (their 'theory of change'). In collaboration with the CLAHRCs we then aim to map out the sequence of events connecting their actions to their intended impacts (often known as 'logic modelling'). Behind this approach lies the belief that projects and interventions have effects because they trigger causal mechanisms whose effects may be masked, undercut, or amplified by different contexts.

Our evaluation is neither intended nor expected to be a complete evaluation of all of the CLAHRCs. Three other teams are conducting evaluations based on institutional theory, implementation research theory, and network theory respectively. Each explores specific aspects of the CLAHRCs. The CLAHRCs are also undertaking their own internal evaluations. There will therefore be available a range of evaluative evidence from across all the evaluations to support overall conclusions and judgements.

In our first phase of research, we found that the intended outputs, outcomes and impacts of the CLAHRCs became clearer than they were at the start of the initiative. In a variety of ways, CLAHRCs are each seeking to change the way research is done and the way the NHS uses research in commissioning, managing and delivering services. However, the diversity of approaches is significant: important differences are emerging between the CLAHRCs. These include how stakeholders relate one to another, how cultures and values are changed, and how infrastructures are developed to support the CLAHRC.

The existing literature is rich and suggestive but lessons are difficult to transfer to the CLAHRCs

We know that the gap between the outputs of the health research system and actual practice in health care is substantial. However, although the problems have long been recognised, and were reiterated in the UK in the Cooksey Report (HM Treasury 2006), evidence on how to solve the problem is patchy and often difficult to act upon. Despite a variety of empirically rich literature to learn from¹ the evidence base for decision makers still has important limitations. This is sometimes because evidence is not described in sufficient detail for lessons to be transferred, or sometimes because the contextual factors are inadequately identified so that their generalisability is limited. In Chapter 2 we report on a review of the literature and of some of the programmes to encourage evidence-based care that preceded the CLAHRCs. The factors thought to be associated with success include: strong leadership; a favourable political conjuncture and careful management of tensions; and successfully satisfying the different needs of participating institutions. The literature also suggests that complex projects take considerable time to become established; often requiring more than five years to demonstrate impacts.

¹ e.g. Greenhalgh et al. 2004; Estabrooks et al. 2008; Mitton et al. 2007; Wilson et al. 2010; Damschroder et al. 2009; Hanney et al. 2007; Eccles et al. 2005; Grol et al. 2007
In the wider literature, there are notable contributions to understanding knowledge transfer and exchange. These stress the interactive processes between research users and research producers, the role of dissemination and communication, the implementation of new knowledge, and organisational change needed to accommodate this. We also considered sociological contributions to the framing, mediation and utilisation of evidence. This sensitised us to an important dimension relating to CLAHRCs: that the reception and use of evidence is shaped by communities of practitioners (Milewa and Barry, 2005; Ling, 2010). This is of central importance to the CLAHRCs. What counts as evidence, and how different evidence should be prioritised, varies in different groups such as: clinicians, managers, researchers, expert patients, the public and policy makers.

The literature identifies logic models as a useful way of understanding complex interventions such as CLAHRCs. Models can help frame our understanding of interventions such as CLAHRCs. Models facilitate communication and focus attention on the key steps along the causal pathways. In this sense they describe key elements in a process (see Figure 1 below). A theory of change based on such a model sets out the building blocks needed to deliver a programme goal and explores the assumptions about the underlying logic of the CLAHRC (Connell and Kubish, 1998; Weiss, 1995). A theory of change-based evaluation helps build a detailed understanding of both how and why a desired change is expected to occur in a specific context (Pawson and Tilley, 1997), and within such an approach, logic modelling provides a useful evaluation and learning tool. Logic modelling was popularised in the 1990s as a way of capturing complex initiatives and graphically illustrating program components to help stakeholders clearly identify outcomes, outputs, inputs and activities (i.e. processes, interventions) (Proteous, Sheldrik and Stewart, 2002). In keeping with Greenhalgh et al’s review (2004), we agree that models should be evidence based to be useful. And in keeping with Powell, Rushmer and Davies (2009), we agree that logic models for CLAHRCs should recognise that CLAHRCs pragmatically select different aspects of varying intervention approaches, and then apply them to the local context.

In phase 1 of our evaluation we applied this approach to the CLAHRCs as they became established and started to deliver change. CLAHRCs are not pre-defined entities. Our approach recognises that each CLAHRC is created by the people and groups in it. Our experience of the CLAHRCs to date has been that much effort has been focused on this construction process itself. In phase 1 of our evaluation we aimed to understand these changes and to identify key questions for phase 2. We recognise that not only does each CLAHRC have to be built by the people in it but also it involves a diverse set of activities which have progressed to different degrees and which more or less cohere. Consequently, we need to qualify evaluation questions such as ‘How, and how effectively, do CLAHRCs support local health service research and practice?’ in favour of a more nuanced approach, asking ‘What various activities have been done to construct and maintain CLAHRCs?’ ‘What consequences have these activities had for the behaviour of research producers and research users?’ ‘How might these behaviour changes influence health services and patient care?’. However, whilst recognising that CLAHRCs are very diverse, their initial funding and establishment coupled with their subsequent mutual learning means that we can identify some over-arching features. Our current overview (which will continue to evolve) is summarised in Figure 1.
We are confident that this overarching view is well-founded but our detailed understanding of individual CLAHRCs is more provisional than we hoped it would be when we began phase 1. First, we were encouraged to share data collection with another evaluation team in order to limit the burden on the CLAHRCs. This led to problems in securing access to all the interview transcripts. Secondly, for understandable reasons, the CLAHRCs were not equally accessible, so we have more data on some than on others. Thirdly, the CLAHRCs continued to evolve as they adapted to learning, local pressures and national priorities; none claims to be ‘the finished article’. Despite these challenges, we have had access to widespread written materials from SDO and the CLAHRCs, and have interview transcripts from almost fifty key informants from across all the CLAHRCs. We have attended meetings in all the CLAHRCs except Birmingham and Black Country, and South Yorkshire, both of which politely declined the offer to be involved. Most of the meetings involved workshops ranging from two to four hours in length.

Despite these limitations, from evidence gained from the CLAHRCs, and from the wider literature, we may identify and organise their activities and associated challenges into three broad categories. These are: structural and political; cultural, educational and norm-related; and infrastructure-related. Each CLAHRC is attempting to create a systematic shift in the relationships between health research and health care and uses a variety of activities under each of these categories. This reflects an emerging understanding which we hope to strengthen in further phases of the study.

**Structural and political:**

‘Political’ in this sense relates to how stakeholders with different interests, goals and identities can work together in pursuit of common goals, or how disputes and conflicts are managed and resolved. Failure to address this political challenge would most likely lead to key stakeholders abandoning or disrupting the project or to short term compromises leading to long-term problems. It is especially relevant because CLAHRCs involve changing practices in ways likely to privilege some stakeholders or interests over others.

CLAHRCs have worked creatively to establish governance and accountability arrangements to provide structures for decision making and discussion, along with implementing new organisational structures. Specific activities range from seeking to establish new personal and professional goals to establishing new, stable networked structures to support communication, negotiation and change among research users and research creators. Across the CLAHRCs, there is a variety of combinations of centralised structures for setting direction, combined with devolved responsibility. Too much centralisation may stifle creativity while too little may lead to incoherence and entropy. Approaches to centralisation and devolution vary across different CLAHRCs. Equally, different ways of managing dual R&D governance systems (NHS and academic) within the CLAHRC structure are still being developed (including mechanisms for releasing individual time to contribute to CLAHRC activities).

All CLAHRCs have secured some agreement from partners for themes designed to fit with local and/or national healthcare priorities. Within this agreement, the relative weight of
research delivery versus research implementation varies. Equally, while all CLAHRCs are pursuing joint working and learning across different themes, the activities and structures through which link one theme to another are varied. The comparative emphasis on generating new research evidence, as opposed to implementing existing streams of evidence in services, also differs across the CLAHRC landscape and, indeed, this balance may be changing over time.

In addition, CLAHRCs recognise that they are part of a broader landscape of health service improvement activities. This creates both opportunities for greater impact from synergies between multiple national and regional efforts, as well as challenges associated with identifying complementarities and coordinating activities. Most CLAHRCs are also facing challenges associated with changes in the broader political landscape and its impact on the organisation of health services (e.g., changes in commissioning). Similarly, the ways by which NHS commissioners and managers are integrated into processes for identifying research questions in CLAHRCs, and implementing results, should be explored further. CLAHRCs all identify the continuation of funding beyond the first round as key for sustainable impact.

Cultural, educational and norm related:

All CLAHRCs also identify the need to change attitudes and norms of both individuals and groups, and to mobilise multiple stakeholders around a common mission. The ‘recruitment’ of leaders and managers who are experienced with working across NHS and academic boundaries, and investments into ‘training’ the next generation of such ‘boundary spanners’, have been central to this effort. According to one CLAHRC, at least, the creation of organisational cultures to support collaboration between different disciplines, professions and stakeholder groups is equally important. Some examples of mechanisms to change culture and norms include joint project work in multidisciplinary teams, meetings designed to share thinking, secondments, fellowships, engaging patients and the public, and raising the profile of applied research amongst clinical and academic staff. By the end of our Phase 1, cultural changes appear to have happened in pockets within organisations, but the scalability of such change (and variables influencing it) remains to be explored. The extent to which the leadership of CLAHRCs is clinically or academically driven, as well as the nature and scale of NHS senior and middle management involvement in CLAHRC activities, is another area we hope to better understand through the next phase of our research. Similarly, there is scope to further explore the influence of patients and the public on how research and implementation activities unfold: early insights suggest there is substantial diversity in the scale and scope of expert patient and public involvement across the CLAHRCs.

Infrastructure

Finally, each CLAHRC is aware of the importance of building an infrastructure able to sustain and support their activities (including information technology and financial systems). This includes finding ‘smarter’ ways to make optimal use of existing resources, as well as investments in new infrastructure. Some CLAHRCs (or themes within them) are pursuing co-localisation strategies and perceive this to be a significant enabler of multidisciplinary collaboration. In others, individuals and organisations operate through more virtually connected environments. Most CLAHRCs are investing in improving IT
systems for data storage, sharing and general communication between different stakeholders.

**Next steps**

Phase 2 of our evaluation is to investigate CLAHRC processes in more detail and to focus on key questions. We could not investigate all the processes in each CLAHRC so to help us prioritise we developed pragmatic criteria. The aspects we wanted to examine should be:

- relatively under-researched (as identified through our literature review)
- potentially high impact with transferable lessons
- relevant to the success of the CLAHRCs
- not covered by one of the three other evaluations
- capable of being researched across more than one CLAHRC to support comparisons and contrasts.

Within these pragmatic criteria we developed research criteria drawing on our assessment of individual CLAHRCs, together with inputs from the wider literature and our advisory group. We shall re-engage with our Advisory Group and include the CLAHRC Directors and the SDO in a discussion about the final selection. The long list is as follows:

1. How do CLAHRCs fit into the broader translational research and implementation landscape of the NIHR (and other funders) at present, and how might they fit in the future?
2. High levels of NHS involvement underpin the CLAHRC ethos and theory of change. What is the real scale and scope of NHS involvement in CLAHRCs, and at what levels? How does the nature and extent of NHS involvement influence their evolution, outcomes and impacts?
3. What is the impact of different governance and management structures on CLAHRCs’ activities and outputs?
4. What levels of operational flexibility do CLAHRCs need in order to deliver on their goals effectively, and how is such flexibility best enabled and nurtured?
5. How are effective multiple-stakeholder and multidisciplinary research and implementation teams for service improvement built? What can we learn from the CLAHRC model and what mechanisms are being used to enable this?
6. What are the different models of public and patient engagement at play in CLAHRCs? What value has PPI brought?
7. What can we learn from the CLAHRCs that can cast new understanding on how to use research knowledge and evidence to change commissioning and clinical behaviour for patient benefit?
8. What value does a CLAHRC bring to the different stakeholders involved? What does it mean to different parties?

The final selection from these questions, derived from our study so far, will form a basis for launching Phase 2.
1.1 **Nine CLAHRCs and four evaluations**

This report marks the completion of the first phase of research by the evaluation team from RAND Europe and the Health Economics Research Group (HERG) at Brunel University. The evaluation is one of four evaluations funded to assess aspects of nine Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) established in October 2008 by NIHR, each funded for up to £10m for five years. CLAHRCs aim to strengthen collaborations between universities and local NHS organisations so that patient outcomes are improved through the conduct of applied health research and its implementation. These collaborations share a common purpose but fulfil them in diverse ways, according to local circumstances and the priorities of the local health and research communities. The nine CLAHRCs and their host organisations are:

<table>
<thead>
<tr>
<th>Name of CLAHRC</th>
<th>Lead NHS Organisation</th>
<th>Academic Partner(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIHR CLAHRC for Birmingham &amp; Black Country</td>
<td>University Hospital Birmingham NHS Foundation Trust</td>
<td>University of Birmingham</td>
</tr>
<tr>
<td>NIHR CLAHRC for Cambridgeshire &amp; Peterborough</td>
<td>Cambridgeshire &amp; Peterborough Mental Health Partnership NHS Trust</td>
<td>University of Cambridge</td>
</tr>
<tr>
<td>NIHR CLAHRC for Greater Manchester</td>
<td>Salford Teaching Primary Care Trust</td>
<td>University of Manchester</td>
</tr>
<tr>
<td>NIHR CLAHRC for Leeds, York &amp; Bradford</td>
<td>Leeds Teaching Hospitals NHS Trust</td>
<td>University of Leeds University of York</td>
</tr>
<tr>
<td>NIHR CLAHRC for Leicestershire, Northamptonshire &amp; Rutland</td>
<td>University Hospitals of Leicester NHS Trust</td>
<td>University of Leicester</td>
</tr>
<tr>
<td>NIHR CLAHRC for North West London</td>
<td>Chelsea &amp; Westminster NHS Foundation Trust</td>
<td>Imperial College London</td>
</tr>
<tr>
<td>NIHR CLAHRC for Nottinghamshire, Derbyshire &amp; Lincolnshire</td>
<td>Nottinghamshire Healthcare NHS Trust</td>
<td>University of Nottingham</td>
</tr>
<tr>
<td>NIHR CLAHRC for South West Peninsula</td>
<td>NHS South West</td>
<td>University of Exeter University of Plymouth Peninsula Medical School</td>
</tr>
<tr>
<td>NIHR CLAHRC for South Yorkshire</td>
<td>Sheffield Teaching Hospitals NHS Foundation Trust</td>
<td>University of Sheffield Sheffield Hallam University</td>
</tr>
</tbody>
</table>
The four evaluation titles and their chief investigators are:

<table>
<thead>
<tr>
<th>Title</th>
<th>Chief Investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>A formative evaluation of CLAHRCs: institutional entrepreneurship for service innovation</td>
<td>Lockett A</td>
</tr>
<tr>
<td>Narrowing the second translation gap: evaluating CLAHRCs' potential, strategies and contributions</td>
<td>Ling T</td>
</tr>
<tr>
<td>Networked innovation in the health sector: comparative evaluation of the role of CLAHRCs</td>
<td>Scarbrough H</td>
</tr>
<tr>
<td>Evaluating CLAHRCs in action: process, impact and theory development</td>
<td>Rycroft-Malone J</td>
</tr>
</tbody>
</table>

### 1.2 Purpose and structure of the report

In an evaluation approach designed to develop as the CLAHRCs themselves establish their ways of working, we have begun to explore the various processes and structures being set up to improve the local capacity to undertake and use research. In phase 2 we shall examine specific aspects of these approaches in more detail; at this stage our aim is to make sense of what the CLAHRCs initiative is beginning to deliver and how this relates to the wider literature.

Following this introduction, in this report we first outline the CLAHRC approach in context, identifying both important related institutional innovations and key literature regarding previous research on CLAHRC-related goals. In chapter 3 we outline our study design and methodological approach and this might be read in conjunction with appendix A where we reproduce our study protocol. In chapter 4 we outline the CLAHRC landscape, providing an overview of each CLAHRC. Chapter 5 identifies the common and different themes existing across the CLAHRCs and identifies our key themes for phase 2 of the evaluation.

### 1.3 Context and approach of the evaluation

The Cooksey Report on UK health research funding (HM Treasury 2006) identified two gaps in the translation of health research:

- translating ideas from basic and clinical research into the development of new products and approaches to treatment of disease and illness.
- implementing those new products and approaches into clinical practice.
The NHS Next Stage review followed the Cooksey Report up arguing there were cultural, professional and organisational barriers to effective innovation and relevant research.\(^2\) Subsequently the landscape of health service innovation and research was reshaped with attention paid both to the activities priorities of researchers (‘supply’) and the translation of research findings into practice by clinicians and managers (‘demand’). Proposed new institutions included academic health science centres (AHSCs), health innovation and education clusters (HIECs), biomedical research units (BRUs) and biomedical research centres (BRCs). The distinctive feature of CLAHRCs within this landscape was that they should have a wider, integrating role across a wide range of local organisations, potentially including NHS Trusts, Primary Care Trusts, universities, and industries. Depending on local circumstances, they might also relate to the work of other parts of the landscape such as BRUs/BRCs and HIECs.

Our evaluation of the CLAHRC initiative addresses the issues described by Cooksey as the second translation gap. We use of the words ‘bridge’ and ‘gap’, but with a caveat that they may be misleading. We do not see the process of research implementation as a linear progression. For example, the translation and implementation of research in practice will depend in part on the relevance, quality and usefulness of the research itself to service needs. That will depend on the ways in which research agendas are set, research processes implemented, and research knowledge communicated and exchanged. Generating, translating and adopting knowledge is likely to involve iteration and feedback between multiple actors involved to varying degrees in different phases; therefore implementation activity cannot be studied in isolation from research generation activity. The idea of building a single fixed bridge between two otherwise unchanging sides has little resonance with the experiences of CLAHRCs to date. In an evaluative approach that develops as the CLAHRCs we shall look at the new processes and structures being established to improve local capacities to undertake and use research.

Our main focus is therefore on examining the impact of CLAHRCs on generating new forms of knowledge and its application in clinical practice. This evaluation seeks to answer one overarching and three subsidiary questions:

- **How, and how effectively, do CLAHRCs address the second translation gap?**
  - How, and how effectively, do CLAHRCs support local health research?
  - How, and how effectively, do CLAHRCs build local infrastructures to utilise globally and locally generated health research for local patient benefit?
  - Does bringing together activities for health research and activities for delivering health research benefit both sets of activities equally (e.g. by stimulating local research that is more relevant to the needs of patients or by encouraging a research-literate local community of service providers and users)?

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The questions may be represented diagrammatically below:

This is a three-year project with three phases:

- **Phase 1**: Identification of types of interventions (combinations of interventions) adopted by the CLAHRCs, based upon the implicit or explicit theory of change (discussed below) associated with them.
- **Phase 2**: Selection of a small number of processes to examine and learn from in more detail.
- **Phase 3**: Reflection on the particular contributions that studying CLAHRCs have made to our understanding of the second translation gap and ways of addressing it, and development of conclusions and recommendations for policy-makers and practitioners.

Our style of working has been and will continue to be collaborative (with CLAHRCs and with other evaluation teams) and we hope to contribute to shared learning and improvement during the lives of the CLAHRCs. Our anticipation is that we shall reduce uncertainty about what works in what contexts, and through doing so provide pragmatic support to future decisions.
CHAPTER 2

The CLAHRC
approaches in context

‘It’s not like there is one gap between the researcher and the user of knowledge. There is a lot of
information exchange along the whole process, bits at a time, so that meaning is developing and
evolving as the research unfolds. It is an iterative process in the system.’
Interviewee, Cambridge and Peterborough CLAHRC

The CLAHRCs aim to encourage and strengthen collaborations between universities and
local NHS organisations so that patient outcomes are improved. This is not the first time
that efforts have been made to achieve such strengthened collaborations and nor is it the
first time that the area has been researched. There is therefore a contextual back-drop of
research and practice within which the CLAHRCs are operating. We thought it important
to address this not only because it could sensitise us to the sorts of barriers and facilitators
previously identified but also because this provides part of the explicit and implicit frame
of reference within which practitioners and policy makers may be operating. This is not
intended to be a systematic investigation (which would exceed the resources available) but
it is intended to provide significant insights and questions to help us identify what is
important, distinctive and especially interesting about the CLAHRCs.

We start this chapter with a brief description of how the problem of gaps in translation is
viewed. We will then consider how, if at all, CLAHRCs might be viewed as a (partial)
solution to these problems. Section 2.2 outlines significant previous initiatives from
around the world for addressing the policy problem, drawing out key lessons that may be
relevant to the CLAHRCs. We then explore the intellectual antecedents of the CLAHRCs –
the theories that have sought to find some causal relationships between research and
practice. Section 2.4 brings together themes and concepts to build up a realistic model of
the environment in which the CLAHRCs operate. Section 2.5 draws on sociological
perspectives that become increasingly relevant as we move on to clinical practice and
application. This is followed by a concluding section.

2.1 The application and conduct of applied research

This section discusses some of the challenges of collaboratively drawing together the
activities of health and medical research, on the one hand, and health and social care
practice, on the other. We primarily draw upon examples from the USA and the UK but
this is not intended to be a comparison since the funding and delivery contexts of health care and health research are very different in each case.

2.1.1 Gaps in translation

Across developed health care systems, much of the care provided is not consistent with the recommendations derived from research. Multiple sources of evidence suggest that around half the healthcare delivered is not in line with recommendations. There is evidence from the USA that care received matches recommended care on only 55% of occasions (McGlynn et al. 2003). This problem is not unique to the USA: healthcare in all high-income countries is characterised by substantial divergence between recommended practice and care. A systematic review of the quality of clinical care in general practice in Australia, New Zealand and the UK found that, even in the best-performing practices, only 49% of patients with diabetes had undergone routine foot examinations and only 47% of eligible patients had been prescribed beta blockers after a heart attack, despite these being the official care recommendations (Seddon et al. 2001). In the UK there are indications that the situation is especially poor for those over the age of 50 and in areas associated with disability and frailty (Steel et al. 2009).

These problems have been recognised for a long time. Programmes to encourage the implementation of research findings and evidence-based care recommendations were set up in Canada in 1992 and in 2001, in the UK in 1994, and in the USA in 1998. In 2001 the US Institute of Medicine raised the profile of Quality Improvement in healthcare (Institute of Medicine 2001), emphasising this gap between research findings and healthcare practice. In 2003 there was a further development when the Institute of Medicine set up a clinical research round table that identified two ‘translational blocks’ or ‘translational gaps’ in clinical research:

1. The transfer of new understandings of disease mechanisms gained in the laboratory into the development of new methods for diagnosis, therapy and prevention and their first testing in humans.
2. The translation of results from clinical studies into everyday clinical practice and health decision-making (Woolf 2008).

In the USA investment in health research is much greater than in the UK but few resources have been directed to translation. The bulk of federal funding for research on translating and implementing research has for many years come from the Agency for Healthcare Research and Quality, and amounts to around $300 million per annum, just 1% of the National Institutes of Health (NIH) budget (Woolf 2008). In 2006 the NIH launched an additional Clinical and Translational Science Award programme intended to address the first and second translation gaps. In practice the main focus has been on the former gap.

Despite a promising start in the 1990s, the situation in the UK remained similar for the following two decades, with few resources for addressing the translation gaps. In 1994 the NHS R&D Implementation Methods Programme (IMP) was established with an overall budget of £4 million. When the programme ended five years later the impact of this

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3 For context, total NHS R&D was about £400 million (Department of Health: Supporting Research and Development in the NHS. A report to the Minister for Health by a Research and Development Task Force chaired by Professor Anthony Cuyler. London: HMSO; 1994).
limited resource was lost (Soper and Hanney 2007); and by 2006, when the Cooksey Report was published, there was no current UK funding stream for implementation research. Cooksey drew attention to the gaps in the translation of health research previously identified in the USA, commenting ‘until recently, the culture and structure within the NHS did little to enhance the reputation or impact of applied research. This has impacted on the UK’s ability to translate research into patient benefit (HM Treasury 2006).

Following Cooksey, efforts to translate research into patient benefit moved up the UK health research agenda. In April 2007 the newly established NIHR funded 12 Biomedical Research Centres (BRCs) designed to address the first translation gap; drive innovation in the prevention, diagnosis and treatment of ill-health; and translate advances in biomedical research into benefits for patients. Shortly afterwards 16 smaller and more specialist Biomedical Research Units (BRUs) were established with the same remit and a similar focus. (Spend per year on the BRCs is £117 million and on the BRUs it is over £20 million.) In 2008 the NIHR funded the nine CLAHRCs with an overall budget of £88 million over five years, matched by local funding. The aim of the CLAHRCs was to ‘forge a mutually beneficial, forward-looking partnership between a University and the surrounding NHS organisations, focused on improving patient outcomes through the conduct and application of applied health research’ (NIHR/SDO 2009).

2.1.2 Collaborative research

The CLAHRCs have a remit to identify and address problems facing the NHS and its patients through the application and the conduct of applied health research. Their focus is therefore not only on the translation of research (whether undertaken locally or elsewhere) but also on developing ways of doing applied research that maximise its chances of being useful to the service and of being implemented.

The CLAHRCs are the latest attempt to develop a health research system that meets the needs of the UK healthcare system (Kogan et al. 2006; Hanney et al. 2010). In 1991 an innovative NHS R&D programme was launched in England to strengthen public health and health services research and ensure that the content and delivery of healthcare were based on high-quality research (Department of Health, R&D Division 1991). This initiative built on previous Department of Health attempts to generate research that met the needs of policy-makers. The evaluation of this previous experiment emphasised the importance of users of applied health research and researchers working closely together to develop agendas to meet the needs of the healthcare system (Kogan et al. 2006). In the same spirit, the NHS R&D programme was intended to be driven by the needs of the NHS and to be fully integrated into its management structure, with regional R&D offices providing a local focus for collaboration (Peckham 1999; Black 1997).

Collaborative models such as these aim to increase the implementation of research by undertaking applied health research that is directly relevant to the healthcare system (Denis and Lomas 2003). In practice, effective collaboration between researchers, clinicians and managers has sometimes proved elusive. In England entrenched cross-cultural differences and ongoing reorganisations of NHS structures meant that the hoped-for exchanges were not fully realised (Black 1997; Lomas 2003), although later this approach was successfully developed elsewhere in the ‘linkage and exchange’ model used by Lomas for the Canadian
Health Services Research Foundation – see below (Lomas 2000; Lomas 2007). In the UK the creation of the NIHR in 2007 and its subsequent initiatives represent new attempts to integrate the health research system into the healthcare system. The CLAHRCs, with their remit to conduct applied health research and encourage the implementation of research, potentially have an important role in these new structures. Their role was recently endorsed in the 2010 White Paper (Department of Health 2010).

2.2 Previous programmes of relevant research

This section summarises other programmes and initiatives relevant to an evaluation of the CLAHRCs. We first outline the literature around previous programmes with similar aims to those of the CLAHRCs. These start with the 1992 Quebec Social Research Council (CQRS) Programme Grants and go through to the Need to Know Project in 2001. We then explore what the literature tells us about two key questions relevant to the CLAHRCs: what can we learn from the literature on the diffusion of healthcare research, and what can we learn from the literature on the framing, mediation and utilisation of evidence? This is not intended to be a systematic review but rather it is intended to provide a backdrop of some of the institutional and analytical insights that help us to locate the CLAHRCs initiative.

2.2.1 CQRS Programme Grants (1992)

In 1992 the Quebec Social Research Council (CQRS) introduced a grant programme to encourage collaboration between researchers, practitioners and policy-makers with the aim of delivering health benefits. The programme’s aims were to:

- introduce a culture of research within action settings, which are often isolated from social sciences;
- introduce a culture of action into research settings, increasing the pertinence and usefulness of the research produced;
- create an improved context for the training of young researchers and practitioners.

The ten-year programme offered infrastructure funding for research teams interested in developing programme-based partnerships between university researchers and the institutional sector. It introduced a range of requirements for the organisational structure of the partnerships (co-direction from a researcher and practitioner, independent secretariat, etc.) to ensure effective integration, as well as offering long-term funding to ensure stability.

Antil et al. (2003) analysed the implementation of the CQRS (based on consultations with key informants from the programme). Their analysis did not assess the impact of the CQRS on the quality, application and productivity of social research, but it noted that the teams supported by the CQRS were involved in the research and development of many innovative social programmes that were widely implemented across Quebec, that the principal stakeholders considered it to be a success, and that the CQRS model had influenced other research foundations in Canada.
The following factors were thought to have explained the success of the CQRS programme:

- **Leadership and coherence in implementation**: All the partners found benefits in the programme, thus ensuring buy-in. The flexibility and long-term nature of the funding provided time and space to build partnerships. It provided effective and inspiring institutional leadership by presenting a well-designed programme and executing it effectively and efficiently.

- **Favourable political and social conjuncture**: It was linked to a broader strategic framework, and the partnerships were required to provide demonstrable proof of their results.

- **Ability to respond to the needs of institutions providing services and formulating policy**: It improved access to useful research for health service providers and policy-makers through increased contact and interaction with researchers, and was also effective in bringing together the different cultures of action-based policy-makers and healthcare practitioners and university-based researchers. Decision-makers’ receptive capacities for research results were improved.

- **Responsive to the needs and expectations of universities**: It gave universities leverage to obtain other funding, and made them more receptive to collaborative schemes.

A contemporary study (Denis et al. 2003) explored the views and experiences of the researchers and practitioners involved in the CQRS programme, with similar findings. The programme was viewed positively by participants and had significant outcomes in terms of building the skills and mind-sets to facilitate future collaborations, as well as building a culture of experimentation. There were positive changes in the attitudes and receptiveness of both researchers and practitioners, and a convergence of views about the importance and value of collaborative research.

### 2.2.2 NHS R&D Implementation Methods Programme (1994)

The NHS R&D Implementation Methods Programme (IMP) was set up in 1994. It was the last of a series of time-limited topic-specific R&D programmes that were otherwise developed largely with clinical research in mind, covering fields such as mental health and cancer. The IMP spanned a wider range of research fields, including social science, policy and management. With a budget of £4 million, the IMP funded 36 time-limited projects exploring issues of research implementation. It ended early because of external changes to the structure and remits of the NHS, and the full programme was never realised.

An evaluation carried out in 2002 (Soper and Hanney 2007) regarded the programme as highly innovative. Some of the projects funded had considerable impact but the IMP as a whole was hampered by not being well understood by the largely clinically based researchers who responded to the call for proposals. Specific difficulties (and insights of importance for initiatives such as CLAHRCs) were:

- tensions between the perceived need for immediate demonstrable relevance to practice and to more academic methodological/conceptual issues;
- the low quality of many applications;
- the lack of a programme-wide tailor-made communication strategy to support interactions among stakeholders, including the potential users of research findings.
The last of these was a significant shortcoming – such a strategy was planned but was not realised because the IMP ended earlier than planned. Many of the problems encountered by the IMP came about because it was too ambitious given the state of knowledge at that time. The evaluators suggested that it might have been better to build the programme gradually, learning from experience as it developed.

2.2.3 QUERI (1998)

The Quality Enhancement Research Initiative (QUERI) programme was launched in 1998 as part of a restructuring of the US Veterans Health Administration. It continues to this day. QUERI seeks to accelerate the implementation of new research findings into clinical care by creating a bridge between those performing research and those responsible for health system operations. QUERI researchers collaborate with policy-makers and healthcare professionals to implement evidence-based practices into routine use, working within disease- or condition-specific units. The model is based on six logical steps:

1. Identify high-risk/high-volume diseases or problems
2. Identify best practices
3. Define existing practice patterns and outcomes and variation from best practice
4. Identify and implement interventions to promote best practices
5. Document that best practice improves outcomes
6. Document that outcomes are associated with improved quality of life.

The implementation stage, step 4, is generally subdivided into four phases to ensure effective roll-out (the planned action model; Atkins 2009):

1. Single-site pilot
2. Small-scale multi-site trial
3. Large-scale, multi-region trial

An overall evaluation of the programme and the many papers it has produced has been published (Graham and Tetroe 2009). This found that the programme had represented a 'paradigm shift to action-orientated research' and had utilised and substantially contributed to the implementation literature. The QUERI programme demonstrates the extent to which change takes time and persistence – benefits in terms of health gain were starting to emerge only in 2009, when this evaluation was published.

The evaluation also found that the QUERI approach had been a significant contribution to the field of implementation and had contributed to debates about the ethical issues relevant to implementation research, the need for economic evaluations, and the need to sustain change. The overall conclusion of the evaluation was resoundingly positive (Graham and Tetroe 2009):

QUERI can be considered a national case study that reveals that changing a healthcare and research system by re-orienting efforts toward the implementation of best practices is a complex, long, and never-ending process, but the potential gains in health outcomes make it worth it. The QUERI Series also illustrates the value of working top-down and bottom-up, if not simultaneously, then iteratively. In other words, clear vision and leadership,
supported by frameworks and tools, as well as a responsive collaborative team-focused work force is a winning combination for innovation within the health system.

Atkins (2009) notes that the QUERI programme and implementation research have both come of age, and discusses some of the challenges to come. These are as follows:

1. *Tying implementation science to more effective implementation*: Going beyond basic discovery (i.e. listing lessons learned) and using and testing the increasing number of theoretical implementation models described in the literature.

2. *Methodological debate*: Ensuring that evidence is both valid and acceptable, and that all relevant methodologies are considered without prejudice in order to foster timely improvements in care while protecting against ineffective or even harmful change.

3. *Ensuring that implementation research becomes more relevant to the daily decisions of key stakeholders*: Aligning the priorities of research and the healthcare system as early as possible.

4. *Developing adequate and useful economic evaluations of implementation interventions*: Promoting economic analyses and aligning economic models more closely with the budgeting and decision-making processes.

5. *Developing capacity*: Nurturing new implementers (front-line connectors) and new implementation researchers.

6. *Strengthening connections to other operational and research activities that influence change in the healthcare system, such as QI, continuing education and health informatics*: Aligning with existing priorities.


8. *Demonstrating impacts on health and healthcare that are meaningful to key stakeholders*: Showing what difference implementation research makes.

2.2.4 **Need to Know Project (2001)**

In 2001 the Canadian Institutes of Health Research funded the Need to Know project in Manitoba. This project built on an existing relationship between the Manitoba Centre for Health Policy and the provincial health authority, Manitoba Health, and was designed to address the need for research to support the decision-making of rural/northern regional health authorities, to promote and develop models of collaborative research and, ultimately, to improve health outcomes.

An evaluation of the Need to Know project was published in 2005 (Bowen and Martens 2005). This concludes that much of what was discovered through this project about knowledge translation was not new and, after initial scepticism, turned out to be equally well understood by researchers and community partners. There were clear messages about:

- importance of building trust between partners through formal and informal contacts;
- need to overcome institutional barriers (such as understanding the time and resource limitations of partners);
- need to develop a common language and culture;
• recognising that time is required to build relationships and generate useful outcomes.

Participants regarded the relationships created by the project as its most significant outcome, and their creation as one of its most difficult challenges. The emphasis on capacity-building included helping practitioners to engage better with research, helping researchers to understand more fully the practicalities of healthcare and the needs of patients, and building organisational capacity in all the partner organisations to identify, develop and implement well-founded and useful research.

2.2.5 Drawing key lessons from other relevant programmes

In this short section we draw together some key lessons for leaders of CLAHRCs and for policy makers.

Key lesson from CQRS

The aims of the CQRS programme are very similar to those of the CLAHRC scheme. The following lessons on success factors gained from the CQRS programme are relevant when exploring the CLAHRCs scheme:

1. Leadership and coherence in implementation
2. Favourable political and social conjuncture
3. Ability to respond to the needs of institutions providing services and formulating policy
4. Responsiveness to the needs and expectations of universities.

Key lesson from IMP

The IMP was the first attempt in England to set up a programme of implementation research. When it was established there was no formal differentiation of the gaps in translation. The focus followed the applied, needs-based emphasis of the NHS R&D programme, and concentrated largely on what is now recognised as the second translation gap. In the context of evaluating and understanding CLAHRCs’ evolution and performance, the IMP experience highlights the dangers of having insufficient time to build up programmes of work on research implementation, and to develop capacity among all partners in the programme, strong and productive interaction between different groups and a well-designed communication strategy.

Key lesson from the Quality Enhancement Research Initiative

The lessons from QUERI are integral to addressing translation gaps and, therefore, to the CLAHRCs, and we note that the Leicestershire, Northamptonshire and Rutland (LNR) CLAHRC cites the Quality Enhancement Research Initiative (QUERI) programme as a significant influence. The long timescale required to see systemic change in the QUERI programme indicates that the CLAHRCs are unlikely to produce measurable health gains over a five-year period and that health impacts may only become evident further into the future.
**Key lesson from Need to Know**
The messages from the Need to Know project focus attention onto capacity-building with a particularly strong emphasis on the importance of, and effort entailed in, building effective relationships between professional groups and stakeholders.

2.3 **Theories and conceptual frameworks on the diffusion of healthcare research**
The literature on the diffusion of healthcare research, knowledge transfer and dissemination is inherently difficult to either summarise or to aggregate. It has attracted interest from a variety of disciplines, each bringing their own conceptual frameworks and key words, such as ‘research’ (compared with ‘evidence’, ‘knowledge’, and ‘innovation’), and ‘diffusion’ (compared with ‘dissemination’, ‘exchange’, ‘transfer’, ‘learning’). This means that any attempt to discuss insights from across the disciplines runs the risk of being slightly awkward. Furthermore, the collection of data about interventions is often incomplete, lacking sufficient detail about either the nature of the intervention or the context (or both). This has resulted in a proliferation of theories, terminologies and approaches that are hard to synthesise and align. Here we describe, as authentically as we can, different insights from some key approaches towards establishing causal relationships between research production and research use.

2.3.1 **Research diffusion and knowledge utilisation**
There is a wide literature on research diffusion and knowledge utilisation, concepts central to the working of CLAHRCs. Two key papers are discussed here, both much cited. Estabrooks *et al.* (2008) suggest that research on knowledge utilisation has evolved through a series of paradigms in which certain disciplines seem to have dominated at different stages. In contrast, Greenhalgh *et al.* (2004) suggest that many streams of research have explored research diffusion in parallel. We are persuaded by Greenhalgh and colleagues and are inclined to heed their recommendations on how research translation should be studied. For CLAHRCs, the important lesson is that when discussing research diffusion and knowledge utilisation there is no single, stable and agreed conceptual framework and this requires being sensitive to how terms are being used and to recognise that the same concept may have different meanings. It also means that there is no off-the-shelf conceptual model that can be used without the potential for confusion.

Greenhalgh *et al.* (2004) is a wide-ranging literature review that focuses primarily but not exclusively on the diffusion of healthcare research, addressing specifically how we can spread and sustain innovations in health service delivery and organisation. Estabrooks *et al.* (2008) traced the development of the field of knowledge utilisation between 1945 and 2004. Both papers emphasise the wide range of research traditions involved (Greenhalgh lists 13) and explain how an early emphasis on diffusion research (Greenhalgh) or knowledge utilisation (Estabrooks) broadened to cover other fields. Greenhalgh cites the emergence of development studies (covering the different contexts and meaning or value of innovations) and health promotion; Estabrooks notes the emergence of diffusion of innovations and technology transfer. Both papers identify the emergence of evidence-based medicine (EBM) in the mid-1980s. Greenhalgh discusses the relevance of the organisation and management literature.
These are rather similar accounts of the history of the research field, but there are substantial differences in how the authors interpret and use their findings. Greenhalgh et al. (2004) see the various strands of thought as influential and attempt to identify the interactions and linkages between them, developing ‘a unifying conceptual model’ to consider the diffusion of innovations in healthcare organisations (see below). This model attempts to combine the large and diverse literature and is intended ‘as a memory aide for considering different aspects of a complex situation and their many interactions’. Estabrooks et al. (2008) see this as a field in which one dominant approach or paradigm emerges at different times and view the story of this broad research field not just as one of a wide range of research disciplines increasingly working together, but also in terms of a shift – a replacement of one overarching theoretical paradigm in the overall field of knowledge utilisation, based on innovation diffusion, by another, EBM. The authors characterise this shift as a renegotiation of the contract between science and society, with society becoming a more active partner in the creation of knowledge. The result is the dominance of a highly prescriptive theory of knowledge utilisation based on the assumption that EBM practitioners have the best knowledge production model and have (or can get) the best knowledge.

Greenhalgh et al.’s attempt to provide an underlying framework was ambitious, but their suggestions for (and against) further research have been helpful. Others have heeded their conclusion:

A striking finding of this extensive review was the tiny proportion of empirical studies that acknowledged, let alone explicitly set out to study, the complexities of spreading and sustaining innovation in service organizations. Most studies concentrated on a few of the components depicted in our model and failed to take account of their different interactions and contextual and contingent features. This, of course, is an inherent limitation of any experimental or quasi-experimental research: the shifting baseline of context and the multiplicity of confounding variables must be stripped away (‘controlled for’) to make the research objective … But herein lies a paradox. Context and ‘confounders’ lie at the very heart of the diffusion, dissemination, and implementation of complex innovations. They are not extraneous to the object of study; they are an integral part of it. The multiple (and often unpredictable) interactions that arise in particular contexts and settings are precisely what determine the success or failure of a dissemination initiative.

Subsequent work has been informed by their general conclusions that the next generation of research on diffusion of health service innovations should be empirically driven but theory guided so that consistent processes may emerge. Future research, they argue, should also be multidisciplinary and multi-method, meticulously detailed and participatory. For this evaluation is important to take from this the central importance of context in masking, undercutting or reinforcing the intended outcomes of the CLAHRCs.

2.3.2 Knowledge transfer and exchange (KTE)

Mitton et al. (2007) published a review of the literature on KTE, and noted a growing emphasis on generating knowledge that can have a practical impact on the health system (a key driver of the CLAHRC scheme). They define KTE as ‘an interactive process involving
the interchange of knowledge between research users and researcher producers’. They qualify this, noting that knowledge transfer emerged in the 1990s as a process by which research messages were pushed by the producers of research to the users of research but that, more recently, knowledge exchange emerged as a result of growing evidence that the successful uptake of knowledge requires more than one-way communication, calling for genuine interaction among researchers, decision-makers and other stakeholders.

The major finding of this review is that ‘despite the rhetoric and growing perception in health services research circles of the “value” of KTE, there is actually very little evidence that can adequately inform what KTE strategies work in what contexts’ (Mitton et al. 2007).

2.3.3 Dissemination
There is some overlap between Mitton’s study and a review undertaken by Wilson et al. (2010) on the conceptual/organising frameworks relating to research dissemination. Although their focus is on dissemination, Wilson et al. reiterate the debate about terminology mentioned at the start of this section and note that the terms ‘diffusion’, ‘dissemination’, ‘implementation’, ‘knowledge transfer’, ‘knowledge mobilisation’, ‘linkage and exchange’ and ‘research into practice’ are all used to describe overlapping and interrelated concepts and practices. Wilson et al. define ‘dissemination’ broadly as ‘a planned process that involves consideration of target audiences and the settings in which research findings are to be received and, where appropriate, communicating and interacting with wider policy and health service audiences in ways that will facilitate research uptake in decision-making processes and practice’ (a formula that resonates with CLAHRC objectives). They note that there are currently a number of theoretically informed frameworks available to researchers that could be used to help guide their dissemination planning and activity, and identify 33, of which 28 are underpinned at least in part by one or more of three theoretical approaches; persuasive communication, diffusion of innovations theory, and social marketing. This does not provide a blueprint but, while counselling against excessively linear models, there is some need to consider effective communicating, both pushing innovations and stimulating demand, and aligning messages and target populations.

2.3.4 Theory and implementation
In a paper calling for greater use of theory in promoting the uptake of research findings, Eccles et al. (2005) describe the current situation as ‘an expensive version of trial-and-error, with no a-priori reason to expect success or to have confidence of being able to replicate success if it is achieved’. They define theory as ‘a coherent and non-contradictory set of statements, concepts or ideas that organises, predicts and explains phenomena, events, behaviour, etc.’, and, following Ferlie and Shortell (2001), note that interventions that seek to improve healthcare operate at four levels: the individual health professional, the healthcare group or team, the organisation providing healthcare (e.g. NHS trusts), and the larger healthcare system or environment in which individual organisations are embedded. Eccles et al also note that:

Because implementation research lives in a policy-relevant context where clinicians, managers, and policy makers may erroneously believe that they already know what is best to do, it will always be prey to the demands for a quick fix and
the political solution. Without a coherent attempt to address the issues raised in this article, we can look forward to reaching 2020 knowing little more than we do today.

A somewhat different account of theory emerges from Grol et al. (2007), who define it as 'a system of ideas or statements held as an explanation or account of a group of facts or phenomena', and distinguish two types of theory:

- **Impact theories**: Describe hypotheses and assumptions about how a specific intervention will facilitate a desired change, as well as the causes, effects and factors determining success (or the lack of it) in improving healthcare.
- **Process theories**: Refer to the preferred implementation activities – how they should be planned, organised and scheduled in order to be effective (the organisational plan) and how the target group will utilise and be influenced by the activities (the utilisation plan).

The ideal model for change in healthcare would encompass both types of theory. In a very wide-ranging review, Grol et al. summarise and recommend a set of 16 theories regarding change in healthcare which can be differentiated by ecological level (individual professional, social setting, organisational context, political and economic context), and conclude:

Our overview of theories is not comprehensive but is a challenge to apply theories from different disciplines to the health care setting. Overall, the lack of scientific work underpinning even some of the most popular models for change in health care is striking. ... Making explicit the theoretical assumptions behind the choice of interventions should be important to both researchers and change agents, for a number of reasons. First, the use of theory can offer a generalisable framework for considering effectiveness across different clinical conditions and settings (Eccles et al. 2005). Second, basing interventions or a change program on different theoretical assumptions should prevent overlooking important factors (ICEBeRG Group 2006). Third, a variety of factors at different levels of health care (professional, social context, organizational or economic) usually are important to improving patient care (Ferlie and Shortell 2001; Grol 1997), so hypotheses regarding effective change that are derived from different theories should be useful.

In related work Damschroder et al. (2009) develop a consolidated framework for implementation research (CFIR) based on 19 published theories and building on Greenhalgh’s 2004 review. It is a very broad approach – the authors use the term ‘theory’ to refer to published models, theories and frameworks – encompassing five major, interactive domains which include the following:

- **Intervention characteristics** – source, evidence base, relative advantage, adaptability, trialability, complexity, design quality and packaging, and cost (very little is said about cost).
- **Outer setting** – economic, social, political context in which organisation resides.
- Inner setting – structural, political, cultural contexts through which the implementation will proceed.
- Characteristics of the individuals involved – knowledge and beliefs about implementation, belief in own capabilities, identification with organisation, other personal attributes such as tolerance of ambiguity, intellectual ability, motivation, values, competence, capacity, innovativeness, tenure, learning style.
- Process of implementation – planning, engaging, executing, reflecting, learning.

The authors conclude (Damschroder 	extit{et al.} (2009): ‘The CFIR is a framework, which reflects a ... professional consensus within a particular scientific community. … The CFIR specifies a list of constructs within general domains that are believed to influence (positively or negatively, as specified) implementation, but does not specify the interactions between those constructs.’

2.3.5 Research impact assessment
There is growing interest in understanding and measuring the return to investment in medical research: in a systematic review of the associated literature Hanney 	extit{et al.} (2007) identified two hundred papers. One particularly influential body of work has been the descriptive categorisation of payback and the payback analytical framework developed by Buxton and Hanney (1996), originally to assess the impact or payback from health services research funded by the Department of Health, but now applied more widely. This broad categorisation covers almost all the measures of impact that are more selectively focused on in other studies, including knowledge, benefits to future research and research use, political and administrative benefits, health sector benefits and broader economic benefits. Of specific relevance to the CLAHRCs and their potential influence in local health economies is a payback study of the impact of the NHS South and West Region’s Development and Evaluation Committee’s technology appraisal reports, comparing the impact in the south west with that elsewhere in England. It found considerable impact in the south west but not much elsewhere. While respondents in the south west claimed that the quality of the information was the most important factor in influencing their use of the reports, these findings suggest that having local authors known to local decision-makers was also influential.

2.3.6 Section summary
Section 2.3 has discussed theories and conceptual frameworks on the diffusion of healthcare research. It looked at research diffusion and knowledge utilisation, KTE, dissemination, theory and implementation, organisational change and research impact assessment.

Key lesson for evaluators, practitioners and policy makers
The conceptual terrain might be described as dynamic, pluralistic and competitive. With terminologies that evolve over time and compete one with another we need to take care to define our terms with care. However, there are several more substantive issues to be sensitive to. The first is that context is increasingly identifies as crucial in shaping outcome. If practitioners do not understand their context, and evaluators fail to assess it accurately, then we will never have a good understanding for why CLAHRCs work in some contexts.
and not in others. The second is that while there is a flow of knowledge it is not always clear that this is simply from research to practice and, even when this is largely the case, there will be a variety of ways in which information flows ‘back’ the other way. In the language of economists, there will be supply push as well as demand pull. Thirdly, and following from the first two, the metaphor of a single bridge, linking research to practice and with a steady flow of traffic moving one way, is unhelpful. Competing metaphors might include an eco-system or a market-place.

2.4 Models of implementation, collaboration and process, and their use

This section reviews literature that seeks to build up a picture of reality, or a model. It seeks to highlight important components and processes in a formative way, so that findings may inform the CLARHCs’ evaluation approach as well as the activities of the CLAHRCs themselves. The section proceeds by discussing the diffusion of innovation, research use, QI, collaboration and process. Key lessons are drawn out.

2.4.1 Diffusion of innovation

This approach may be described as an evidence-based model of the diffusion of innovations in health service organisations (Greenhalgh et al. 2004). The broad scope of this multi-faceted model may be seen from its main components, which include:

- the attributes of the innovation – 11 are cited, such as relative advantage, compatibility (being in line with adopters’ values and perceived needs), low complexity (perceived simplicity of use);
- adoption by individuals – seven aspects of adopters and the adoption process are cited, such as psychological antecedents, meaning for the intended adopter, concerns;
- assimilation by the system – adoption by the team, department or organisation in which various changes in structures or ways of working will be required;
- diffusion and dissemination – seven components are cited, such as network structure, opinion leaders, champions, boundary spanners;
- system antecedents for innovation – including administrative intensity, centralisation (which has a negative correlation), complexity, external communication, functional differentiation, internal communication, managerial attitudes towards change, professionalism, adequate resources, specialisation, technical capacity, absorptive capacity for new knowledge, receptive context for change;
- system readiness for innovation – this depends on the tension for change, innovation–system fit, assessment of implications, support and advocacy, dedicated time and resources, capacity to evaluate the innovation;
- outer context – including informal interorganisational networks, intentional spread strategies or formal networks, the wider environment, political directives or mandates;
implementation and routinisation – this is nonlinear in process and depends on organisational structure, leadership and management, human resource issues, funding, intraorganisational communications, intraorganisational networks, feedback, ability to adapt or reinvent an innovation.

The links between these individual components are an important part of the model. They include linkage at the development stage between the developers and potential users of an innovation, a positive and supportive change agency and effective external change agents. The authors also discuss possible areas for further research.

**Key lesson for practitioners and policy makers**
The authors report that they were ‘struck by the number of studies that had been undertaken without a comprehensive review of the existing relevant research, many of which asked what appeared to be obsolete questions’ (Greenhalgh et al. 2004). Hopefully the evaluators in this case will avoid this risk. For practitioners, however, the significant point is the multi-faceted nature of the diffusion model. It would require alignment of activities and decision making across a range of institutions. In turn this requires some shared incentives or sense of purpose to sustain it. This speaks to the experience of the CLAHRCs in having to conduct a variety of activities simultaneously and the sense that maintaining forward momentum in each CLAHRC requires a variety of skills, information and alliances and incentives.

### 2.4.2 Research use

Nutley et al. (2007) identify three models of research use. These are as follows:

**a) Research-based practitioner model**

In this model ‘it is the role and responsibility of the individual practitioner to seek out and keep abreast of the latest research, which then informs his or her every-day practice and decision-making’. Its origins lie in EBM, and its focus is on enabling the practitioner to access good-quality research and on developing the skill to appraise this evidence critically.

**b) Embedded research model**

Within this approach ‘research enters practice by becoming embedded in services systems and processes, through mechanisms such as standards of care, inspection frameworks, national and local policies and procedures, intervention programmes and practice tools’. In other words the relationships between the research and the clinician/manager is mediated by a number of organisational factors. In this model, practitioners rarely engage directly with research findings, and the responsibility for developing and ensuring research-based practice lies with local and national policy-makers and service-delivery managers. The model’s approach depends on the widespread adoption of research-informed guidelines and tools, and it therefore tends to restrict rather than emphasise practitioner autonomy. The guideline movement to some extent reflects this model.

**c) Organisational excellence model**

The key perspective within this model is that ‘developing research-informed practice lies not with individual practitioners or national policy-makers but with service delivery organisations, their management and organisation. This approach recognises that the actions of individual practitioners are shaped and constrained by local management and
service structures, and by the policies, procedures and culture(s) of the organisation.’ The focus is on changing the culture and context of the organisation; initiatives to adapt research findings to this context will take place at the local level, relying on partnerships with universities and other bodies to facilitate cross-pollination and the effective use of knowledge. The model contains many parallels to the CLAHRC scheme, and is identified as an important influence by the LNR CLAHRC.

**Key lesson for practitioners and policy makers**
All three perspectives and models are valuable and they need not be mutually exclusive. Rather they offer a range of options to be used and evaluated by the CLAHRCs. For evaluators it is important to have clarity about which levers and being used and in what combination.

2.4.3 **Quality improvement**

Quality Improvement is another approach to ensuring that the best available research finds its way into routine practice. Powell *et al.* (2009) describe five models of QI (TQM/CQI, Business Process Reengineering, IHI and rapid cycle change, lean thinking, Six Sigma) and five system-wide multi-model approaches (Jonkoping County Sweden, Kaiser Permanente, QUERI, Organising for Quality case successes, IHI’s 100,000 Lives campaign). The models share a set of necessary, but not sufficient, conditions for the successful implementation of change, which is relevant for the evaluation of CLAHRCs. These are:

- active engagement of health professionals;
- active participation of middle and senior managers and the support of board members;
- use of different approaches to intervention and allowing sufficient time for prolonged action;
- alignment of the process of implementation with the broader goals of the organisation;
- embedding of implementation as a part of everyday work of all staff.

Information technology (IT) support and sufficient training and development also matter. But, crucially, they conclude that there is no one ‘right’ approach. Models should be selected in relation to circumstance and applied flexibly over a sustained period in order to engage staff at all levels and achieve desired outcomes.

**Key lesson for practitioners and policy makers**

Powell *et al.* (2009) advocate an approach that the CLAHRCs are in practice adopting: using different models to build a combined approach to fit the specific context. An important test of this approach will be the goodness of fit of these combined models to particular cases. QI will also, typically, seek to integrate a number of processes, much as CLAHRCs seek to do but QI activities have a more narrow focus on the health care setting. Again the need to balance both a multi-faceted approach and with the need for some coherence is apparent.
2.4.4 Collaboration

A further approach to this question emphasises the importance of collaboration Denis and Lomas (2003). There are two key features of collaboration models, both of which underpin the work of the Canadian Health Services Research Foundation – established in 1997 to facilitate evidence-based decision-making in Canada’s health system (Lomas 2000).

a) Linkage and exchange between researchers and decision-makers

The key feature is that ‘the primary motivation for collaboration comes from the demonstration that a major predictor for the application of research to practice is the extent of interaction throughout the research process between the researchers and the practitioners who could potentially use the results’. The collaborative, or interaction, model aims to increase the implementation of research by encouraging applied health research that is directly relevant to the healthcare system.

b) Knowledge brokering – bridging the know–do gap (a component of the linkage and exchange model)

A key feature is that research use is defined not just in terms of process change but also of changes in understanding. There is a perceived need for frequent personal interactions for knowledge transfer; hence the importance of collaborative working, including the co-location of healthcare professionals and researchers (Bartunek et al. 2003). Knowledge brokers thus play an important role in bridging the know–do gap (Lomas 2007).

Key lesson for practitioners and policy makers

On-going linkage and exchange between researchers and decision-makers is a crucial component of capacity-building. The success of this approach is argued to be startling: research funded under this model is four times more likely than that funded under traditional means to be subject to active efforts at dissemination and implementation (Graham et al. 2006). Importantly, the emphasis on knowledge brokering and on securing direct personal involvement begin to provide some practical ideas on how to deliver CLAHRCs which, arguably, some of the more abstract models lack.

2.4.5 Process

This section pertains to the implementation of change, how the different activities are planned and organised in order to be effective and how the target group is influenced by the activities (Grol et al. 2007).

a) Organising for quality

In a study of the quality of nine high-performing healthcare organisations in the UK and the USA, Bate et al. (2008) take an approach that is grounded in the examination of actual processes at different organisational levels and based on a view of QI as a complex process. They note that the general literature on QI is for the most part atheoretical, uninterested in processes, acontextual and/or ahistorical, and that the overwhelming majority of studies of QI are descriptive rather than explanatory. Furthermore, they argue, QI is dominated by a ‘menu mentality’ – by identifying lists of key factors such as leadership support, team-based structures and composition, IT systems and their failings – rather than a focus on the processes that will bring these together to deliver success. These authors suggest that the keys to QI lie in the distinct characteristics and dynamics of organisational and human processes. In theoretical terms this is a shift from a variance or variables theory (e.g. more of X and more of Y produce more of Z) to a process theory (e.g. do A and then B to get to
C). In empirical terms it is the shift from seeing QI not only as a method, technique, discipline or set of skills to seeing it as a human and organisational achievement – a social process. Bate et al. (2008) identify six common challenges that all the organisations they studied faced: structural (organising, planning and co-ordinating QI), political, cultural, educational, emotional, and physical and technical. They develop a model that uses network analysis to examine the constituent processes in each organisation and the ways in which they are interrelated.

Key lesson for policy makers and practitioners
According to Bate et al. there is no single best way to achieve service excellence. The case studies reported by Bate et al. (2008) underscore the fact that Quality Improvement processes are interconnected and symbiotic. Organisational processes may form cycles or closed loops, which may be virtuous (upward improvement) or vicious (downward degrading) spirals. A focus on organisational processes and their interactions over time provides important insights. This step beyond the ‘menu mentality’ could potentially provide some key insights both for the evaluation and for the CLAHRCs themselves. It provides a focus on sequencing and transformation and helps to move beyond more ahistorical models.

b) Normalisation process model
Drawing on sociological research and empirical studies, May (2006) and others have developed a theoretical normalisation process model (NPM) that focuses attention on factors that have been empirically demonstrated to affect the implementation and integration of complex interventions in healthcare. More recently they have moved away from the idea of a single model in favour of Normalisation Process Theory (NPT). Normalisation is defined as the routine embedding of a complex intervention in healthcare work. The NPT offers a structure for investigating people’s actions. It explores four aspects:

- coherence – how complex interventions are formed in ways that hold together and, for CLAHRCs, why people believe it is distinctive and has value;
- cognitive participation – how communities of practice are built and sustained – i.e. how actors were enrolled into complex interventions and, for CLAHRCs, how individuals and groups come to see the role they can play to achieve the value on offer;
- collective action – the collective work that people do to enact a set of practices and, for CLAHRCs, how individuals and groups are able in practice to collaborate in pursuit of the goals of the CLAHRC;
- reflexive monitoring – the appraisal that people make to understand the ways in which a new set of practices affects them and those around them and for CLAHRCs, how improvement can be sustained by learning and adapting a multi-faceted and evolving approach.

The NPT therefore covers the relationships between a complex intervention and the context in which it is implemented. It is interested in the processes by which implementation proceeds – including interactions between people, technologies and organisational structures – and the work that proceeds from these. It views the outcomes of the CLAHRCs as resulting from the integration of a complex intervention achieved by the accomplishments of its stakeholders. It is concerned both with the implementation of new
ways of thinking, acting and organising in healthcare, and with the integration of new systems of practice into existing organisational and professional settings.’

**Key lesson for policy makers and practitioners**

The NPM looks at what people do and how they work. This distinguishes it from theories of the cultural transmission of innovations (such as diffusion of innovations) that seek to explain how innovations spread, theories of collective and individual learning and expertise that seek to explain how innovations are internalised, and theories of the relationships between individual attitudes and intentions and behavioural outcomes. The NPT informs the CLARHCs evaluation by emphasising the need to look for processes. More particularly it asks CLAHRCs leaders to attend to at least three things: to ensure that individual understand what the CLAHRC is and why it is worthwhile; to ensure that individuals can work with others effectively in pursuit of a shared vision; and to ensure that the CLAHRC is able to reflexively learn and adapt. NPT appears to be a relatively pragmatic mid range theory which points to relatively specific things to be done.

### 2.4.6 Section summary

Section 2.4 has discussed the diffusion of innovation, research use, QI, collaboration and process and previous efforts to build realistic models that can inform CLAHRCs’ activities and their evaluation. The key lessons drawn out are summarised in Table 2.1 below. It would be wrong to place too much weight on this brief review but a number of things are apparent:

1. There is no ‘industry standard’ to guide the CLAHRCs; CLAHRCs are involved in both inventing their own solutions and delivering these
2. The causes of problems are understood differently, and consequently solutions vary (although these are often at a high level of abstraction)
3. It is widely recognised that context is very important
4. There is a general suspicion of rigidly linear models (but in all there is a sense that processes can be managed to make progress over time)
5. It is likely that successful change will be multi-faceted and therefore evaluations must be equally multi-faceted if they are to understand the range of processes involved
Table 2.1 Implementation, collaboration and process models

<table>
<thead>
<tr>
<th>Approach</th>
<th>Focus</th>
<th>Features/Strategy</th>
<th>Strengths</th>
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</thead>
<tbody>
<tr>
<td><strong>Implementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diffusion of innovation.</td>
<td>Conceptual framework for implementation constructed by Greenhalgh and others following a systematic review of the literature.</td>
<td>Captures many of the features of implementation in the health services context and identifies some key attributes for success.</td>
<td>Health service specific. Builds on a range of existing literature. Broad and generalisable.</td>
</tr>
<tr>
<td>Research use, includes research-based practitioner model, embedded research model and organisational excellence.</td>
<td>Implementation by various groups / at various levels.</td>
<td>Responsibility for implementation is at various levels, with an emphasis on creating a research-oriented mind-set.</td>
<td>Context driven. Emphasises capacity-building. May help to clarify thinking about research uptake.</td>
</tr>
<tr>
<td>Quality Improvement</td>
<td>Several different models.</td>
<td>Clear definition of the necessary but not sufficient conditions for the implementation of change</td>
<td>Importance of a combined approach, picking relevant aspects from various models.</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td></td>
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<tr>
<td>Linkage and exchange and knowledge brokering.</td>
<td>Theoretical model focusing on personal interactions.</td>
<td>Emphasis on frequent interpersonal interactions as crucial for learning.</td>
<td>Recognises the importance of learning and capacity-building.</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td></td>
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<tr>
<td>Organising for quality</td>
<td>Empirical model focusing on the characteristics and dynamics of organisational processes.</td>
<td>Emphasis on key constituent processes in organisations and their interrelations over time.</td>
<td>Sees improvement as a social process as well as a set of techniques or methods.</td>
</tr>
<tr>
<td>Normalisation process model.</td>
<td>Theoretical model focusing on process evaluation.</td>
<td>Emphasis on what people do and how they work.</td>
<td>Specifically aimed at the implementation and integration of complex interventions in healthcare settings in relation to the work that it involves.</td>
</tr>
</tbody>
</table>

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2.5 The framing, mediation and utilisation of evidence

The previous sections have emphasised that it is not only the research outcomes that matter but also the research processes. There is a body of sociological literature that aims to make sense of how evidence is framed (what counts as evidence and what weight should we give it) how it is mediated (in what form does it shape our decisions – as guidelines, papers, professional values or whatever), and how is evidence used (is it used only selectively, is it balanced with other sources of decision making and so forth). We believe that this may cast light on the more detailed processes shaping the success or failures of CLAHRCs.

In this section the focus is on factors that shape the reception, valuation and considered implementation of research outputs and recommendations. A brief review of some assumptions that underpin the perceived problem of the second translation gap prefaces a discussion organised around two questions:

1. What factors shape the production and presentation of evidence upon which individual and organisational clinical practice may or may not draw?

2. What factors influence individual and organisational adoption, adaptation or resistance in relation to such evidence?

2.5.1 Assumptions and the second implementation gap

Estabrooks (2001) argues that policies and interventions designed to foster the internalisation and institutionalisation of outputs and recommendations based upon sound evidence often reflect at least six assumptions. By recognising how and by whom these assumptions may be challenged, we can see potential challenges to the success of the CLAHRCs. These are the assumptions:

1. That research outputs are oriented towards innovation or change in practice.

2. That research utilisation will improve health outcomes. This assumes that the outcomes achieved in research settings will also be achieved outside those settings.

3. That “good” clinicians can clearly relate their practice to specific research outputs and recommendations. It downplays the extent to which the framing and utilisation of the “evidence base” is a social activity that takes different forms and has differing impacts in different areas of medicine (Broome et al 2009).

4. That practitioners and organisations will, given apposite evidence, be able to make the choices and decisions suggested by newly introduced knowledge. But this view is premised on the idea that those delivering health care have the autonomy and resources to introduce associated changes in practice; that they will, on the basis of such autonomy, opt to utilise research findings and, finally, that the intervention(s) being considered are compatible with dominant models of change.

5. That change in relation to the utilisation of research outcomes and recommendations can be fully planned. But innovations are introduced into social settings in which the phenomena of hierarchy, negotiation and the setting of boundaries have to be taken into account. Broon and Tovey’s (2007) study of the role and status of complementary and alternative medicine in cancer services within a British hospital and hospice
illustrates how informal understandings and networks precluded the internal funding of such treatments through reference to ideas of legitimacy and credibility. 

6. That the knowledge needed for individual and organisational change should primarily be scientific in nature. But other forms of knowledge (such as tacit or procedural knowledge) may also be relevant.

2.5.2 The production and presentation of evidence

Knowledge may be cast as evidence with reference to social perceptions. Such perceptions are influenced by the contexts of interaction, including negotiation between stakeholders, their perceived interests and the hierarchies and authority structures within which they operate (Behague et al. 2009; Geltzer 2009; Dobrow et al. 2004). These authors draw a distinction between the internal and external contexts of decision-making. Internal contexts, such as those in specific hospitals and primary care trusts, encompass factors such as the ‘purpose for the decision-making activity, the role of participants in a decision-making process and the process employed to arrive at a decision outcome’ (Dobrow et al. 2004: 209). External contexts reflect the environments in which decisions are applied. These include the epidemiological environment of an intervention, apposite political considerations and structures and other factors beyond the control of decision-makers. The interaction and influence of these contexts may be central to the understanding of decision-making at three stages: introduction of evidence, interpretation of evidence and application of evidence. This broad framework helps, within particular contexts, to identify and categorise the factors that shape the mediation and use (or non-use) of evidence.

![Diagram of contexts of evidence-based decision-making](source: Dobrow et al. 2004: 216)

Following this emphasis upon contexts, we focus upon the framing of evidence at national and local levels.

2.5.3 Framing evidence

In terms of influences upon knowledge at a national level, Ray and Mayan (2001) suggest that the production, dissemination and evaluation of evidence can be framed in terms of agendas and audiences. Agendas will obviously vary according to specific interests and
objectives. That of fiscal accountability and cost control may be a particular concern for the state, as may be devolved budgetary entities in the planning and provision of healthcare. Issues of quality and need may be of more direct concern to patients and health consumer advocacy groups (Allsop et al. 2004: 741).

Concurrently, manufacturers, the state and professional associations may focus on issues of risk and liability in relation to the adoption and use of new health technologies. Professional associations also have a natural interest in issues of clinical effectiveness and professional standards.

The projects sponsored under the CLAHRC programme are based on geographical areas. Previous research on such collaborations has indicated that the negotiations, hierarchies and boundaries evident at a national level may also be seen in local contexts. May (2006) studied a series of meetings and parliamentary hearings on telemedicine (involving social care managers from county and metropolitan social work departments; health service managers from regional, national and local levels; individuals from NHS trusts; researchers and national policy-makers). It emerged that evaluation of the telemedicine technologies at a local level tended to reflect more than received wisdom from above: they reflected the different and flexible criteria and methods used by local health and social care professionals, criteria and methods that were often shaped by local collaborations or partnerships between the public and private sector. Local variations were highly significant.

2.6 Conclusions

Previous attempts to explore the application and conduct of applied research in healthcare represent a patchwork of approaches and concepts, and interventions have, largely, been too varied or under-specified to allow thorough evaluations. Consequently, we are not faced with a mature route map which identifies what to do under each set of circumstances. This may lead to the pessimistic conclusion that there are no solutions available for policy-makers to ensure that research outputs are optimally managed. Equally, it might suggest that there is no single mechanism for raising the likelihood that research findings will be adopted or adapted in clinical or health management settings. However, a more positive interpretation is possible. Although the science of research and the science of improvement are both still developing, and the evidence is incomplete, progress is being made. Table 2.1 summarised different approaches but, apart from strengthening the case for thinking that collaborative research settings would lead to more readily usable research, we still have relatively little idea about how and why this might happen. We know something about the factors associated with the likelihood that research evidence will be used in health settings, and we also understand something about the processes that facilitate this application of knowledge into practice. As we go on to discuss in chapter 3, we also know that these processes operate at macro, meso and micro levels. However, the mechanisms involved and the influence that context has over outcome need further consideration.

The evaluations of the CLAHRCs are not being conducted in the complete absence of evidence and analysis, and offer opportunities to contribute to the still-developing science of reshaping research and practice for the benefit of patients and society. Our next step is to consider more concretely what the CLAHRCs are intending to achieve and how.
the purpose of Chapter 3. Finally, for ease of reading, we summarise the key lessons identified in the Table below.

**Table 2.2 Summary of key lessons**

<table>
<thead>
<tr>
<th>Lesson source</th>
<th>Key lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>CQRS</td>
<td>The aims of the CQRS programme are very similar to those of the CLAHRC scheme. The following lessons on success factors gained from the CQRS programme are relevant when exploring the CLAHRCs scheme:</td>
</tr>
<tr>
<td></td>
<td>• Leadership and coherence in implementation</td>
</tr>
<tr>
<td></td>
<td>• Favourable political and social conjuncture</td>
</tr>
<tr>
<td></td>
<td>• Ability to respond to the needs of institutions providing services and formulating policy</td>
</tr>
<tr>
<td></td>
<td>• Responsiveness to the needs and expectations of universities.</td>
</tr>
<tr>
<td>IMP</td>
<td>The IMP was the first attempt in England to set up a programme of implementation research. When it was established there was no formal differentiation of the gaps in translation. The focus followed the applied, needs-based emphasis of the NHS R&amp;D programme, and concentrated largely on what is now recognised as the second translation gap. In the context of evaluating and understanding CLAHRCs' evolution and performance, the IMP experience highlights the dangers of having insufficient time to build up programmes of work on research implementation, and to develop capacity among all partners in the programme, strong and productive interaction between different groups, and a well-designed communication strategy.</td>
</tr>
<tr>
<td>Quality Enhancement Research Initiative</td>
<td>The challenges identified in the text are integral to addressing translation gaps and, therefore, to the CLAHRCs, and we note that the Leicestershire, Northamptonshire and Rutland (LNR) CLAHRC cites the Quality Enhancement Research Initiative (QUERI) programme as a significant influence. The long timescale required to see systemic change in the QUERI programme indicates that the CLAHRCs are unlikely to produce measureable health gains over a five-year period and that health impacts may only become evident further into the future.</td>
</tr>
<tr>
<td>Need to Know</td>
<td>The messages from the Need to Know project reinforce insights about capacity-building that also emerge from the other programmes discussed above, with a particularly strong emphasis on the importance of and effort entailed in building effective relationships between professional groups and stakeholders.</td>
</tr>
<tr>
<td>Theory and implementation literature</td>
<td>Evaluation research on CLAHRCs should exhibit a clear awareness of the theoretical perspectives it draws on, and it should make explicit its rationale and justification for drawing upon particular perspectives. The evaluation should also make explicit the theoretical bases upon which CLAHRCs draw.</td>
</tr>
<tr>
<td>Models of implementation</td>
<td>Greenhalgh et al (2004) were 'struck by the number of studies that had been undertaken without a comprehensive review of the existing relevant research, many of which asked what appeared to be obsolete questions'. Striving to establish causal relationships in an evaluation of the CLAHRCs is likely to be frustrating and unlikely to be achieved. Instead, the Greenhalgh model is intended as a memory aid for considering the different aspects of a complex situation and their many interactions, not as a prescriptive formula. As such it is an important aid for the CLAHRCs and our evaluation in order to avoid frustrating and 'obsolete' questions.</td>
</tr>
<tr>
<td>Research use</td>
<td>Practitioners have a responsibility for the fate of research; the research needs to be embedded in systems; and policing, procedures and the culture of organisations may constrain research. All three perspectives and models are valuable. As separately defined, they can help the CLAHRCs clarify thinking about approaches to research uptake.</td>
</tr>
<tr>
<td>Strategies in Practice Settings</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Quality Improvement</strong></td>
<td></td>
</tr>
<tr>
<td>Powell <em>et al.</em> (2009) advocate an approach that the CLAHRCs are in practice adopting: using different models to build a combined approach to fit the specific context. An important test of this approach will be the goodness of fit of these combined models to particular cases.</td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge Brokering</strong></td>
<td></td>
</tr>
<tr>
<td>On-going linkage and exchange between researchers and decision-makers is a crucial component of capacity-building. The success of this approach is startling: research funded under this model is four times more likely than that funded under traditional means to be subject to active efforts at dissemination and implementation (Graham <em>et al.</em> 2006).</td>
<td></td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td></td>
</tr>
<tr>
<td>There is no single best way to achieve service excellence. The case studies reported by Bate <em>et al.</em> (2008) underscore the fact that QI processes are interconnected and symbiotic. Organisational processes may form cycles or closed loops, which may be virtuous (upward improvement) or vicious (downward degrading) spirals. A focus on organisational processes and their interactions over time provides important insights.</td>
<td></td>
</tr>
<tr>
<td><strong>Normalisation Process Model</strong></td>
<td></td>
</tr>
<tr>
<td>The NPM looks at what people do and how they work. This distinguishes it from theories of the cultural transmission of innovations (such as diffusion of innovations) that seek to explain how innovations spread, theories of collective and individual learning and expertise that seek to explain how innovations are internalised, and theories of the relationships between individual attitudes and intentions and behavioural outcomes. They inform the CLARHCs evaluation by emphasising the need to look at processes.</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 3

Study design and methodological approach

In the Introduction to this report we recapitulated some features and background to this project. We begin this chapter by emphasising that our approach is a dynamic and emergent one. We go on to discuss how we intend to build up theories of change by compiling contribution stories to inform our evaluation. We then outline the sequence of our evaluation activities which is outlined in terms of three phases. As described above, this report marks the end the first phase.

3.1 An emergent perspective for enquiry and learning

As discussed in detail in the previous chapter, there are many paths that CLAHRCs may take to generate knowledge and enable its adoption for the improvement of patient care. CLAHRCs are engaged in a process in which they are coming to understand themselves better and are adapting their behaviour and organisation in response to insights that evaluators make. This is, in essence, a real-time evaluation.

With this in mind, our approach must be emergent and ready develop with the programme’s phases. We do not begin with pre-specified hypotheses and seek to test them, for our hypotheses are likely to be outdated and made irrelevant almost as quickly as they are formulated. Instead our evaluation approach begins with an effort to understand CLAHRCs based on their perceptions and behaviours, so that we may then reveal some implicit assumptions. We are interested in exploring not only the emergence, persistence and reproduction of social behaviours, structures and institutions, but also their potential modification and change.

3.2 Conceptual foundations for evaluation methodology

This evaluation begins with a warning from Bokhoven et al. (2003):

We know that most interventions are, in practice, heterogeneous and self-limiting, and that long-term beneficial interventions require multifaceted and evolving strategies. This requires non-linear, complex and emergent evaluation strategies. Since most evaluations don’t do this, most evaluation information is weak and fails to convincingly deal with attribution or accountability.
We have sought to develop a ‘non-linear, complex and emergent evaluation strategy’ that uses the explicit or implicit theories of change and logic models underpinning the CLAHRCs’ own approaches as a way to frame data collection and to shape the initial analysis (whilst recognising the importance of unanticipated outcomes). We are sensitive to the possibility (and, in our experience, the reality) that to be effective CLAHRCs require ‘multifaceted and evolving strategies’. The object of study is itself evolving and the evaluators are encouraged to play a formative role in undercutting traditional evaluation approaches.

Our approach to developing theories of change and intervention logics to be assessed starts with the argument of Weiss (1995), which was related specifically to the evaluation of programmes. The point may be more broadly made and applied to CLAHRCs:

The concept of grounding evaluation in theories of change takes for granted that social programmes are based on explicit or implicit theories about how and why the programme will work … The evaluation should surface those theories and lay them out in as fine detail as possible, identifying all the assumptions and sub-assumptions built into the programme. The evaluators then construct methods for data collection and analysis to track the unfolding assumptions. The aim is to examine the extent to which programme theories hold … [T]he evaluation should show which of the assumptions underlying the programme are best supported by the evidence.

We will use logic models to illustrate and explore the theories of change underlying each CLAHRC. However, we are sensitive to the limitations of such models (in particular those arising from their linearity) and will use them pragmatically. They are a tool for making explicit what practitioners believe to be the causal pathways, and the accuracy of these assumptions has to be tested against the evidence available. Our purpose is to develop an account of the extent to which expectations are supported through evidence and analysis. The purpose of the logic models is to bring these suppositions about causal mechanisms to the surface so that they can be tested. The logic models will therefore provide a route into our evaluation rather than an end point. We intend to return to them when we review the dynamics and change in the CLAHRCs as part of the final evaluation. We appreciate that one purpose of the evaluation is to track learning and change within (and potentially amongst) the CLAHRCs, and that this will require flexibility in our own approach. The great merit of the logic models is that they focus data collection and analysis on issues that are understood by, and matter to, those involved.

3.2.1 Developing a theory of change
Such an approach involves looking at different theories of change within distinct areas of service delivery and supporting research. In this sense, theory of change is a conceptual approach to evaluation rather than a methodology and its successful delivery requires appropriate use of a range of methodologies.

We also wish to understand the overall context within which the CLAHRCs make, and examine, their theories of change. We will use the logic models initially to identify the implicit and explicit causal assumptions contained within each CLAHRC’s approach (such as: ‘If we provide this information along with those incentives, we may anticipate these changes in behaviour’). Some of these assumptions will be well evidence based; others will
be more contentious and will require more detailed attention in the evaluation. Our task will then be to provide evidence and analysis that allows a reasonable person to form a judgement about whether a theory of change is well founded, and in what circumstances it is likely to work. This is different from attempting to provide an analysis of the causal effects. Formally, this involves a sequence of steps:

1. Identify what practitioners intend to achieve and how
2. Develop from this a theory of change
3. Gather evidence to support/challenge this theory
4. Assess the extent to which this is credible
5. Seek additional evidence
6. Offer conclusions.

This approach broadly follows the arguments on contribution analysis put forward by John Mayne (2008). In its attention to ‘what works and in what context’ it also applies the arguments of realist evaluation advocated by Pawson et al. (2005). Through this we do not expect to ‘prove’ that an approach adopted by one CLAHRC is better than another (whatever that means), but we do intend to develop a reasoned and evidence-supported argument for when and how to apply different approaches to bridging the second translation gap.

The theory of change approach suggested here has five precepts that provide a firm and pragmatic base for evaluating the social impacts of CLAHRCs:

1. It requires us to look at outcomes but also to pay equal attention to processes. The first step is to identify the processes assumed to produce the desired outcome. This contrasts with more classical evaluation approaches, which tend to look at outcomes first and then for evidence to understand attribution. While this approach may be justified where, as with randomised controlled trials, the ‘noise’ in the context is assumed not to be causally relevant, in many evaluations the elements affecting the outcomes are to be found, at least partially, in the ‘noise’ itself. In that case, a process evaluation is especially helpful to identify interacting causal channels, and tools such as process mapping and logic modelling, developed and/or validated collaboratively, may be used. Often, too, existing research may be used to support prior assumptions and new evidence may be located within this wider body of knowledge. Working in this way, we are able to keep the benefits of a logical framework approach but avoid the weaknesses (Fujita 2010).

2. It calls for a more embedded evaluation drawing upon the local and culturally specific knowledge held by policy-makers and other decision-makers, providers and recipients to understand and elaborate a sometimes subjective and changing theory of change (Rist and Stame 2006). Successful evaluators need to understand the world within which those being evaluated operate (Jones et al. 2009).

3. It necessitates an ability to reconstruct and represent the sequence of events connecting actions to each other – if events are necessary, sufficient or exogenously influenced – and how these contribute to the outcomes identified, reconstructing at least the sequence of events and statistical co-variations, and preferably also identifying the
causal mechanisms at work. The proposed approach is broadly that of critical realism – see Sayer (2000).

4. It is sensitive to the possibility that during the life of a programme or intervention, initial theories of change may adapt to learning or exogenous events and that the evaluation should capture these changing understandings and actions.

5. It is sensitive to the fact that different and potentially conflicting theories of change (explicit and implicit) may be simultaneously pursued. The framework will look for testable implications and differences between those involved, and especially for testable differences in implications of policies and interventions.

Collectively, these precepts describe an interest in causal effects (what happens when an independent variable changes) and also in causal mechanisms (what connects causes to their effects). They describe what officials, experts, practitioners and users say they do (the stories of success and failure habitually referred to are important carriers of influence in shaping shared assumptions), and what the evidence shows they do. They describe what contribution stories practitioners tell themselves and others, and also what really contributes to public benefit.

3.2.2 Developing contribution stories

Putting these rather abstract arguments into evaluation practice when examining the (potential) impacts of CLAHRCs may be assisted by using what Mayne (2008) calls the ‘contribution story’. Contribution stories allow us to understand why practitioners and policy-makers believe that their use of resources (money, authority, expertise, time, etc.) will contribute to public benefits, and what side-effects and unintended outcomes they envisage. They provide a pragmatic way of embedding a theory of change approach in an evaluation. Contribution stories can be used to identify what evidence you need in order to evaluate how well a programme has met its stated goals, as well as highlighting where gaps exist between different types of practitioner and stakeholder expectations and the reality of what a programme has delivered.

In order to establish an evaluation framework through which CLAHRCs are linked to outcomes, we use a variation of Mayne’s (2001) contribution analysis. By looking at analysis through a contribution story lens, an evaluator may see how a simple change in organising research may contribute to more complex far-reaching changes in health and social care service delivery. This approach has four steps (in practice these may not be in chronological sequence):

1. **Building a contribution story:** In order to understand the contribution story it is critical to identify the formally stated performance criteria, standards and expectations of providers and recipients. These may be contextualised and developed by attempting to assess and take into account the tacit assumptions of stakeholders and partners about how decisions and investments were intended to change the delivery of service to the public. It is also essential to identify where shared and differing contribution stories exist, and potential differences in anticipated and perceived legitimate performance standards.

2. **Developing the evidence:** Once the contribution stories have been identified, it is important that they are subjected to rigorous assessment. In the case of CLAHRCs
improving the delivery of services, an evaluator might probe further where there appear to be causal ‘leaps of faith’. It is also important that the contribution stories are revisited in real time as evidence emerges that supports or undercuts them, and as the results of the evaluation are fed back to stakeholders.

3. **Validating and filling in evidence gaps:** Given that resources for evaluations are necessarily finite, the key to targeting these limited resources is to focus on where the evidence (including prior research evidence) to support the most important steps in the contribution story is weakest. This will include evidence concerning the activities being evaluated and also from the wider research literature and prior experiences in the country/sector concerned. From this, the evaluator identifies the evidence available, what it shows and what is regarded as robust and appropriate. The aim then is to collect data to fill any essential evidence gaps with appropriate methodologies and within budget constraints.

4. **Evaluating the evidence:** Once the evidence base is identified, the evaluator weighs the strength of the evidence available according to its independence, validity, replicability, and so on, and develops a performance judgement based on a credible account of the contribution made, minimising the uncertainties surrounding this contribution. Since these uncertainties relate to the ‘stories’ used by the stakeholders, improving the evidence base will inform a wider audience and may help to improve decision-making.

Identifying contribution stories and hence building a theory of change by following each of the steps will support the evaluation in making robust and systematic judgements. It also provides opportunities for real-time learning and feedback into the local and national CLAHRCs communities.

3.3 **Key phases in the study and their implementation**

We now elaborate on each of the three key stages of this project. The description of phases 2 and 3 are for information purposes only, as the subsequent chapters in this document report on phase 1. More detailed information about the study protocol may be found in Appendix A.

**Phase 1: Exploring the CLAHRC landscape: identifying the diversity of intervention approaches and implementation activities**

During phase 1, which is now being completed, we collected data from all the CLAHRCs to identify and make explicit the diversity of strategic approaches being used to generate and use new forms of knowledge, and identify how the strategies are being implemented. The quantity and range of this evidence varied as a consequence of the commitment not to overburden each CLAHRC. Four teams were invited to provide evaluations of the CLAHRCs, and we sought to avoid unnecessary duplication of data collection. The unevenness of our data does not prevent this evaluation from achieving its objectives for phase 1. We are confident that we have sufficient data to allow us to understand the key resources used, the range of activities, the outputs achieved and the intended outcomes of all nine CLAHRCs, and the facilitators and barriers encountered. Our data collection primarily involved documentary analysis, interviews and workshops with individual
CLAHRCs, as well as drawing on existing literature in implementation science and the sociology of knowledge to inform our enquiries (as discussed in Chapter 2).

Through this approach, we tried to identify and make explicit the theories of change and intervention logic of each CLAHRC (a guide for questions explored in interviews and workshops is presented in Appendix B). We explored:

- the types of intervention being used to identify problems and promote evidence-generation and evidence-based improvement in health service practice;
- the mechanisms through which these interventions operate (interactions, social influence, facilitation, etc.);
- the diversity of stakeholders involved in the intervention approaches;
- the various levels at which these interventions operate:
  - micro-level, i.e. interventions that promote improvements in the identification, conduct, application and integration of research by individual researchers, managers, practitioners and patients within a single organisation,
  - meso-level, i.e. interventions that promote improvements in the identification, conduct, application and integration of research by researchers, managers, practitioners and patients across different organisations,
  - macro-level, i.e. interventions that promote improvements in the identification, conduct, application and integration of research from organisation to organisation and across research and healthcare sectors.

The detailed findings from this phase are described in Chapter 4 and analysed and discussed in Chapter 5. We fed early findings back to all the CLAHRCs, and to SDO and other key stakeholders at a learning event at the start of 2011.

**Phase 2: Examining and evaluating selected approaches in more detail**

In phase 2 we will draw on insights and analyses from phase 1 and select a limited number of case studies exemplifying distinct types of interventions (combinations of key interventions) to examine and learn from in more detail. Case studies will be cross-cutting themes possibly observed in one or two sites but exemplifying challenges faced by all the CLAHRCs.

Our selection strategy will be based on criteria discussed with the SDO, CLAHRCs and our project advisory board. The questions explored should:

- be relatively under-researched (as identified through our literature review)
- have a potentially high impact with transferable lessons
- be relevant to the success of the CLAHRCs
- not be covered by one of the three other evaluations
- be capable of being researched across more than one CLAHRC to support comparisons and contrasts.
Collectively these criteria should ensure the selection of themes that are not only relevant to decision-makers in and around CLAHRCs but should also be relevant to the academic literature. In this report we identify the long list of eight potential themes (Chapter 5) and we will discuss these further with SDO and CLAHRCs before developing a final list of, possibly, three themes towards the end of February 2010.

We will primarily use evidence from workshops, key informant interviews and ‘grey’ literature from the CLAHRCs themselves. Where possible we will also estimate the costs involved as part of a cost-consequence analysis. We will develop detailed narratives of the relevant interventions undertaken in selected CLAHRCs, undertake an analysis of what is required to deliver them, and, where available, will identify realised (in addition to anticipated) output and outcome data. We will also seek to understand what might have happened in the absence of these activities through using comparator data, e.g. between one CLAHRC site and another, comparing before and after data, and asking local key informants for their judgements on this.

**Phase 3: Learning and sharing the learning**

In phase 3 we will draw together the data and analyses from previous phases and identify lessons learnt before developing conclusions and recommendations. We will assess these for feasibility, suitability and acceptability through a series of workshops with policy-makers and practitioners. This will involve meetings to discuss our findings with policy-makers, relevant academics, NHS practitioners and managers, and the SDO. These will inform a final report and a policy briefing.

NIHR has made a significant investment in CLAHRCs on the understanding that interactive collaborations can make an important contribution to the development and use of research in service delivery and organisation for the ultimate benefit of patients. The outputs of this study should be relevant to the NIHR and other health research funders, healthcare practitioners, academics, policy-makers and the public that the NHS serves. In particular, we hope our study sheds new light on the specific contributions CLAHRCs have made to our understanding of how changes in the identification, conduct, application and integration of research by researchers, managers, practitioners and patients can improve health care.

We will also actively participate in conferences, as well as forums with policy-makers and healthcare practitioners, and intend to publish our findings in peer-reviewed journals.

### 3.4 Conclusion

The first two sections of this chapter presented the basis for our methodological approach. The third elaborated on our methodological approach by explaining how a series of contribution stories may be used to build up theories of change and how we have identified a long list of common themes that exemplify some of the key challenges that all the CLAHRCs are addressing. This final section also described how we will narrow that long list of themes down to a short list, and how we propose to explore the short-listed themes in detail in the second phase of the evaluation, and share any lessons learned.
CHAPTER 4

4.1 Introduction

As explained in Chapter 3, one aim of phase 1 was to identify the main logics of intervention being used across the CLAHRCs. These are outlined in the following sections. The number of interviewees and workshops/events carried out is detailed for each CLAHRC in Table 4.1 below. We had access to each CLAHRC’s application form to the NIHR as well as other documents. These were reviewed and the information extracted has also been used in compiling the following sections.

What emerges from these detailed and (hopefully) rich cases is a somewhat uneven set of stories. We resisted the temptation to shoe-horn each example into a predefined framework because, firstly, the CLAHRCs are so varied, and secondly, because we were given different degrees of access to data about each CLAHRC. However, we hope it provides the basis for a systematic mapping of CLAHRC activities as well as allowing both comparisons and contrasts to be drawn.

Of course translation is important and I do agree that there is a moral imperative to use the evidence that you have. But we cannot lose sight of the fact that the areas where there is evidence are often decided by rather idiosyncratic priority setting by academics.

PenCLAHRC Interviewee
### Table 4.1 Mapping of data obtained from each CLAHRC in interviews and workshops

<table>
<thead>
<tr>
<th>CLAHRCs</th>
<th>Number of interviewees</th>
<th>Workshop and events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birmingham and Black Country (BBC)</td>
<td>4</td>
<td>Declined to participate in workshop or alternative involvement</td>
</tr>
<tr>
<td>Cambridgeshire and Peterborough (CP)</td>
<td>8</td>
<td>Half-day workshop</td>
</tr>
<tr>
<td>Greater Manchester (GM)</td>
<td>4</td>
<td>Non-participant observation at board and theme leads meeting</td>
</tr>
<tr>
<td>Leeds, York and Bradford (LYBRA)</td>
<td>7</td>
<td>2-hour workshop and attendance at business meeting</td>
</tr>
<tr>
<td>Leicestershire, Northamptonshire and Rutland (LNR)</td>
<td>8</td>
<td>CLAHRC mini-conference and half-day workshop</td>
</tr>
<tr>
<td>North West London (NW London)</td>
<td>7</td>
<td>Half-day workshop</td>
</tr>
<tr>
<td>Nottinghamshire, Derbyshire and Lincolnshire (NDL)</td>
<td>3</td>
<td>CLAHRC conference and mini session</td>
</tr>
<tr>
<td>South West Peninsula (Pen)</td>
<td>5</td>
<td>Half-day workshop</td>
</tr>
<tr>
<td>South Yorkshire</td>
<td>2</td>
<td>Declined to participate in workshop or alternative involvement</td>
</tr>
<tr>
<td><strong>Total number of interviews</strong></td>
<td><strong>48</strong></td>
<td>–</td>
</tr>
</tbody>
</table>

### 4.2 Birmingham and Black Country CLAHRC

#### 4.2.1 Introduction and overview

**Partnership and governance structures**

The Birmingham and Black Country (BBC) CLAHRC’s core partnership consists of the University Hospital Birmingham NHS Foundation Trust as the lead NHS organisation and the University of Birmingham as the lead higher education institution (HEI). This core partnership is complemented by the West Midlands Strategic Health Authority (WMSHA). The main primary care trusts (PCTs) and secondary care trusts from the region, listed in Table 4.2, are also part of the initiative.
Table 4.2 Primary care trusts and secondary care trusts involved in the BBC CLAHRC

<table>
<thead>
<tr>
<th>CLAHRC PCTs</th>
<th>CLAHRC secondary care trusts</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Birmingham PCT</td>
<td>Birmingham Children’s Hospital NHS Foundation Trust</td>
</tr>
<tr>
<td>Sandwell PCT</td>
<td>Heart of England NHS Foundation Trust</td>
</tr>
<tr>
<td>Solihull PCT</td>
<td>Walsall Hospitals NHS Trust</td>
</tr>
<tr>
<td>Heart of Birmingham Teaching PCT</td>
<td>Sandwell and West Birmingham Hospitals NHS Trust</td>
</tr>
<tr>
<td></td>
<td>Birmingham and Solihull Mental Health NHS Trust</td>
</tr>
</tbody>
</table>

The BBC CLAHRC covers all the Birmingham PCTs and extends into the area covered by two of the four Black Country PCTs. A highly diverse population is served. There are three levels of management group in the programme, overseen by the CLAHRC BBC director, Richard Lilford, and the programme manager, Nathalie Maillard.

Nine theme management groups are responsible for the overall co-ordination and monitoring of each research theme. Each meets at least four times a year and reports to the programme management committee (PMC), outlined below, on a monthly basis. The administrators working for each theme are supported by a project management group co-ordinated by the programme manager. Theme management groups ensure that staff appraisal takes place each year, make regular presentations on their work and become involved in grant writing.

The PMC oversees the delivery of the whole programme and optimises integration and synergy between themes. As well as monitoring the finances of the programme, the PMC plays an important role in reviewing and appraising the research proposals that are developed within each theme. It convenes each month and comprises theme leaders, lead researchers and financial and operational personnel.

The programme steering committee reports on the progress of the programme to the NIHR, provides strategic advice on the management of the research programmes, undertakes financial monitoring and is responsible for external relations and the dissemination of results. It also receives the director’s report on staff development and personnel development.

**High-level aim and key objectives**

The main objective is to conduct needs-based applied health research to generate evidence that may be rapidly translated into routine practice to improve patient care. The BBC CLAHRC aims to reduce inequalities in and improve the quality of healthcare provision, and to enhance safety and reinforce preventative services. Four core ideas build on each other:

1. NIHR funding and matched funding, support service interventions that are evaluated prospectively.
2. Complementary activities across themes and linked projects within themes that are conducted to help provide evaluations and an evidence base.
3. Research programme and management of staff careers with aim of generating sustainable capacity over the area.
4. The partnership aims to capitalise on this capacity by developing further topics for research and by expanding its geographical reach within the area.

Of the CLAHRC scheme as a whole, one interviewee commented, ‘nationally it probably wasn’t exclusive enough’, this in his view resulted in an initial focus on clinical research in the BBC CLAHRC.

Thematic focus
As discussed, the BBC CLAHRC comprises nine individual research or implementation themes addressing national health policy initiatives and reflecting local policies and priorities. Choice of the themes was driven by national and local priorities but was also opportunistic to the extent that ‘it was fairly clear at the start that it had to be things that services, that PCTs particularly, were already going to do and, therefore, in a sense the money for the service was guaranteed and there was then the opportunity to match it with decent research’. The research themes are, to that extent, based on service need; one theme lead identified the key drivers of CLAHRC identity (also referred to as ‘CLAHRCiness’) as ‘relevance and information exchange’.

The themes are:
- health service redesign, based on comparisons between three hospitals undergoing capital development – the challenge is to see what the influences on the trusts are and how they drive and implement change; ‘we think it’s a sustainable notion, this idea of working with organisations to look at organisational change’;
- evaluation of paediatric outreach service;
- early detection and intervention in psychosis;
- assessment of the effects of new housing interventions;
- redesigned maternity support services for multi-ethnic disadvantaged groups;
- investment in prevention (evaluation of targeted prevention of cardiovascular disease in primary care);
- optimisation of the management of stroke and transient ischaemic attack (TIA).

The implementation themes are:
- implementation of effective community care for diabetes;
- study of an evolving IT system to improve patient safety.

Flowing from these themes, the intended outcomes of the CLAHRC are listed in Figure 4.1.

The CLAHRC approach
All research and implementation themes focus on systems-level interventions intended to improve services. The CLAHRC has a strong commitment to maintaining a significant evaluation dimension to work, using a mixed methods approach. This approach reflects the views of those who led the initial bid, largely academics with relevant service experience: ‘there was a cadre of very sound academics with a service background … You might still end up reflecting that some of the studies turn out to be more on the academic
end than the service end but not as much as I’ve heard from some of the other CLAHRCs. If there are any RCTs [randomised control trials] in the Birmingham Black Country one they are focused on a particular set of service questions. The research studies are expected to identify factors that determine success or failure, and the various themes share findings and expertise in order to add value to each other and promote learning across the CLAHRC. The BBC CLAHRC therefore has a particular focus on evaluation: ‘half the money we’ve got is to do the evaluations, it’s not virtual money but it’s already there, it’s for work that you [the service] are doing’.
Financial resources
£9.9 million from SDO,
£31 million matching funding

Existing human resource
Existing expertise in research and implementation between the partners

Existing relations and networks
Historical relationships in both research and service improvement and delivery activities
A diverse study population: income levels, urbanicity, ethnicity

A culture of collaboration between academic and service delivery sectors has been strengthened
Time lags in research translation and adoption are being addressed
Accelerated knowledge use for faster service improvement: knowledge and evidence is being implemented as it is developed
Additional funding is being sought and attracted to scale up CLAHRC-like efforts

Improved services for people throughout their life span, based on improved evidence base and its adoption in improved service design and delivery, e.g., a “massive change” in care pathways for people with psychosis
Building a sustainable system in which academics can work with NHS organisations in a timely fashion to look at what they’re changing, how they’re changing it, and what reference may be drawn
Increased and integrated capacity for doing, translating and using applied health research and evidence in service delivery – ensuring long-term sustainability
Secondary impact on the wider local economy through the wider implementation of locally produced technologies

Figure 4.1 BBC CLAHRC’s logic model of the theory of change
Challenges to BBC CLAHRC’s operation

1. The BBC CLAHRC is not alone in that tensions persist between academic and NHS cultures, between producing papers and developing a focus on work of more immediate practical value and leading to soundly based, sustainable change: ‘it’s a tension, but I don’t think it is an unsolvable tension and I think you can do it but it does need a particular approach ... consultants like publications, they like the notion of pure research but ... they tend to be not today’s problem’. There is a related issue of getting the right people in CLAHRC posts who can work across the academic/service divide.

2. There are differing interpretations of the CLAHRC remit. One interviewee suggested that another senior figure in the CLAHRC ‘has a very unusual view of what the CLAHRC is about, and it has taken a couple of years ... to actually become more mainstream’.

3. Getting (and retaining) NHS management buy-in:
   (a) matching funding: ‘you get buy-in if people have paid’;
   (b) exploiting initiatives, such as the CQUIN (Commissioning for Quality and Innovation) framework and the new public health focus of local authorities;
   (c) developing synergies with NHS bodies, such as strategic health authorities (SHAs).

4. Communications, and specifically raising awareness in NHS trusts: ‘our biggest issue … has been getting into the Trusts. It’s proving very difficult … it’s raising awareness that I think is the biggest barrier we have to reach at the moment.’ There is a related need to engage all trust staff: ‘What we’ve learnt is don’t just use a consultant, use a nurse as well. Nurses are much more conscientious than doctors and if you do ... if there is follow up they’re much more likely to do it and also introduce yourself to the PA [Personal Assistant], because actually the biggest block is the PA.’ But there were also concerns that with improved communications ‘they would get whistleblowers and all this sort of stuff’.

5. There were also perceived risks of policy and finance-driven changes in local and NHS bureaucracies. For example, there was a concern about PCTs abolishment as set out in the recent White Paper (Department of Health 2010) – ‘With the PCT disappearing we’re going to have to think about how those bits of knowledge get retained and developed’ – and related difficulties in recruiting staff. Further anxieties were expressed in relation to cuts in budgets. There was also thought to be a risk of the CLAHRC itself becoming overly bureaucratic.

6. Information sharing and governance problems: ‘There are still some information governance type problems, data protection and that kind of thing, so we’re grappling with some of that but, in fact, there is goodwill to create a data warehouse that will be needed to link housing improvement to future health experience.’ There is a related issue of dealing with local bureaucracies: ‘there are some bureaucrats in local authorities and if they have a job as the Data Protection Manager their first inclination, in many cases, is just the letter of the law kind of thing. It’s not “What’s the long term benefit of sharing the information in terms of the population return?”’, or whatever, it’s “This data wasn’t collected so you could look at it” sort of thing and so we are working through how we get round some of that’.

7. Getting genuine and real user participation was seen to be challenging.
8. Finally, there were anxieties about the long timescales to produce results: 'these things take time'.

Ways to improve the application and conduct of applied health research

1. Researching service interventions properly in a timely fashion and learning as you go: 'I think it's the focus on researching properly what service interventions you're going to make because over many years you do a new intervention or a new service and you're sending some consultants at the end to see if it works and how was it for you sort of thing, but on this occasion it was an opportunity, it still is, to do the more soundly based evaluation from the start. So I think that is different and I think it's good … if a PCT is investing, … £3m into palliative care then the PCT should be encouraged to put 1% of that into a proper evaluation from the start and on that basis you could see a CLAHRC working as an informal agreement between a PCT and an academic establishment.'

Producing timely data: 'even now when I go and say, “Look, how can we help you?” they say, “Well, what will you need from us? Just carry on what you're doing, we'll just be there to measure,” and then you begin to get a flicker of interest and then we're slow because in large institutions … it goes off the boil again and so, really what we need to do is say, “Right, we'll start tomorrow,” and that's very difficult to do.'

Working to appropriate timescales: 'for me, actual research is no good just feeding back in an ad hoc way, we need to put a line in the sand and say, “We are now reporting. We are aware that this may change practice.” … [I]s it not formative? It's a series of little cumulative projects. So, instead of being a five-year timescale it's a six months to 12 months timescale, but we do need to put a mark and say, ‘Look, we are aware there's things happening in year three.”'

2. Helping managers and commissioners to be more literate about research methods and appreciate the value of research, and to do this more systematically: 'getting a set of managers and commissioners who are research literate or knowledgeable or just know how to read a paper and how to interrupt the information is very useful'; 'might have a spin off for us in terms of things like expensive drugs and PCT says no to funding such and such, actually people, when they do understand what the research is about and why some things can do harm as well as good'.

Helping managers, commissioners and clinicians understand the key levers of change: 'do the reputation building, do the clinical outcomes, everything depends on them'. 'Once they begin to see the quality of the resource to them, that it's there to help them and that they can call on them, they need it. … [T]hey control the big element here, then I think, they will take it up much more. So, that the notion of partnership of having a resource, financial skills that is available in a hospital would then be taken up. It's just seen as not relevant, it's too far off.'

3. More generally, developing communications and building awareness: 'part of what we do is trying to reach a wider audience about what the research is for and what methods, what's the best way of doing it, so in that context where we are extending this interest out to the collective members and PCT Board and so on with a
general expectation of just raising a level of knowledge about how research is done';
‘we had some money to employ some extra people and so, again, when we talk about
some of the specifics we’re thinking now of using some of that to buy people’s time on
fellowships and secondments and things like, because we think that might be a useful
way of overcoming this awareness barrier, which is the biggest barrier of all’.
Related need for a culture change: ‘this is largely a marketing job’;
4. There is seen to be a need for flexibility and working together: ‘the idea was to
convene a meeting in each area of all the lead consultants, well one from each Trust
and get them together to brainstorm what the changes were. So, we could get a
consensus. We only managed to do that with ACS, with the Acute Coronary
Syndrome, where we had three consultants, two nurses, two of our health economists
and it came out that what we were interested wasn’t what they thought was relevant
and we were prepared to change … we went off our main idea to work on theirs.’ ‘My
hypothesis would be that if we can get it shared, it will be much more robust and
much more sustainable.’
5. Value is perceived in having multidisciplinary teams working on CLAHRC themes,
which is challenging. Some disciplines, ‘do what they want to do’. The CLAHRC has
‘provided a forum for bringing together different paradigms of research which has
enabled those working in all the themes to provide positive challenges to each other as
their research has developed and explore areas of mutual interest. This has had a
positive impact.’ It also helps to develop stronger links with people in other sectors,
such as social services: ‘in fact, in looking at the Telecare trial we needed to involve the
technicians of Telecare, from the social care services … when we’ve talked to Social
Care in the past about that, that has never been terribly warmly received, “We don’t
do that sort of thing. We know what’s best” kind of thing, but actually it was well
received.’
6. There was seen to be a secondary value in exploiting wider economic potential, for
example through local job creation: ‘it’s not a CLAHRC priority to look at the job
creation potential … [but] we know that with some of the work we do that some of the
kit is made in the West Midlands, there is the technology around here to do it … [I]t’s
kind of predicting what the outcome of the trial might be but if you found it was
successful then that instead of doing 400 units a year in Sandwell we did a client base
of 20,000 what would it do in terms of the job creation potential for making that stuff
in the West Midlands.’

What we were told would look different if CLAHRC were successful
1. ‘One test will be whether things that don’t work are discontinued as well as whether
things that do work are widely implemented.’
2. ‘What I want to achieve by the end of five years is if someone has a clinical change or
any sort of change they want to do with the Trust, then the first thing they’ll ask is,
“Well, who can I get to help evaluate this?” … the notion of working with organisations
to look at what they’re changing, how they’re changing it and what reference can be
drawn, is sustainable. It’s almost like a consultancy service but you’re drawing an
academic reference from it as well … it will be some, sort of, action research unit or
service evaluation unit that will be available to any Trust or any health organisation.’
4.2.2 **History**

The BBC partners have a long history of collaboration with the University of Birmingham and the WMSHA. Examples of past collaboration include these:

- The Wellcome Trust Clinical Research Facility at the University Hospital Birmingham NHS Foundation Trust is a joint initiative that aims to strengthen clinical and translational research. It provides a focus for education, training and audit for clinical staff, supports research in conjunction with other NHS trusts and provides statistical advice.
- The University of Birmingham’s Aggressive Research Intelligence Facility is funded by local PCTs.
- The Birmingham and Solihull Mental Health Trust (MHT) has a formal partnership agreement with the university covering applied research with the Department of Psychiatry, School of Psychology and Institute of Applied Social Studies. This partnership underpins two linked university/NHS networks: the West Midlands hub of the Mental Health Research Network and the Centre of Excellence in Interdisciplinary Mental Health.
- The Birmingham Children’s Hospital NHS Foundation Trust is integrated with the university and the academic Department of Paediatrics is located at the trust.
- The Birmingham Children’s Hospital NHS Foundation Trust hosts the West Midlands Medicines for Children Research Network, thus providing leadership for the organisation of clinical research into children’s medicines across the West Midlands region.
- The WMSHA and various local NHS hospitals work with the university on the evaluation of clinical performance.
- The Heart of England NHS Foundation Trust has a long-standing collaboration with the university and holds large grants for applied research in diabetes and obesity.

4.2.3 **Summary**

The BBC CLAHRC has a theory of change at the heart of what it seeks to do:

- Using the financial resources secured through CLAHRC status, and drawing upon existing skills and partnerships, it will establish nine themes involving evaluations and delivery.
- These will enable collaborations and knowledge exchange which will be reinforced by boundary spanners, fellowships, studentships and improved communication.
- External stakeholders will be brought into the process, widening the impacts.
- Good governance will allow a distributed leadership and will be supported by central administrative and management support. This will facilitate a culture of collaboration, stimulating closer ties between researchers and service delivery sectors, shorter time lags between research and application, and a base for securing further funding to support CLAHRC-like efforts.
• Compared with other CLAHRCs, there is a particular emphasis on the importance of evaluation as a means of creating a self-improving and reflexive system. In time this will lead to improved services, a sustainable bridge between research and delivery sectors making both more responsive and timely. Meanwhile there will be spill-over effects on the local economy.

Despite this relative clarity and simplicity, the interviews reveal how complex all this may be to deliver. There are many challenges and risks, and suggestions for improvement are in some cases very demanding. Managing the processes needed to deliver the logic model appears to require active engagement and leadership within both the CLAHRC partners and the wider environment.

4.3 Cambridge and Peterborough CLAHRC

4.3.1 Introduction

The overarching mission of the Cambridge and Peterborough CLAHRC (CLAHRC-CP) is to improve the quality of community mental health and well-being. The CLAHRC’s focus is on people with mental illness, learning disability and acquired brain injury, and on end-of-life care. The area covers a population of over 106 million people living in both urban and rural places, with very diverse socioeconomic status and ethnicity. The diversity may be conducive to insights with applicability to other areas nationally.

The primary emphasis is on the translation of research evidence into improved mental health and social care services and patient care. It calls for strengthening the capacity both to do and to use relevant research. This is to be achieved through establishing and nurturing strong and sustainable learning and exchange linkages between diverse stakeholders in the mental health services pathway, including academic researchers, clinicians, NHS managers, local authorities, general practitioner (GP) practices, commissioners and service users. The translation gap is not seen to be unidirectional, and CLAHRC-CP intends to involve stakeholders throughout different stages of the research and implementation processes: ‘It’s not like there is one gap between the researcher and the user of knowledge. There is a lot of information exchange along the whole process, bits at a time, so that meaning is developing and evolving as the research unfolds. It is an iterative process in the system.’

The highest-level governing body – the CLAHRC board – is responsible for overall implementation and direction, and includes representatives from different academic disciplines as well as service providers, commissioners and local authorities. The CLAHRC executive group takes operational responsibility for the initiative and monitors the progress of the themes and implementation of research findings. Members include the theme leads, key senior managers from the NHS, social care partners and the University of Cambridge. A governance group includes NHS R&D leads and ensures research governance, management and infrastructure support across the CLAHRC. The CLAHRC has also established a central management and administration support centre – ‘a lean support system’ (year-1 progress report); CLAHRC researchers find this very helpful, releasing them from administrative burdens and enabling information sharing across the initiative. Table 4.3 presents the formal partners and Figure 4.2 shows the governance structure.
Table 4.3 CLAHRC-CP partners

<table>
<thead>
<tr>
<th>NHS commissioners and providers</th>
<th>University</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridgeshire and Peterborough Mental Health Partnership NHS Trust</td>
<td>University of Cambridge Departments of Psychiatry, Public Health and Primary Care; Institute of Public Health, Engineering (Design Centre), Judge Business School</td>
<td>Cambridgeshire County Council</td>
</tr>
<tr>
<td>Cambridgeshire PCT</td>
<td></td>
<td>Cambridgeshire Community Services</td>
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<tr>
<td>Peterborough PCT</td>
<td></td>
<td>UKCRN Mental Health Research Network</td>
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<tr>
<td>NHS East of England Public Health Commissioning Network</td>
<td>Anglia Ruskin University</td>
<td>East Anglia Hub</td>
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<td>Eastern Region Public Health Observatory</td>
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<td>East Anglia Primary Care Research Network</td>
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Figure 4.2 CLAHRC-CP governance structure

SOURCE: CLAHRC-CP website (2010), Organisational charts

4.3.2 Overview

Key assumptions

CLAHRC-CP’s theory of change is based on a number of core interrelated assumptions which have influenced its strategy and intervention approach:

- Effective mental health services need to be designed in a way that considers the patient’s needs throughout their life. Improved practices in service provision are needed in particular at points of transition.

- Improvement in practices requires a detailed understanding of the mental health system pathway from the perspectives of different actors in the system (across professional groups and disciplines), so that areas in need of research, policy and practice-related attention are made explicit, and research and change implementation activities are framed accordingly.

- Service improvement requires integrating doing, translating and using applied health research: the effective translation of research into practice is an iterative process with feedback loops between different stages.
• This requires close collaboration and knowledge exchange throughout all stages of research generation, maturation and utilisation processes.

**Key features of the intervention approach**

The assumptions discussed underpin the key features of CLAHRC-CP’s approach:

1. Within the broader field of mental health, CLAHRC-CP is building on established strengths of partners in life-course approaches to health and illness, focusing in particular on challenges at the points of transition.

2. The CLAHRC is supporting not only themes that place emphasis on research activity but also on those that prioritise implementation, and is creating an environment that encourages interactions within and between thematic programmes. Activities are broadly organised into three research themes that focus on mental health in child and adolescent, adult, and old age stages; and two cross-cutting implementation themes: health service design and public health improvement. Staff in implementation themes are conducting implementation science research, and work with the research themes to inform research agenda-setting based on service needs, and to enable the translation of research outputs into improved mental health service delivery. Within this overarching organisation of activities, the CLAHRC aims to foster interaction at three core levels in the overall programme (as well as with external communities): between the different research themes, between the two implementation themes, and between the research and implementation themes.

3. The CLAHRC is maturing existing streams of research and developing new ones. For example, work on mapping the mental health system pathway is expected to provide novel insights into where service improvement needs exist and in turn inform new research projects and (ultimately) change implementation in service design and delivery. Equally, previous and ongoing research has produced a body of knowledge and evidence that needs to be identified, transferred and communicated to users so that it can be consumed (e.g. the Evidence Adoption Centre is contributing to this through systematic reviews).

4. To facilitate knowledge exchange and build capacity to conduct, integrate and use health research to improve services and the quality of patient care, the CLAHRC is also pursuing collaborative projects involving multiple stakeholders in an iterative manner, from design to dissemination; this includes academic researchers, clinicians, managers, commissioners, users and local authorities. For example, within the old-age theme, a commissioner attends monthly team meetings and feeds into research team thinking. Senior staff from all PCTs and the county council sit on the CLAHRC board, and heads of service commissioning sit on the executive group. The CLAHRC is also bringing together new combinations of disciplines, professions and individuals in research and implementation teams (in engineering, business, public health, general practice and psychiatry). This plurality is expected to enable the process of generating, communicating, disseminating and adopting research findings to be better tuned to the healthcare system, and increase the relevance, usefulness and adoptability of outputs.
5. The CLAHRC is mobilising individuals who can bridge disciplinary and professional boundaries between academic and service delivery sectors (e.g. as theme leads) and trying to empower future ‘boundary spanners’ and ‘knowledge exchange champions’ through its capacity in building and training activities. Related to this is a belief in the need to involve clinicians in research activities in a way that enables them to remain active in clinical practice (and teaching): ‘If you take a clinician, be it a nurse or a doctor, suck them out of clinical practice for five years, they are then too rusty to go back in again, and actually they feel and I feel that you are no longer asking questions that people are addressing’.

6. The CLAHRC leadership also believes that improving service delivery and making the best use of funding for maximum patient benefit and public good calls for taking responsibility and committing to sharing and disseminating learning widely, including beyond local and regional levels. Although the CLAHRCs’ direct and immediate focus is on local service delivery improvement, this should not compromise an academic ethos of sharing and communicating lessons learnt and research findings. An academic commented: ‘I’m sure your research has done a lot to advance patient care but I am not sure how much it has done to advance knowledge.’

**Operationalising the intervention logic**

These efforts are being operationalised in a number of ways. Implementation activities are facilitated by financial support, existing infrastructure, existing expertise in research and implementation between the partners, and historical relationships in research and service improvement and delivery activities. The NIHR is providing £9.8 million over five years, and the regional NHS trusts and the county council have committed £13.5 million. For some clinician researchers the dedicated research funding as well as its duration has already ‘transformed’ their ability to do research from a spare-time activity they could dabble in occasionally to a formally recognised part of their job in which they have research and administrative support.

The CLAHRC is using these inputs to build capacity through a number of channels, including the following:

1. **Fellowship scheme:** To enable clinicians and NHS management to gain a better understanding of research methods and environments, and to increase their appreciation and responsiveness to the role that research can play in service redesign and innovation in the NHS.
2. **PhD support:** To train future academic applied health researchers.
3. **Visiting fellows:** For example from social care and business disciplines.
4. **Cross-disciplinary training programme:** For doctoral students and medical staff, this includes workshops in areas such as health system pathways and design, and change implementation.
5. **Secondments:** Of nurses and dedicated PAs to assist consultants in engaging in research.
6. **Organising research teams and projects:** To integrate contributions and perspectives from multiple disciplines, enable repeated interactions and build an appreciation of the value of different perspectives on the same issues.

7. **Engaging with the Evidence Adoption Centre:** This conducts systematic reviews to identify and share existing evidence on best practice.

8. **Internal communications strategy and infrastructure:** This further facilitates knowledge exchange, for example through formal and informal meetings between CLAHRC members at different levels and members of partner organisations (e.g. theme lead meetings, away days, meeting groups for junior academic and NHS staff, team meetings, sharepoint).

9. **Rigorous external communications strategy:** Intended to maximise the potential impact of CLAHRC efforts, this will leverage opportunities presented by the roles of the senior leadership in relation to various advisory boards, regional and national committees. Reaching out to user communities will build on existing public engagement networks (e.g. INVOLVE, which supports greater public involvement in NHS, public health and social care research) and on new engagement efforts (e.g. patient forums within individual themes). Other aspects of external influence and dissemination include academic publishing, the CLAHRC website and participation in conferences and other events. Some external engagement activities are already in place; for example, each theme has a partnership committee that includes CLAHRC staff as well as commissioners, service users and careers who provide inputs into project design and implementation.

10. **Centralised management and administrative support:** To release time for research and implementation efforts.

11. **Distributed leadership approach:** For example, senior theme leads. To develop leadership capacity in the future generation of applied health researchers and implementers.

12. **Development and engagement in new translational research and implementation initiatives:** Examples are Health Innovation and Education Clusters (HIECs) and attracting new funding.

13. **Building internal evaluation capacity:** For example, supported through SDO academic fellowships and development of internal key performance indicators (KPIs).

**Critical conditions**

CLAHRC-CP suggests that the ability of these activities to lead to the desired outcomes – and most notably to improved mental health and learning disability services for people throughout their lives, based on an improved evidence base and its adoption in service
design and delivery – depends on a number of critical conditions. Amongst others, these include:

1. sustaining partner enthusiasm and commitment to delivery on agreed objectives and responsibilities (including from senior levels in the NHS);
2. ability to manage, navigate and respond to changing and uncertain socioeconomic, political and NHS landscapes – related to this is the need for flexibility from all initiative stakeholders;
3. continuation of the CLAHRC or CLAHRC-like funding beyond the first phase of initiative existence;
4. finding ways to balance and manage the academic ambitions of research groups with time commitments and the emphasis on impact of research on services;
5. clarity and management of expectations about the timelines needed for demonstrable change and wide-scale service improvement.

CLAHRC-CP’s overall intervention logic is summarised in Figure 4.3 below.
Figure 4.3 CLAHRC-CP logic model of the theory of change
4.3.3 History
CLAHRC-CP evolved out of previous efforts to secure funding for applied health research and collaboration between university researchers and service providers in the area of mental health. Mental health was excluded from eligibility for translational research funding from some other initiatives (such as NIHR BRUs), but there was growing interest in collaborating on applied research agendas, relationships between university and NHS organisations, and progress in specifying research and implementation needs and agendas. The CLAHRC call for proposals presented an opportunity to harness support for collaborative efforts to improve evidence-based mental health and social care practice. Many of the partners in CLAHRC-CP have a history of working together locally in research and care delivery initiatives. CLAHRC funding enabled the consolidation of existing relationships, integration of fragmented efforts, bringing in additional expertise from new partners, and increasing regional participation and the coverage of diverse populations with varying needs. This included developing new partnerships with primary and social care providers and commissioners, and with organisations with expertise in change implementation (e.g. Judge Business School). The approach described in the CLAHRC-CP proposal was to understand better the ways in which services are designed and delivered, examine them critically, and gradually improve services based on existing and new evidence on best practice.

In developing the bid, the partners first worked on identifying their individual strengths, how they complemented each other, and how they could be channelled towards tackling the priority research evidence needs. They decided to focus on established strengths in approaches to mental health and to address challenges in arbitrary transition from adolescent to adult to old-age and end-of-life health and social care services.

Their initial bid prioritised translational research and expanding and maturing existing streams of work. The CLAHRC call emphasised the importance of both new research and support for implementation. In response to feedback from the selection panel, the partners revised their application to strengthen collaborations with groups with expertise in implementation areas such as service design (Engineering Design Centre) and service change and evidence-based innovation (Judge Business School). They revisited their research agenda and project selection strategy to ensure it is driven by the needs of service users and providers (as opposed to academic interests), and strengthened the emphasis on building the capacity of clinicians and NHS managers to consume research evidence for service delivery.

4.3.4 Summary
CLAHRC-CP utilises resources made available through the CLAHRC funding and draws upon existing relationships and skills. It combines an overall framing approach based on the life course approach, with a highly iterative approach to change – exchanges take place in multiple settings, allowing adaptation and change to take place outside a hierarchical or command and control approach. Anchoring this is an orientation towards the creation and use of evidence (including developing self-evaluation):

- Fellowships, studentships, training and projects all help to facilitate these developments and sustain momentum.
• Distributed leadership and centralised management support appear to fit well with the overall ‘tight–loose’ approach. KPIs may further support this.

• Outputs are to be a more collaborative culture with a capacity to address issues in new ways. Health services will become more evidence based and will draw upon research more quickly. This will create a platform for securing further future funding.

• Outcomes will include improved experiences and outcomes for service users, more appropriate applied research, more evidence-based services, a sustainable network of organisations to support this, and contributions to the national and international understanding of the theory and practice of how to bring research and practice together for the benefit of service users and society.

CLAHRC-CP has a coherent and in many ways convincing account. However, maintaining a tight focus on the overall approach and on improving services whilst simultaneously eschewing any tight micro-management appears to be both crucial and difficult to achieve. The concept of anchoring the looseness with a focus on evidence combined with a centralised management and administrative support is coherent, but proof that this works is yet to be produced.

4.4 Greater Manchester

4.4.1 Introduction

The core partnership of the Greater Manchester CLAHRC (CLAHRC-GM) is made up of a university, PCTs, hospital trusts, MHTs and an ambulance service, as shown in Table 4.5. It is led by the Salford Teaching PCT.

Table 4.4 Primary care trusts, hospital trusts and others involved in the GM CLAHRC

<table>
<thead>
<tr>
<th>CLAHRC PCTs</th>
<th>CLAHRC hospital trusts</th>
<th>CLAHRC MHTs</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashton Leigh and Wigan PCT</td>
<td>Bolton Hospitals NHS Trust</td>
<td>Bolton Salford and Trafford Mental Health NHS Trust</td>
<td>University of Manchester</td>
</tr>
<tr>
<td>Bolton PCT</td>
<td>Pennine Acute Hospitals NHS Trust</td>
<td>Stockport NHS Foundation Trust</td>
<td>North West Ambulance Service NHS Trust</td>
</tr>
<tr>
<td>Bury PCT</td>
<td>Salford Royal NHS Foundation Trust</td>
<td>University Hospital of South Manchester NHS Foundation Trust</td>
<td></td>
</tr>
<tr>
<td>Heywood Middleton and Rochdale PCT</td>
<td>Stockport NHS Foundation Trust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manchester PCT</td>
<td>University Hospital of South Manchester NHS Foundation Trust</td>
<td></td>
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<tr>
<td>Oldham PCT</td>
<td></td>
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</tr>
<tr>
<td>Salford Teaching PCT (lead trust)</td>
<td></td>
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<tr>
<td>Stockport PCT</td>
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<tr>
<td>Tameside and Glossop PCT</td>
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<tr>
<td>Trafford PCT</td>
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</tr>
</tbody>
</table>

Greater Manchester is part of the North West SHA. It has more than 2.56 million residents and is the third largest metropolitan area in the UK. The key characteristics of the population are the relatively high representation of Asian (approximately 6.5%) and Black (1.7%) people, a low life expectancy (the lowest in the UK), and a high incidence of cardiovascular disease (the main cause of death).

The CLAHRC governance is made up of the following four elements:
1. **Chief operating officer:** Responsible for day-to-day management, including research governance and research protocols, and reports to the director.

2. **Director:** Accountable to the NIHR and steering group for overall management and performance. Chairs the research and implementation group.

3. **Steering group:** Chaired by the lead trust. Meets twice annually to approve the CLAHRC's budget and programme. The lead trust is responsible for managing finances and subcontracts with partners and providing general administrative support.

4. **Research and implementation group:** Meets quarterly to review progress across all themes and ensure integration of the work. Composed of the theme leaders, the chief operating officer, and the director as chair. The theme leaders meet monthly and manage day-to-day theme work.

### 4.4.2 Overview

#### High-level aim and key objectives

The overall goal is to improve the health of people in Greater Manchester by enhancing the quality of care in terms of safety, efficacy, efficiency, patient centredness, timeliness and equality through the application of world-class research.

The overall objectives are to:

- develop and evaluate a series of interrelated interventions to support patient self-management and improve the quality of care for people with chronic vascular disease;
- implement these and other evidence-based interventions in NHS trusts across Greater Manchester to improve patient health and reduce inequalities in healthcare provision;
- build local NHS capacity to plan and implement evidence-based changes in care pathways for people with vascular disease through close working and knowledge transfer between university researchers and NHS providers and commissioners.

#### Thematic focus overview

Current approaches to chronic disease focus on developing evidence-based standards of care, as found in clinical guidelines. However, research that improves patient self-management may significantly reduce the burden of NHS service consumption. Recent research has shown that patient self-management can be improved by enhancing patient knowledge and coping strategies in a systems approach, as shown in Table 4.5 below.
Table 4.5 GM improvement of patient self-management

<table>
<thead>
<tr>
<th>Level</th>
<th>Strategy</th>
<th>Specific method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Improve information</td>
<td>Work with patients to develop information that is relevant and accessible and uses a combination of lay and evidence-based knowledge</td>
</tr>
<tr>
<td>Practitioner</td>
<td>Change professional response</td>
<td>Promote flexibility in professional response through a patient-centred approach and the negotiation of a self-management plan with patients</td>
</tr>
<tr>
<td>Service</td>
<td>Improve access to services</td>
<td>Change access arrangements to promote patient-initiated follow-up and use patient–practitioner contacts as a means of reinforcing self-management</td>
</tr>
</tbody>
</table>

This research approach may be implemented in six steps: agreeing what is to be accomplished, determining how the impact of change will be measured, identifying what changes should be made, implementing change using plan–do–study–act cycles, sustaining and spreading the changes, and evaluation of implementation.

The strategy for the implementation theme rests on the recognition that successful implementation requires multi-faceted interventions across whole systems and is not a linear or technical process.

The CLAHRC has four research themes (1–4) and four implementation themes (5-8), focusing on patient self-management of chronic diseases, with the aims set out below:

1. **People with long-term conditions:** To elicit the needs, social and health contexts, and receptivity (to information) of socially disadvantaged people with vascular conditions in order that information can be developed, integrated and evaluated within an existing evidenced-based approach to guide self-management support.

2. **Healthcare practitioners:** To promote better patient-centred care by practitioners through the development and testing of new approaches to the management of depression in patients with long-term conditions (LTC).

3. **Healthcare services:** To contribute to the promotion of self-management through the development of new patient-centred systems of access to specialist care and through the development of allied programmes of training for specialists. Combined with the self-care information resources from the first research theme, this will generate whole systems intervention.

4. **Health information systems:** Will develop the information systems needed to improve healthcare planning by monitoring variations and inequalities in healthcare provision for people with chronic vascular disease, and assessing the likely impacts of interventions to improve patient care and public health.

5. **Coronary heart disease:** To enhance NHS capacity to translate research findings into improved outcomes for patients by the improvement of services for people with heart disease.

6. **Chronic kidney disease:** To enhance NHS capacity to translate research findings into improved outcomes for patients by improving services for people with chronic kidney disease.

7. **Diabetes:** To translate research findings into improved outcomes for patients with diabetes by developing and improving services for people.
8. **Stroke**: The overarching aim is to enhance NHS capacity to translate research findings into improved outcomes for patients by the improvement of services for people with stroke.

**Overview of the CLAHRC approach**

The research theme findings will feed into the implementation themes and knowledge transfer partnerships to facilitate change and build leadership capacity in implementation. The CLAHRC aims to develop existing systems of partnership working among NHS trusts and the University of Manchester through closer alignment of research with NHS needs and priorities, and facilitating the uptake of research into practice.

**4.4.3 History**

Since 2000 the University of Manchester and local NHS organisations have been in partnership under the remit of the Institute of Health Sciences, which supports multidisciplinary research teams working across organisational boundaries. Since 2004 all the local trusts have worked together under the remit of the Greater Manchester Research Alliance, which was formed to improve the quality, relevance and impact of NHS research for the public. The boards of directors for both organisations overlap to ensure alignment of organisational objectives and programmes.

Greater Manchester has agreed to create a Greater Manchester health federation which further improves the integration of research and its management across the area, particularly governance of finance, staffing and infrastructure.

Different networks already exist on topics which are being research in the area. They bring together managers, commissioners, providers and users to facilitate the delivery of integrated care, provide equity of access for all patients and aid the spread of best practice in the city.

Greater Manchester has historically had its own research initiatives linking multidisciplinary work, public/stakeholder-relevant work and coherence in initiatives. The Cooksey Report (HM Treasury 2006) highlighted Greater Manchester as a good example of partnership working delivering world-class research for the benefit of patients, with a focus on key stakeholders including industry, local and regional government.
Financial resources
£9.9 million from NIHR
£10 million matching funding

Human resources
1 CLAHRC Chief Operating Officer
0.4 CLAHRC Director
0.25 Finance Officer to manage accounts and contracts
0.5 Senior Communications Officer for topic and comprehensive local research networks
0.25 Human Resource Manager (1st year) for recruitment
1 Secretary
8x0.5 PhDs to build research capacity
24 Knowledge transfer associates inc. 8 clinicians

Relations and networks
Manchester and Cheshire Cardiac Network
Manchester Stroke Network
Greater Manchester Renal Managed Clinical Network
Diabetes and Obesity Research Network

Four research themes
- People with long-term conditions
- Healthcare practitioners
- Healthcare services
- Health information systems

Four Implementation themes
- Coronary heart disease
- Chronic kidney disease
- Diabetes
- Stroke

Capacity development plans
- Training 24 associates (including 8 clinicians) through Knowledge Transfer Partnerships
- Training 8 MDs or PhDs through the research and implementation theme

Production of information resources (guidebooks) for patients to support self-management
Development of new patient-centred access systems to specialist care
 Provision of cost-benefit assessment of service redesign to support patient self-management
 Provision of interactive simulation models to assist commissioners in assessing the likely impacts on NHS costs and patient outcomes of changing care pathways and services for vascular disease
 Provision of workforce development plans to support redesign of vascular care pathways and services, including training programmes for practitioners.
Peer-reviewed publications

More effective treatments for the emotional consequences of chronic vascular disease
Reduce demand and improved access
Ability to claim which change initiative has been successful, based on the implementation themes
Improved patient self-management and healthcare provision leading to better health outcomes
Improved NHS responsiveness to the needs of individual patients
Reduced inequalities in patient access to care
Increased capacity in the NHS to plan and implement evidence-based changes to service delivery

Figure 4.4 GM logic model of the theory of change
Main challenges to the CLAHRC’s operation

The CLAHRC-GM recognises a number of challenges with its initiative. These flow from the challenging (but potentially high-impact) model of change adopted. On tension is that researchers and practitioners have different ways of working. There are also significant challenges involved with the practicalities and logistics of having many different kinds of people working together. These are quite pragmatic issues spanning issues such as planning meetings, the number of meetings, lengthy and uncertain recruitment processes, and increased bureaucracy and governance.

4.4.4 Summary

The CLAHRC-GM draws upon the resources made available through NIHR and matched funding, with which it has funded (among other things) a central leadership and secretariat along with studentships and 24 knowledge transfer associates. It is summarised in Figure 4.4. It draws upon and strengthens existing relationships and networks. Its processes involve both research and implementation themes and building capacity to generate and disseminate knowledge. The creation and application of knowledge is fundamental to the approach and the knowledge transfer partnerships are an important aspect of this. Therefore the outputs are strongly focused on the production and creative use of information sources, including cost–benefit information, simulation models (allowing commissioners to engage with the evidence base by simulating the likely impact on costs of changing pathways) and peer-reviewed publications. Alongside these, and closely related to them, is the production of workforce development plans to support redesigned pathways and improved ways to access care. Knowledge is therefore intended to play a key and transformative role in achieving ambitious impacts: more effective treatment, reduced (inappropriate) demand and improved access; improved patient self-management; a more responsive NHS; reduced inequalities; and increased capacity in the NHS to plan and implement evidence-based changes. The intended outcomes are firmly focused on transforming NHS services.

A number of more granular issues are apparent from CLAHRC-GM’s experience:

- There is inherent tension in bringing together the research and service delivery worlds, one factor being that they work at different paces. The CLAHRC has sought to address this by funding consecutive rounds of evidence-based innovation projects with a quick turn-round. It allows faster answers to be provided, while building on previous knowledge in future work. In other words, the research setting can be reorganised to respond to different timeframes without losing the long-term accumulation of knowledge that lies at the heart of the scientific process.

- CLAHRC-GM has found that funding that forces interaction may sometimes be successful: ‘So the kidney implementation team were like, “we want more money, I don’t have enough to do these care pathways” and [they were told] “you can have the money if you join with the research theme to develop the care pathway because they have a budget.”’ In this way, implementation may become involved in the theory underpinning the work, and researchers move beyond communication and dissemination in generic terms so that research can be adapted usefully. Local adaptations emerge when practitioners have at least some idea of theories. The success
of the CLAHRC may depend upon the transformative power of knowledge, but it also
recognises the need to support this with incentives and guidance.

- One of the many useful aspects of CLAHRC-GM is recognised as its synthesis of the
  large body of information on how to bring research and practice into a more mutually
  beneficial relationship. It is seen to do so in a reliable and accessible way. In this sense
  CLAHRCs have more of a meta-function in supporting learning about learning.

- CLAHRC-GM is aware that there are dangers in trying to link everything with
  everything, and that there is a need to retain focus – otherwise there may be a series of
  unproductive meetings and little else. The issue here is how priorities might be
  identified, agreed and acted upon within a distributed leadership.

- CLAHRC-GM has had to emphasise that it is not about running services. ‘You learn
  very quickly that when you are talking to people at that level of commissioners it is
  about “what can we get back” and I explained the CLAHRC is not a return on
  investment model, the money put into the CLAHRC is not to get back X hours from
  one of our team say because that is not what it is about. We think about what we are
  spending and then it may just so happen that some of that may be used in a PCT.’ It is
  about informing the way in which services are run and supporting evidence-based
  change.

4.5 Leeds, York and Bradford

4.5.1 Introduction


Partnership and governance structure

There are four core partners in the CLAHRC for Leeds, Yorkshire and Bradford (LYBRA): the Universities of Leeds and York and the Leeds and Bradford teaching hospital trusts. The core partnership was determined on the basis of the ambition to bid with the two strongest academic and NHS components in the region. These partners are also linked to a number of others, listed in Table 4.6. LYBRA covers a population of around 5 million people who have a range of socioeconomic, ethnic and cultural backgrounds.

<table>
<thead>
<tr>
<th>NHS partners</th>
<th>Council partners</th>
<th>Other partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leeds Partnerships NHS Foundation Trust</td>
<td>Bradford Metropolitan District Council</td>
<td>Yorkshire Forward</td>
</tr>
<tr>
<td>NHS Bradford and Airedale Teaching PCT</td>
<td>Leeds City Council</td>
<td></td>
</tr>
<tr>
<td>NHS Yorkshire and the Humber Strategic Health Authority</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHS Innovation Hub for the Yorkshire and Humber region</td>
<td></td>
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</tbody>
</table>

Governance of the LYBRA CLAHRC is outlined in Figure 4.5. This aims to provide central direction while giving the various themes freedom in running their work. It is operated like a membership organisation for various members of academia and the NHS. The appointments for the various themes mainly cut across the four partners, but spread more widely too; members come from a number of sectors on which the CLAHRC is
intended to draw. Within any given theme they also are part of pre-existing networks with a number of these key partners.

**Figure 4.5 LYBRA core governance structure**

*SOURCE: Based on CLAHRC-LYBRA website (2010), Governance*

**4.5.2 Overview**

**High-level aim and key objectives**
LYBRA’s high-level aim is to build a capacity to bridge the second translation gap by building the capacity to innovate in commissioning and service delivery in a cost-effective way. The objectives LYBRA aims to meet are as follows:

- Building the research capacity of the NHS
- Building researchers’ ability to respond to frontline needs
- Building commissioners’ and NHS staff’s ability to communicate frontline needs
- Building the capacity of commissioners and those delivering healthcare services to innovate – by tying research to outcomes, changing relationships and networks, and communicating on the topics of interest to commissioners
- To evaluate the cost-effectiveness of work
- To inform practice on the basis of rigorous evidence.

**Thematic focus overview**
LYBRA has two research themes: physical health and addiction, and vascular disease; and three implementation themes: maternal and child health, stroke, and translating research into practice. The research themes draw on local expertise and are intertwined as numerous psychical and psychological symptoms are common to addicts and sufferers of vascular disease. The implementations themes are of two types: the first refers to implementation-driven research rather than substance-driven research – the stroke and maternal and child health themes; the second refers to a theme that can support the implementation of research into clinical practice – the so-called ‘TRIP-LAB’ theme (see below).
The physical health and addiction theme will undertake randomised control trials (RCTs) to explore cost-effective interventions which can be routinely implemented in the acute care setting.

The vascular disease theme will investigate two aspects: prevention through a range of lifestyle change advice programmes to at-risk communities; and treatment through exploring the reasons for poor medicines adherence.

The child and maternal health theme will aim to develop and implement research-calibre information systems. These will focus on addressing inequalities in antenatal health (exposures to risk factors \textit{in utero}), infant and child feeding and obesity, maternal mental health, and access to health and social care services.

The stroke care theme will seek to uncover the reasons for poor stroke care by routinely collecting data on hard-to-capture measures and analysing it. These data will include information on stroke care delivered, stroke care organisation and delivery structure, the unique characteristics of patients and the outcomes of care on patients, as described by them. The results will suggest the measures to be continually monitored and any conclusions for improving carer service and patient outcomes.

The TRIP-LAB theme is designed to improve the clinical performance, speed of uptake of innovations and translation of research into practice. The theme will meet this objective by exploring a number of questions in research translation-oriented projects, such as those of the themes described above. The questions include the following:

- How does time impact on adoption, sustainability and behavioural change?
- How do the characteristics of innovations affect their implementation over time?
- How do the characteristics of organisations affect the implementation of research-based innovation over time?
- Does knowledge of the characteristics of the organisation and teams predict innovation adoption over time?
- Can we use theoretical models of diffusion of innovation and knowledge transfer?

The projects will answer these questions through three phases consisting of: 1) development – What are the important contextual factors that influence research knowledge uptake and application? (a range of methods will be applied to answer this question); 2) implementation – those factors found to influence uptake and application will be promoted through a range of activities; 3) evaluation – the effect of these activities on different types of staff and their values and behaviour will be monitored and evaluated over time within and between partners. The projects apply a range of theories to underpin their rationale, which may allow the TRIP-LAB to draw conclusions regarding the application of different lenses.

Overview of the CLAHRC approach

The LYBRA CLAHRC aims to respond to local and chronic health conditions distributed unequally in the population. It thereby hopes to achieve a significant effect while building its own capacity to attract further funding.
The CLAHRC’s themes draw on established expertise to allow the focus to be on service delivery challenges and improvements, and on integrating commissioners in the clinically driven research process. The research themes consist of quasi-experiments, tailoring an intervention to a context, and using a time-series analysis to demonstrate change. LYBRA builds change within the NHS by involving six individuals who are in authority and in a position because of their place within networks to cascade the research and its outputs through the service. LYBRA also seeks to involve commissioners in this initiative, as well as clinicians, in order to build a path for long-term capacity to integrate the clinicians and researchers’ knowledge into clinical research. In other words, it sees commissioners as key to the sustainability of the CLAHRC legacy.

Patient public involvement is also important to LYBRA, through the board’s relationship with LINKs and also through the individual themes. The optimal way of engaging with the public is not yet clear, however.

4.5.3 History
LYBRA partners have worked together for many years in a variety of ways. In Leeds in particular, we were told the university had a ‘25-year history of doing things’ with clinicians. Some of the more notable relationship networks they have inherited are through the White Rose Consortium, which aims to increase collaboration between the Universities of Leeds, York and Sheffield. The Universities of York and Leeds have collaborated with NHS partners through the NIHR Cancer Research UK Experimental Medicine Centre. The University of York had strong links with the Centre for Reviews and Dissemination, which is pertinent to the CLAHRC objectives. Finally, a number of CLAHRC staff have key roles on the West Yorkshire Clinical Research Network Board.

As one respondent says, a key motivation for bidding for the CLAHRC was the fact that ‘there are a lot of health researchers in this neck of the woods and there was this feeling that we weren’t getting our fair share of the pots of money’.

Logic model of the theory of change

Inputs
On the basis of its financial, human (staff, expertise and networks) and physical inputs, LYBRA set up a governance structure for the CLAHRC and selected a number of projects to fund from applications.

Processes
LYBRA are funding four research projects focused on improving service delivery, including physical health and addiction, vascular disease, child and maternal health and stroke care (the last two are identified as implementation themes in the proposal). These themes are supported by a fifth theme, an implementation one, which is looking at how these projects are succeeding or failing to bridge the second translation gap. The projects all focus on making access to care more equitable across communities, in particular for chronic disease. Cost-effectiveness is a strong element of the projects, in particular that relating to addictions. Networking, communications and collaboration efforts cut across committee and team meetings, and across the members’ collaboration on projects and their external engagement with commissioners, patients and the public, healthcare planners and policymakers, and other stakeholder organisations such as Health Technology Assessment
(HTA), SDO, Cochrane and the National Institute for Health and Clinical Excellence (NIHCE).

**Outputs**

One of LYBRA’s key objectives is to understand better what works in bridging the second translation gap. A second is to build capacity in the NHS for conducting research and evaluating performance; and another is to build the capacity in researchers to understand public and patient needs, respond to them, and communicate needs-focused research better with commissioners. The capacity-building output also concerns commissioners, who can frame their concerns in ways adapted to researchers (notably with regard to the timing of results). Finally, in pursuing these objectives, LYBRA seeks to achieve a number of outputs specific to its research projects, such as understanding what interventions for addiction are cost-effective, being able to demonstrate the outputs of a range of NHS services, and understand better what the public values in service delivery.

**Outcomes**

LYBRA hopes that by having set into motion processes of networking, communication and collaboration and by building the capacity of both NHS (including commissioners) and researchers, a number of sustainable outcomes and impacts will realise themselves. More specifically:

- the research-specific outputs may lead to better planning for how communities will react to different interventions;
- the capacity-building of the NHS may lead to an increased ability to measure and predict outcomes for interventions;
- capacity-building among academics may lead to partnerships encouraging research tailored to public and patient needs;
- joined with the capacity-building targeted at commissioners, it may lead to a regular feed of research ideas and guidance to commissioners.

Taken together, LYBRA hopes it will develop a new way for the health service and academics to work together, and for this structural and cultural change to form a bridge for the current second translation gap.

**Enablers and barriers**

This logic is not foolproof, however. A number of conditions may appear that put the approach that has been defined at risk. These may qualify as risks and/or as challenges. A number have been highlighted by the CLAHRC.

One is that providing clinicians with the time to engage in research through funding streams is not sufficient in itself as it may be particularly difficult to backfill their position: ‘The money might be there, but it is actually the practicalities of taking that money and being able to provide what you might lose to help facilitate [clinician] time ... that is the tricky bit in the middle.’ An example from the interviewee’s previous job was: ‘One of my consultants came to me and said “I have got this wonderful opportunity with the Department of Health, I am going to help them design a new learning tool for EMTG doctors, but don’t panic because they are giving me funding to backfill my post”’ and I
“well, that’s marvellous, but where am I going to find an EMT surgeon who can give me two afternoon surgery lists on Tuesday afternoon?”

Another challenge is to build relationships and networks amidst a changing health service landscape. This may confuse the direction of effort (Whom should one partner with to achieve a specific goal, if those responsible for that area are about to change?) as well as the willingness and commitment of health service providers to engage with LYBRA: ‘Just as we are getting to the stage where we are truly engaging with commissioners the White Paper arrives and you go to meetings with people who don’t quite know where they are going to be in a year’s time. ... Some of the actions around the plan are being affected by restructuring because one of the issues is the imminent demise of the PCTs, that has huge implications for our theme because one of our primary partners is PCT, NHS Bradford, and we have forged some good relationships with individuals within that organisation but [it] will cease to exist within the lifetime of the CLAHRC.’

Also the funding was also delayed – allegedly due to the difficulty of fulfilling the novel CLAHRC human resource funding approach – and this has meant that certain outputs may not be achievable within the set timeframe. This could have knock-on effects on some outcomes and impacts; what these may be has not been specified.

Other challenges to LYBRA’s approach to CLAHRC

The interviewees communicated other challenges that do not necessarily pose a threat or act as a catalyst to producing the intended outputs; however, they may influence the specifics of the processes and the consequent outputs, outcomes and impacts. The key challenges mentioned by the interviewees include these:

- As yet, LYBRA partners do not have a fully shared view of what the CLAHRC identity is / should be.
- Overcoming the culture barriers – all interviewees highlight the cultural differences between the NHS and academia. This cultural barrier relates to a number of points:
  - Conceptual barriers – the sectors do not necessarily understand terminology and concepts in the same way.
  - Differences in ambition – practitioners are driven by different ambitions. These are not incompatible but they do imply different priorities: ‘On the NHS side it is “here we go again, a bunch of academics who want to get us to do stuff and this time we have even got to pay for it” and a bunch of academics thinking “here we go again, the NHS shaping things in their own way and we need to try and respond to getting things done in a different environment”.’ There needs to be some practical compromise in order that this difference does not come to present a barrier to LYBRA’s logic model.
  - Differences in work environment – clinicians and researchers do not generally grasp the day-to-day activities and the possibilities and constraints of each other’s work. This is an obstacle to their successful collaboration: ‘One of the key culture clashes is ... about how busy people are on the frontline of the NHS ... Sometimes the researchers see that as a lack of engagement which is clear as well because they are trying to help
and they perhaps don’t understand why these people can’t spare an afternoon.’

- Differences in timescales – researchers’ timescales are generally much longer than clinicians’, who have a fire-fighting capacity: ‘Part of the TRIP-LAB theme ... is ... trying to make quite rapid changes in behaviour, that sometimes sits at odds with the ... academic approach which is often ... one step forward, two steps back. ... There’s a culture issue in terms of marrying those two which is difficult.’ ‘In the very early stages [one theme] was simply built around the idea of taking the outputs of the research themes and then increasing their adoption in practice. ... But research themes don’t have any outputs for the first few years so I can’t sit twiddling my thumbs for two years, so that is an obvious flaw and we had to revise that one fairly quickly.’

- In seeking to bridge the second translation gap, clinicians and other NHS practitioners are expected to ask questions that will still be relevant to them in the longer future, while researchers are expected to be flexible and pursue research that can start providing answers relatively quickly. This is conceivable since it is beneficial for clinicians to think along these lines. An interviewee recounted that an NHS partners had admitted: ‘I am still dealing with the same problems I was dealing with five years ago. So if five years ago I had sat down with a group of researchers and said “this is a problem” then I would probably now be in a better position.’

- Public patient involvement – this poses a number of challenges: ‘It is not clear what the optimal way to achieve public patient involvement is. LYBRA is still trying to answer this question. The idea that one person is going to represent a whole community is a complete load of bollocks as far as I am concerned, so I think the challenge is to engage communities through other ways so through social networks, through the local media, that sort of thing, rather than creating them a post.’

- The CLAHRC rests on deep collaborations. These rely on an element of trust between partners. This trust can take time to build, as partners have their personal ambitions and reason for being protective of these: ‘How do you get people in the NHS who really cannot see the value of this slow, expensive movement, and how do you get people in the university to stop being so aggressive with competitors and starting to work with each other and there have surely got to be lessons there.’

This suggests that collaborations will take time and may have uncertain consequences.

Demonstrating impact is a challenge that LYBRA faces. There are a number of tangible outcomes that may be measured, but much of the core of the CLAHRCs includes intangibles. It was said that this challenge is particularly felt in relation to outputs.
### Financial inputs
- £7 million from the NIHR
- £11.5 million in matched funding, from partner organisations

### HR resources
- Staff drawn from multiple academic and clinical partners
- Unclear number of FT and PT staff

### Physical infrastructure
- Leeds Teaching Hospital for budgetary
- University of Leeds will hold an administration centre

### Committees
- Board
- Executive Group
- Scientific Steering Group
- Infrastructure Group

### Applications received and selected
- Existing networks and relationships

### Research on improvements to service delivery:
- Addressing inequalities in access to chronic conditions care and exploring cost-effectiveness
- Physical health and addiction
- Vascular disease
- Child and maternal health
- Stroke

### Research into bridging the second translation gap
- TRIP-LAB

### Committees and team meetings
- Collaboration (networking and developing a shared understanding)
- Engagement to listen to the health economy’s needs:
  - With patients and the public
  - With healthcare planners and policy makers
  - With commissioners
  - With other organisations (e.g. HTA, SDO, Cochrane, NIHCE)

### Research-specific outputs:
- Knowledge of the cost-effectiveness of a range of interventions
- Demonstrating NHS performance through outcome measurements
- Better understanding of what the public values

### Capacity-building outputs:
- Building NHS capacity for research at both clinicians’ and management level
- Building NHS capacity to evaluate performance
- Being embedded in and informing the commissioning process so that the commissioners perceive the value of their relationship with clinicians and academics
- More public and patient needs-focused research
- Increased and better informing of the public

### Drawing lessons on how to bridge the second translation gap (what doesn’t work and/or what works)

### Planning for how the community will react to different interventions
- Measuring and predicting outcomes for interventions
- Partnering to tailor the research that is conducted to public and patient needs
- Regular feed of research ideas and/or guidance to commissioners
- Structural and cultural change in the NHS, academia and commissioners which results in bridging the second translation gap

This relies on achievements being sustainable

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**Figure 4.6 LYBRA logic model of the theory of change**
A number of findings regarding how to bridge the second translation gap are starting to emerge from LYBRA’s experience. Key points include this: ’Networking is key to achieving collaboration and an understanding of “the other’s” work environment, ambitions, possibilities and constraints. It is considered by some to be one of the hardest and most time-consuming activities, but is also seen to be crucial if LYBRA is to be successful. Comments were: ‘If you get engagement you’re continually along the journey ... in a position to offer that thing that can generate change.’ ‘It’s not just about giving direction, it’s about giving people an opportunity to have conversations about how [others] develop and take things forward.’ ‘As a rule of thumb, I would much rather I had the time of people, because ... they are already embedded in the organisation, they understand the culture and they understand where the leaders are and where the links are and we will achieve a more sustainable change if we can deliver [there].’

Buy-in from the chief executives has been highlighted as a key factor that can make the CLAHRC’s relationship brokering and pursuit of various costly activities more seamless: ‘[The chief executives] genuinely care, and have put their money where their mouth is and ... they have been a big part of driving it forward really.’

It has been suggested that a way of securing buy-in is to build on existing strands of expertise, which may help build credibility and interest. Some dimensions of securing buy-in were these:

- Close relationship with commissioners; where there is a mutual dedication to listening and integrating the other’s advice, it is thought to be key to ensuring that findings can be acted upon.
- Clinical leadership could be effective in ensuring that the research retained a clinical focus.
- The CLAHRC activities were most effective in clinical settings to facilitate clinicians’ finding time to engage.
- The fact that the CLAHRC initiative did not provide support costs was a concern at first but has since been considered a positive element, forcing researchers to ensure the usefulness and feasibility of the research.
- Field diaries are thought to be a useful way of capturing the intangible impact of CLAHRC activities: ’I think one of the aspects of the CLAHRC that we were very nervous about to start with ... was the fact that there wouldn’t be service support costs ... because in most of the research that we are doing ... if you don’t have service support costs you don’t get going. ... [As a result] we are going to have to engage with frontline workers and also engage to design interventions that they can deliver ... so it sharpens our minds.’ Some interviewees mentioned that engaging and building a critical mass of change-capable agents is key for bringing about change: ’I was around in the early days of primary care when [the Department of Health] did a lot of collaborative programmes ... run ... by the NHS. ... It was really powerful stuff and it worked on a very small scale down to the fact where practices would get together and change [their] ways. ... That had [a] dramatic impact on the quality of service that they were able to offer but the problem with that was that it had no scale.’
4.5.4 Summary
The LYBRA CLAHRC has secured NIHR and matched funding, using some of this to secure staff and physical infrastructure:

- It has a governance structure in place and is able to take advantage of many pre-existing networks and relationships.

- It is conducting research into improvements to service delivery (with an important theme of reducing inequality) and improving the second translation gap.

- Networking, meeting and engagement with stakeholders are intended to build a shared understanding and to bring the needs of patients, planners, commissioners and other organisations closer to the activities of the CLAHRC.

- Outputs relate to research, capacity-building and drawing lessons. Research outputs include improved knowledge of the cost-effectiveness of certain interventions, better outcome measures and a better understanding of what the public wants. Capacity-building involves the embedding of research and evaluation capacities in the NHS and the embedding of the needs of the NHS in researchers’ approaches.

The intended outcome is a structural and cultural change in the NHS, in academia, and in commissioning, resulting in a new and sustainable relationship between researchers and practitioners.

4.6 Leicestershire, Northamptonshire and Rutland

4.6.1 Introduction
Aims and objectives
The LNR-CLAHRC’s aims are twofold: to conduct applied health research (in long term care - LTC) in new ways that can more rapidly inform practice, and to increase research capacity in the NHS. Achieving the latter through the CLAHRC means enabling partner NHS organisations to generate new research evidence, make use of existing research evidence and also ‘develop systems and structures for the application of knowledge and for the translation of research evidence into more effective and efficient health care policy and practice’ (LNR-CLAHRC website, Aims and objectives). These high-level aims are underpinned by a set of nine objectives:

1. Secure a step change in the way that applied health research is conducted and health research evidence is put into practice
2. Increase capacity to conduct and implement applied health research through education and collaboration
3. Increase the involvement of stakeholders from the local health community, including the public, in the design, conduct and application of health research
4. Link those who conduct applied health research with those who use it in practice
5. Test new initiatives to encourage the use of applied health research findings in healthcare practice
6. Create and embed approaches to research that are specifically designed to take account of the changing ways in which healthcare is delivered
7. Focus on the needs of patients, particularly on research relating to LTCs of public health importance
8. Improve the health of the population of LNR
9. Ultimately LNR-CLAHRC is hoping to make a significant positive impact on the health of the people of its region and contribute to a better understanding of the mechanisms for sustaining that improvement (LNR-CLAHRC website).

Structure and partners
In order to fulfil these objectives, LNR-CLAHRC has a wide range of local partners, as detailed in Table 4.7 below.

Table 4.7 LNR-CLAHRC key partners

<table>
<thead>
<tr>
<th>NHS acute trusts</th>
<th>NHS PCTs</th>
<th>NHS MHTs</th>
<th>HEIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Hospitals of Leicester NHS Trust</td>
<td>Leicester City PCT</td>
<td>Leicestershire Partnership Trust</td>
<td>University of Leicester</td>
</tr>
<tr>
<td>Northampton General Hospital NHS Trust</td>
<td>Leicestershire County and Rutland PCT</td>
<td>Northamptonshire Healthcare NHS Trust</td>
<td></td>
</tr>
<tr>
<td>Kettering General Hospital</td>
<td>Northamptonshire Teaching PCT</td>
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</tbody>
</table>

The LNR-CLAHRC aims to bring all these partners together. The expectation is that by working less in silos and becoming part of the same system, it will be possible to improve patient outcomes and the system as a whole. As one interviewer put it: ‘You know, why do we get all these patients in on a Friday night, why do we get all these adult patients that come in to A&E all of a sudden, half of which don’t really need admitting but we have to because of targets and all of this, how can you solve all of those complex things by just being UHL or just being Kettering district general? What I think CLAHRC is trying to do is to look at it all together and I think that is an important part of it. There is lots of other stuff as well, but for me it is to do with this area wide thing and looking at it together.’

Some of the interviewees and workshop participants felt that current budget pressures and changes in the NHS could help to break down silos because fewer resources would be available through the system as a whole, creating pressure to work together to address these system-wide issues.

Figure 4.7 outlines the LNR-CLAHRC structure.
Organisational management of the LNR-CLAHRC

Within this structure, the LNR-CLAHRC has created posts for co-ordinators to be employed within the partner trusts throughout the geographical region covered by the CLAHRCs. The role of the co-ordinators is to ‘provide the crucial link between NHS trusts and academia to ensure CLAHRC is working collaboratively to deliver its aims and objectives’ (LNR-CLAHRC website: Coordinators).

The CLAHRC also uses translation teams, which are described by a CLAHRC representative as: ‘groups that are located again in the NHS and are designed to link clinical and/or managerial problems into CLAHRCs so the CLAHRC can offer expertise and assistance and help doing either research or doing some of the knowledge generation that isn’t research to help them address that. So it is a way of ensuring that ownership of some of these issues remains with the NHS and … there will be at least one in each trust, that is the current plan.’

So the LNR-CLAHRC has created posts that span boundaries in order to facilitate the involvement of NHS partners and ensure its research is focused on their needs and priorities.

Geographical context

The LNR-CLAHRC covers three counties: Leicestershire, Northamptonshire and Rutland. The population covered by these is approximately 1.6 million and, whilst indicators of health are similar to the average for England and the East Midlands region, there are some wide variations with areas experiencing significant levels of deprivation and poor health. In addition, a large proportion of some of these areas’ population is made up of ethnic
minorities. For example, 34% of the population in Leicester is from Black and ethnic minority groups, mostly south Asian (LNR-CLAHRC 2008).

The geographical spread is significant. The areas are diverse, with ethnic minorities, people with chronic conditions, deprived areas, high unemployment and so forth; there is a sense that if CLAHRC can produce results in this region the lessons learned from successful activities could be applied elsewhere in the UK. The fact that the area covered by the CLAHRC is large means that the CLAHRC has access to a greater number of GP practices and different systems than would have been the case had the CLAHRC focused on Leicester only. There is also an element of wanting to do something as a region because historically Northamptonshire was not considered part of this region (and Leicester was grouped with Sheffield and Nottingham).

It is clear from the LNR-CLAHRC application that many of the partners within the CLAHRC had previous networks and relationships on which it has been able to capitalise and build. Examples include the LNR Comprehensive Local Research Network (LRN), the South East Midlands Diabetes Network and the East Midlands and South Yorkshire Primary Care Research Network.

Nonetheless, at the workshop held with key representatives of the LNR-CLAHRC in November 2010, it was recognised that there are some geographical variances in engagement with the CLAHRC. There is a view that more research is happening in Leicester (and that a lot of the expertise lies there) rather than in Northampton, and this creates added challenges. It was also mentioned that engagement with the CLAHRC differs across areas and that different means of engagement are needed to achieve buy-in from all partners involved.

4.6.2 Overview

Overview of areas of thematic focus

The LNR-CLAHRC has five different themes: four applied research themes focused on different stages of treatment and one focused on implementation. None of these themes is disease specific as the LNR-CLAHRC wanted to capitalise on disease-specific expertise and assess whether this expertise could be applied to other diseases in the same stage. Therefore the themes are set up to enable cross-disciplinary working. The applied research themes are:

1. Early detection
2. Self-management and education
3. Prevention
4. Rehabilitation.

These themes have the following aims:

1. Early detection of chronic diseases in a multi-ethnic population in primary care
   - Refine and test an interactive web- and paper-based self-assessment tool for risk of type 2 diabetes (T2DM) and cardiovascular disease in a primary care setting.
• Identify methods of screening for chronic heart failure (CHF) in a multi-ethnic population with diabetes in primary care.
• Implement recommendations on public and healthcare professional interventions to encourage early presentation of suspected transient ischaemic attack and stroke to specialist services.
• Evaluate the use of dynamic plaque indices in predicting high-risk patients with asymptomatic and symptomatic carotid artery stenosis in a one-stop vascular neurology and surgery service.
• Evaluate interventions to reduce carer strain for stroke patients in a multi-ethnic population

2. Structured education and self-management programmes in long-term conditions

• Test a structured self-management programme for newly diagnosed subjects with T2DM from Black and minority ethnic populations, and evaluate the model applied to a self-management programme for people with CHF.
• Test an integrated approach for promoting effective self-management in people with established T2DM. This objective will build on existing and newly created modules of the national DESMOND (Diabetes Education Self-Management for Ongoing and Newly Diagnosed) programme hosted by the University Hospitals of Leicester (UHL). Lessons from this will be incorporated into the chronic respiratory disease (CRD) rehabilitation programmes and the programme to reduce progression of chronic kidney disease (CKD).
• Evaluate the DESMOND training and quality development programme for educators delivering self-management education, leading to a quality development framework for educators transferable to other long-term care conditions, specifically CRD and CKD.

3. Prevention of chronic disease and its associated co-morbidity

• Undertake a trial to enable translation of a low-cost, previously piloted intervention with a robust theoretical philosophy based on increasing physical activity, particularly walking, in order to prevent development of T2DM and to test this intervention in a multi-ethnic UK population.
• Implement and appraise novel models of care to prevent progression of CKD in a primary care setting.
• Undertake a cluster RCT to assess the prevention of depression in high-risk groups in primary care.
• These objectives will complement strategies set out in our research themes on early detection, self-management and rehabilitation, providing a comprehensive approach to chronic disease management, and will link where appropriate to the implementation theme to facilitate local adoption into practice.

4. Rehabilitation
• To evaluate the effectiveness of generic rehabilitation aimed at reducing disability and increasing habitual physical activity applied across a range of chronic diseases managed in primary care.

• To determine the institutional and individual barriers to the successful implementation of this intervention.

• To determine whether generic rehabilitation, delivered during unplanned hospitalisation for an exacerbation of chronic disease, reduces the risk of subsequent unscheduled care and improves clinical, psychosocial and health economic outcomes.

• To determine the individual and organisational constraints to the implementation of such a service in acute care settings.

5. Implementation theme

• Improve uptake of evidence-based practice in accordance with local public health priorities, including relevant National Institute of Clinical Excellence (NICE) guidelines.

• Promote the implementation of the findings of the research themes of LNR-CLAHRC.

• Develop capacity in implementation expertise in trusts through training and structured involvement of professionals in the implementation theme.

• Develop the evidence base for methods of effective implementation through rigorous evaluation.
Financial resources:
£10m (SDO)
£10m matched funding obtained from local NHS trusts, University of Leicester and Deane

Physical infrastructure:
Premises located at the Department of Health Science of Leicester University and the local trust, equipment, IT and simulation centre for courses

Human resources:
1 director and 1 deputy director
1 manager
5 theme leads and 5 deputy theme leads
5 theme managers

Board, Committees and groups:
Management board
Executive group
Stakeholder group
Commissioner’s forum
Scientific committee
Implementation management group

Existing relationships and networks
Regular meeting between CLAHRC staff and partners

Research-specific outputs
E.g. the Detect tool to extract data from GP practices as part of the CKD project

Articles in peer-reviewed journals

More people new to research being able to articulate research questions

Intended outputs:
Obtaining further funding to sustain the work of the CLAHRC beyond 5 years
Secure access to data and have systems in place to hold them efficiently so that it becomes possible to identify when clinicians are deviating from clinical evidence
Generate new evidence through CLAHRC activities that is ready to be implemented
Set up an infrastructure to implement evidence generated by the CLAHRC

Achieved outcomes:
Raised awareness and views on clinical research amongst both the research community and NHS staff
Some of the non-research oriented PCTs are now doing research
New research on areas not considered strengths before (e.g. project involving GP practices in Northants for CKD)

Intended outcomes and impacts:
Better health outcomes for patients or at least evidence that better health outcomes are likely in future
Produce changes to current ways of working to improve patient outcomes
Influence trusts in investing in research that can help their decision making beyond life of the CLAHRC
Achieve behaviour change with academics producing more locally relevant research and NHS staff being involved in it

Use of co-ordinators embedded in the trusts and use of translation teams to link clinical and/or managerial problems into the CLAHRC
Maximise the use and improvement of local knowledge
Develop guidelines locally
Involce local partners in decisions on research
Use training to deliver particular models of education developed by the CLAHRC
Engage patients and clinicians in research so that they generate the evidence underpinning different approaches and see the outputs of their involvement

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Achieve behaviour change with academics producing more locally relevant research and NHS staff being involved in it

Underpinning enablers and barriers
Researchers in the CLAHRC are clinical researchers so they have an interest in their research findings being implemented in the NHS
Strong relationships between partners previous to the CLAHRC
Areas of expertise have been capitalised on through the CLAHRC and new areas of research are being explored
Different incentives for researchers (i.e. articles in peer-reviewed journals) and short-term contracts often mean that researchers do not typically have time to see or work towards their findings being implemented – not all NHS staff are used to working in research and seeing its value for their work because often over-worked and therefore ‘sticking to business as usual’
HR recruitment and other processes (e.g. ethics) are very bureaucratic and can impede/influence the direction of research plus CLAHRC studies don’t have research portfolio status so no support from Local Research Networks
Some may have unrealistic expectations of what the CLAHRC can achieve

Figure 4.8 UNR logic model of the theory of change
Delivering the theory of change

At a more granular level than can be achieved in the outline logic model, LNR-CLAHRC have identified in more detail some of the activities needed to deliver the theory of change. Some examples are set out below:

- The engagement of NHS partners at different levels of the CLAHRC (e.g. decision-making on prioritising which research to follow and how best to implement that research) aims to make these partners realise that research is not necessarily a process separate from their day-to-day work, and that it may produce useful outputs that can be practically implemented if the needs of clinicians are integrated into the process.

- The CLAHRC aims to send a clear message to partners that it aims to provide trusts with research that will be tailored to their needs and those of patients. In the long run, this means that money could be saved because it is spent on evidence-based interventions rather than interventions as usual.

- In addition to involving NHS partners at all stages of research to create useful outputs for healthcare practitioners, there is a view that their involvement in the CLAHRC could create long-lasting changes in the way research is viewed by the NHS, so that after the CLAHRC has gone NHS partners will be left the knowledge that research can be useful to them as practitioners and also with the ability to do research themselves. One interviewee said that NHS partners should become more involved in: ‘doing research and being much more open to the findings of research whether that be on a level of them being involved in studies, or whether that is them implementing the results of a study more quickly, or because they question more and want to know what the evidence is in their practice and reflect on their practice more’.

- One of the ways in which the CLAHRC aims to achieve buy-in and involvement from NHS partners is through its improvement of local knowledge so that the work of the CLAHRC is highly relevant to partners and the areas it covers. The aim is for the CLAHRC to use existing local knowledge where possible. Similarly, the CLAHRC attempts to ‘piggy back’ on existing activities as well to make its outputs relevant.

- Another way in which it aims to spread the relevance of its work and its use and impact on practitioners is through training people to deliver a particular model of education developed by the CLAHRC. One interviewee said: ‘it is engaging lots of people and they become part of the implementation of the study, you know, we train people about the research and to not have fixed views about what they think the outcome might be and I think that has changed a lot of those people’s perceptions of how to do research and how to use it in practice’.

- While it is important to achieve buy-in from clinicians, it is also vital to have the support of the management for the CLAHRC, so the LNR-CLAHRC board is broadly made up of chief executives, which makes it powerful and gives legitimacy to the CLAHRC. It also means that some of the ideas driving the CLAHRC come from the trusts’ chief executive officers. Overall, their involvement means that it is possible to get things done in the trusts (if they say it can go ahead, it can). Also, R&D people in the trusts are now senior staff so there are better links between...
them and the chief executives (if you present an idea to them, they can walk into the chief executive’s office). One comment was: ‘You need the chief execs’ input really if you are going to make major changes and I would say they are engaged, but it is a question of getting time with them because … this is a very small part of their agenda … you have to be careful how much you trouble them with it and … give them something good, don’t waste their time.’ The CLAHRC executive group is important; it is made up of chief executives and senior people from partner trusts as well as R&D leads: ‘that is important from a match funding perspective, from a performance perspective and from an endorsement perspective because, you know, if they are not aware and they are not engaged then it is really difficult to get things going, so that works reasonably well’.

- The LNR-CLAHRC seeks to involve the public, patients and clinicians so that the research it produces is directly relevant to them and has greater drive. One interviewee felt that involving patients and clinicians may be one way to counter the challenges of constant change in the NHS because they will remain the same, whereas commissioners and commissioning organisations will change, although it is still vital to get buy-in from management in order to influence organisational structures.

### Challenges

The LNR-CLAHRC faces a range of challenges:

- Workshop participants mentioned that in order to achieve engagement from all partners, they were having to adopt different tailored approaches. This was linked to different trusts having different levels of interest as well as varying levels of previous experience and expertise in research.

- There are different incentives and issues at play for researchers and NHS staff. For example, researchers are typically employed on short-term contracts, so they only rarely get the opportunity to implement their research findings. In addition, their incentives are such that the focus is on the research process and output (i.e. peer-reviewed articles) rather than implementation of findings in the NHS. On the other hand, NHS staff often lack the time to stop and reflect on their practices, and NHS resources are seldom dedicated to evaluating current practice owing to the short timescales they operate under as well as frequent changes in management (e.g. if a research finding can make a difference in a few years, it is likely that the leadership of the trust will change and so will its priorities). One interviewee felt it was a challenge to engage trusts in particular owing to the time-lags between research and implementation of findings, but that it was vital to achieve buy-in from the trusts to make research relevant: ‘I mean if trusts can see the point of research as being “helping us with our problem now”, I would hope they are getting to the position where they can start to say yes and see that information about something in five years’ time would actually be really useful and they would remain interested in it throughout that period, but until they are at the point of thinking that it has got any use at all, or it is not something that comes out and puts even more requirements on them and asks them to spend even more money that they haven’t even got, it really isn’t helpful.’
The CLAHRC operates in an environment where it is competing for the attention of all sorts of people, and current changes in the NHS landscape mean that involving commissioners in research is increasingly complex. The people to engage are changing and their priorities are changing due to current pressures.

Staffing and recruitment have been a challenge, and it has taken longer than expected to fill posts such as those of the co-ordinators because of the bureaucratic processes involved in appointing staff. In addition, it has not been easy to define some of the CLAHRC posts. One interviewee felt that the role of co-ordinators had been somewhat unclear to start with: ‘I think they are slightly caught between two storms really because they are not really based within the sort of central core themes, and they are not really in the research or the implementation themes, I think they are sort of slightly struggling to see what their role is and also it is difficult isn’t it because you can’t be all things to all people and I think sometimes people overestimate when there is lots of money, their expectation of what they might get from the CLAHRC is sometimes a little bit unrealistic.’

Similarly, the processes involved in getting ethics approval for some studies have implications and may end up driving research in different directions.

Some may have unrealistic expectations of what the CLAHRC can achieve. Some of those views are generated by the fact that a large grant has been awarded to the CLAHRC, but it is relatively small compared to the region it covers and the changes it would like to bring about in the system. The CLAHRC cannot solve everyone’s problems and that is sometimes not well received. In addition, although the CLAHRC has been able to put together an infrastructure to make changes happen, these changes will be realised in the long term rather than straight away.

One barrier to the CLAHRC enterprise as a whole is that CLAHRC research studies do not have research portfolio status and are therefore not eligible for support from the LRNs. When the CLAHRC studies are competing with other prospective research studies that do have this status they are therefore at a disadvantage. In order to counter this, the CLAHRC has tried to provide some funding for practices and other partners to get involved in order to create a replacement for the portfolio support.

Some feel there is too much emphasis on applied research and too little on implementation. Similarly, some feel that the applied themes are were very close to traditional research.

4.6.3 Summary

LNR-CLAHRC secured NIHR and matched funding, some of which went towards funding a core team of director and deputy director, five theme leads and five deputy theme leads, and five theme managers. A physical infrastructure was available and the necessary governance arrangements were put in place.

One key process is the use of co-ordinators embedded in the trusts and the use of translational teams. Another is to develop guidelines locally and involve local partners in decisions on research.

Training is used to deliver particular models of education to support the aims of the CLAHRC, and patients and clinicians are encouraged to become directly involved in
research. Through this there have been research-specific outputs such as the ‘Detect Tool’ and articles in peer-reviewed journals.

- Intended outputs include securing further funding, improving the availability of data to clinicians so they know when they are departing from evidence-based practice and guidelines. New and usable evidence is to be created along with an infrastructure to support the implementation of locally produced research.

- Outcomes already achieved include raising awareness, bringing clinicians who were previously non-researchers into research activities, and developing strengths in new areas of research. In the longer term, it is hoped to achieve better health outcomes for patients, improved ways of working, and sustainable behaviour change among NHS staff and researchers.

In the list of challenges at the end of section 4.6.2 above we illustrate how demanding it may be to deliver on this model of change (although much the same may be said for each CLAHRC). The resources required and the types of processes needed are less controversial and less uncertain than how these might in practice be combined to deliver the intended outputs and outcomes. Some of these dimensions will be explored in phase 2.

4.7 North West London

4.7.1 Introduction

Partnership and governance structure
The North West (NW) London CLAHRC’s core partnership consists of the Chelsea and Westminster NHS Foundation Trust as lead NHS organisation and Imperial College London as lead HEI. This core partnership is complemented by the London SHA and the West London Research Network (WeLReN). The main PCTs and SCTs of the region, listed in Table 4.9, are also part of the initiative.

Table 4.8 Primary care trusts and secondary care trusts involved in the NW London CLAHRC

<table>
<thead>
<tr>
<th>CLAHRC PCT</th>
<th>CLAHRC SCT</th>
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<tr>
<td>Brent PCT</td>
<td>Ealing Hospital NHS Trust</td>
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<td>Ealing PCT</td>
<td>The Hillingdon Hospital Trust</td>
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<tr>
<td>Hammersmith and Fulham PCT</td>
<td>Imperial College Healthcare NHS Trust</td>
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<tr>
<td>Harrow PCT</td>
<td>North West London Hospitals NHS Trust</td>
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<tr>
<td>Hillingdon PCT</td>
<td>West Middlesex University Hospital NHS Trust</td>
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<tr>
<td>Hounslow PCT</td>
<td>Royal Brompton and Harefield NHS Trust</td>
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<td>Kensington and Chelsea PCT</td>
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<td>Westminster PCT</td>
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The NW London CLAHRC covers a specific geographical area in London which represents 1.9 million individuals. They key characteristics of this population are that 35% come from ethnic minorities (mainly Asian and Black), and 23% are under the age of 20, with 12% over the age of 65.

The partners and their activities are governed in a centralised way, as Figure 4.8 illustrates. The CLAHRC employs around 20 full-time staff for governance, management, administration and leadership of the themes it funds. It indirectly employs around another
20 full-time research staff at the doctorate level through the research projects it funds. These fully funded staff represent only a fraction of all those involved with the CLAHRC, which have been estimated at around 500. It is worth noting from Figure 4.9 that a number of the key CLAHRC staff had/have appointments in both the clinical and research sector, notably the initiative’s director, Professor Bell, the co-director, Professor Majeed, and the theme head for chronic care, Mr Banarsee. The CLAHRC’s core team come from a range of backgrounds including academic, NHS, PCT and frontline medical and nursing practice.
Figure 4.9 North West London core team

SOURCE: Based on CLAHRC-Northwest London website (2010) and on NIHR application to become a pilot CLAHRC (2008)
High-level aim and key objectives
The NW London CLAHRC aims to improve patient care, especially at the interface between service provider and service user. It seeks to achieve this aim by meeting a number of objectives:

- monitoring the cost-effectiveness of clinical interventions;
- enhancing and speeding up uptake of clinical cost-effective interventions;
- improving the patient journey across interfaces;
- changing the culture and empowering individuals to design, influence and implement change programmes.

4.7.2 Overview

Thematic focus overview
The NW London CLAHRC strives to meet its high-level aim and key objectives through five themes. Two relate to research: chronic and acute care. Three refer to implementation: collaboration, learning and delivery; patient public involvement; and evaluation. The research themes are the means to experiment and evaluate different systems to bridge the second translation gap, and the implementation themes support them through knowledge transfer and capacity-building. The CLAHRC also encourages larger teams than necessary to allow building the critical mass of skills, knowledge and interest.

The CLAHRC is unique in that it funds research projects in three rounds, thereby retaining flexibility over its activities. This provides the team with the opportunity to learn lessons from past experimental research projects, and build on this with future experimental projects: ‘We will support [future rounds of projects] to do implementation on their site at a lower level of funding [than earlier rounds] ... for the roll-out because there is a learning component ... a roll-out project interacts with its feeder project and that is one of the reasons we have got the six month overlap ... so we can encourage them to tell each other what went wrong … “What did you learn, what would you do differently this time?”

The implementation themes in this way are continuously adapting the knowledge transfer and capacity-building support they offer. More specifically, the themes’ activities encompassed the following in the first round of funding:

- **Acute care research**: Mostly focused on the issues of medicines management and care bundles in chronic obstructive pulmonary disease (COPD) and pneumonia.
- **Chronic care research**: HIV testing in PCTs and the management of complex-needs patients.
- **Collaborative learning and delivery implementation**: Aims to develop and help the application of a systematic approach to implementing and adopting new practice. In order to achieve this it provides educational and training programmes on improvement and research methodology, and on the value of public patient involvement. It also provides tailored advice and support, and helps research teams collaborate and cooperate.
- **Patient and public involvement**: Looks into methods that can be used to understand patient needs and opinions. It provides an induction and training programme to
empower the public to become involved in research into service delivery. Both activities are underpinned by public open days to develop knowledge about these opportunities.

- **Evaluation:** Focuses on monitoring change programmes, assessing their outcomes and impacts, and drawing lessons from these to feed into future change programmes.

**Overview of the CLAHRC approach**

The CLAHRC’s aim is to bring about institutional change in the NHS by building the capacity and knowledge of specific area groups who in turn will be able to build the capacity and knowledge of their colleagues. Acting in a cascading way, it hopes to bring about a comprehensive system change by enabling the principles, processes and skills to be transferred continuously and sustainably.

As the system change being sought relates to the patient’s journey, the CLAHRC has put patients in the centre of their activities. The focus is on using projects to learn, feed back and build knowledge. It recognises the NHS’s significant capability in running projects, which is in contrast to its ability to drive structural change: ‘The problem is that the health service endemically suffers from projectitis, so you go and you find a project, or they tell you they are running projects, and if they are really lucky they will be running 40 projects, all of which will deliver and so there is a bit of an issue in that continuing to do this isn’t right, continuing to do what we currently do doesn’t actually change the system for the better, so you need to have something that is a bit more structure and robust around that.’

**Logic model of the theory of change**

**Inputs**

With its funds, expertise and physical infrastructure the NW London CLAHRC was able to kickstart its proposed plans. It began by hiring a large number of people at the operational and doctoral research levels.

**Processes**

Within this CLAHRC the funding of research projects is an activity in itself, rather than an input. NW London provides training to prospective applicants (who have passed the screening stage) in the key principles underpinning the CLAHRC. In so doing, they are building some capacity that will not be directly captured at output/outcome stage since not all will eventually be funded: ‘[A] senior researcher ... must have come along to every single event we had, trying to ... work out the different language for different groupings, so if we are talking to a researcher we can manipulate the language, if we are talking to someone on the front line we can talk a slightly different language with the same meaning.’

The CLAHRC is using the research projects selected to test new models for bridging the second translation gap; they are not interested in the research studies per se. Their core focus on how the models fare with various research projects is reflected in the fact that they impose a high number of committee, theme and CLAHRC-wide meetings (weekly and quarterly) to discuss experiences, successes and challenges, allowing for close monitoring. The CLAHRC asks for data on outputs to be collected on a weekly basis.

The CLAHRC reflects and builds on the research project experiments through its implementation themes, which promote and facilitate collaboration and learning; through the evaluation theme; and also through the public and patient involvement theme, which
allows them to bring in their views regarding the needs and success of the work being undertaken for improving service delivery pathways. Similarly, the CLAHRC engages with key stakeholders such as healthcare planners and policy-makers as well as industry in order to inform them about their results and implement the improvements in service delivery – or caution about directions that appear to be either unproductive or counterproductive.

**Outputs**

The NW London CLAHRC sees these processes (training of applicants, testing of models through research projects, reflection and building on these research projects through collaboration, evaluation and engagement with stakeholders) as means to achieve a number of outputs. The key is to gain insight into how to bridge the second translation gap. Some of the outputs will be research specific (i.e. direct results of the research projects). Others relate to capacity-building, especially in the NHS, to inform, conduct and integrate research into practice: ‘Building research capacity and capability ... is about taking away the fear, ... so that people aren’t frightened of filling in an ethics form for example, [and] can actually do that themselves.’

It includes the building of cross-organisational networks that allow sustained collaboration and exchange. More outputs are intended by NW London, regarding influence on and alignment with policy.

**Outcomes**

Following from these outputs, the CLAHRC hopes to achieve a systematic approach to education, knowledge and transfer from its collaborations, and thereby continue and sustain improvements in patient care. To achieve this NW London believes it will see the SDO and the NHS become more open to change and to risk. The CLAHRC also hopes that through its collaborations it will generate a critical mass of researchers and clinicians who understand one another and can work together to achieve products of shared benefit.

**Enablers and barriers**

This logic is not foolproof, however. A number of conditions may appear and undercut the approach that has been defined. These are both risks and challenges. A number have been highlighted by the CLAHRC itself:

- A sense of group achievement is key to maintaining momentum of effort. Without the feeling of shared success, interviewees fear interest and commitment may wane.
- Some interviewees mentioned that researcher leadership suggested an element of risk around achievement activities according to plan. Researchers are not renowned for timeliness.
- Staff turnover and retention was highlighted as a potential risk to activities in this CLAHRC, which places a large emphasis on people (notably through a large number of recruitments).
- A number of concerns around sustainability are raised in relation to outcomes and impact. It is suggested that sustainability relies on two key elements: for NW London to develop a clear identity for itself; and for the funding environment, which can keep initiatives going, to align with the user focus as the CLAHRC does. After the end of its
initial funding phase this should allow the CLAHRC to remain competitive in attracting the necessary resources.

Other challenges to NW London’s approach to CLAHRC
Interviewees communicated a number of other challenges that do not necessarily pose a threat or act as catalysts to producing the intended outputs; however, they may influence the specifics of the processes, and consequently outputs, outcomes and impacts. Most of these relate to CLAHRC’s aim to bring people out of their comfort zone, which means there are misunderstandings and tensions in the objectives and interests of those involved. The core tension is between researchers who generally do not grasp the importance of public patient involvement, and front-line staff who conceive of methods differently from researchers (i.e. as ticking boxes or as a means to an improved end).
A number of partners have roles in stakeholder organisations:


Figure 4.10 NW London logic model of the theory of change
Findings on how to bridge the second translation gap

A number of findings on bridging the second translation gap are emerging:

- There is inherent tension in bringing together the research and service delivery worlds, which work at different paces. The CLAHRC has sought to address this by funding consecutive rounds of evidence-based innovation projects with a quick turn-round. It allows provision of faster answers, while still building on previous knowledge in future work.

- The language barrier is a key obstacle to overcome. For example, there is a barrier in clarity of communication which results from different sectors having a different understanding of the same term.

- One of the useful aspects of the CLAHRC is its reliable and accessible synthesis of the large body of information on how to bridge the second translation gap.

- The CLAHRC has found that bridging the second translation gap starts not at the findings stage of research, but in wordstorming at the proposal stage. This allows service delivery processes to be integrated into the research – through, for example, action research methodology.

- Any effort at bridging the translation gap benefits strongly from being underpinned by strong collaboration/co-operation and evaluation. It allows learning and sharing from those lessons.

- Communication has been found in NW London to be most successful when it is between individuals that relate to and respect each other: ‘there’s nothing like a doctor to listen to another doctor, particularly a more senior doctor’.

- NW London have found the requirement of matched funding to be useful in increasing organisational involvement.

4.7.3 History

The CLAHRC partners were jointly involved in similar work previously:

1. Most notably, the core Chelsea and Westminster Hospital (C&W) and Imperial College CLAHRC staff were involved in trying to set up a centre for healthcare improvement and delivery that corresponded closely to the call from the SDO.

2. C&W and Imperial have partnered with the NHS Institute for Innovation and Improvement to provide training modules (the same as will be used for the collaborative learning and delivery theme).

3. C&W and Imperial have engaged the public and patients through Imperial’s science communication department and with the support of the Royal College of Physicians’ Public Involvement Unit.

4. Imperial and the trusts involved are all part of the North West London Comprehensive Clinical Research Network (CLRN). Imperial also hosts the West London Health and Social Care Alliance (WeLReN), a unit co-ordinating primary care research amongst trusts, social services and local academic institutions.
5. The partners – notably PCTs, C&W, Royal Brompton Hospital and Imperial – have experience of working together on similar programmes to those of the CLAHRC, targeting research and change management.

4.7.4 Summary
NW London CLAHRC has secured NIHR and matched funding and has set up a core leadership and management team along with a wider pattern of governance. It draws upon various well-established relationships and networks. Its processes bring together a commitment to engagement – with planners, charities, patient representatives and industry – and to learning, training and feedback to use research to change services for the better.

Outputs include those relating to research-specific activities, to patient involvement, to informing and supporting frontline staff, and to creating a more research-responsive culture. All of this, it is anticipated, will lead to improvements in patient care.

In this CLAHRC learning, feedback and engagement create, it is hoped, both an adaptive NHS and one which is aware of and contributing to research. Spread and adaption become not an add-on activity, but part of the routine of the NHS. Awareness of the needs of the NHS, in this scenario, becomes more active in shaping researchers’ activities.

4.8 Nottinghamshire, Derbyshire and Lincolnshire
4.8.1 Introduction
Partnership and governance structure
The key partners in the Nottinghamshire, Derbyshire and Lincolnshire (NDL) CLAHRC span a university and local authority and NHS institutions. They are the University of Nottingham, Nottinghamshire University Hospitals NHS Trust, Nottingham County Council, Nottingham City Council, Derbyshire Mental Health NHS Trust, NHS Nottingham City, Lincolnshire Partnership Foundation NHS Trust, NHS East Midlands, Bassetlaw PCT, Derbyshire County PCT, Nottinghamshire University Hospital NHS Trust, Nottinghamshire Healthcare NHS Trust, NHS Nottingham County and NHS Derby City.

The NDL CLAHRC covers around half of the population of the East Midlands SHA, which in total includes Leicestershire, Rutland and Northamptonshire as well as Nottinghamshire, Lincolnshire and Derbyshire. The SHA encompasses around 4.3 million people and has a budget of £6 million.

The governance consists of three overlapping structures, with oversight from a governing board (BOAST – Behavioural medicine, Organisation science and Applied research Synergy in the Trent region). The functions of the three governance centres (centre governance, research governance and partnership governance) are outlined briefly below.

- Centre governance: Its remit is to establish memoranda of understanding between partners, meet quarterly to set general strategy and plan updates, ensure clarity of roles, manage risk and outputs, oversee forward planning, and sign off annual reports. Members are representatives from the SHA, local authorities and trusts.
Research governance: Undertaken by research leaders from outside and inside the region. It also has a scientific committee to oversee the scientific quality of research, ensuring projects are peer reviewed and conducted in accordance with prevailing ethics and research procedures; it is chaired by an external expert.

Partnership governance: Secured by two board sub-panels, one looking at commissioners and one at health service users, carers and the public. The panels ensure that the board is aware of priorities, issues and concerns identified by service users, the public and commissioners. Members are elected.

The overarching governing board, BOAST, is made up of four elements:

- **Operational executive:** Meets monthly to supervise, co-ordinate and lead the detailed operation of BOAST themes and the wider relationship to the local health economy. It implements policies and project proposals agreed by the BOAST board and NIHR respectively. Members include the BOAST research director, theme leads and managers, the BOAST centre manager, and representatives from the two board panels.

- **Theme structures and management:** Ensure that themes and projects run to agreed timetables and budgets, meet all regulatory ethical and clinical governance requirements and report in a timely way. Training and support are offered by a senior trials manager. Each theme has a quarterly executive committee meeting, consisting of the theme lead, manager, project leader, a representative of NHS organisations, commissioners, service users and carers to review protocols, research progress and problem-solving.

- **Research support:** Trial management, administration, statistics, health economics and health psychology input into the studies constituting the research and implementation themes are centrally provided, sharing methodologies, protocol and procedures.

- **Engagement of service in research and research in service:** One day each week 20 to 25 diffusion fellows encourage research-based innovations in clinical practice and work with clinical staff to stimulate research. Associate fellows receive monthly email updates with invitations to become involved in a variety of activities hosted by BOAST, including a road show to take lessons learnt from BOAST to other parts of the East Midlands.
High-level aim and key objectives

The overall goal of the NDL CLAHRC is to improve patient care by demonstrating the feasibility and usefulness of organisational learning in the NHS, and build capacity to apply organisational learning in the NHS. Its objectives are as follows:

- To employ and develop diffusion fellows seconded by practice partners in BOAST.
- To engage healthcare practitioners and managers as BOAST associates, and involve health professionals and other local stakeholders in research and implementation activity.
- To set up research themes focused on chronic illness in the areas of mental health, stroke rehabilitation, young people and primary care.
- To set up research-based implementation themes looking at: implementation research and educational developments; and engagement, synthesis and diffusion.
- To engage commissioners through governance procedures and support the development of world-class commissioning competencies through organisational learning that drives system-wide change.
- To tackle focused research projects to meet East Midlands Darzi recommendations and other local research priorities (e.g. one Nottingham local strategic partnership to produce a measurable improvement in local healthcare).
- To address specifically cross-cutting themes of universal relevance concerning access to healthcare and occupational engagement, as a means to promote engagement and diffusion in the NHS workforce, service users and other stakeholders such as local councils.
- To sustain a coherent platform for future health gains in the East Midlands through developing capacity at the organisational and individual level in the local health economy, enabling the NHS to take the lead on future implementation research.

4.8.2 Overview

Thematic focus overview

The NDL CLAHRC strives to meet its high-level aim and key objectives through a research theme, an implementation theme and an engagement theme.

The research theme has three aims:

- To improve clinical care to at least the best current national standard by studying issues identified as both local priorities and feasible to change. Studies attempt to identify where patient care is failing due to unsatisfactory interventions or to unsatisfactory service provision.
- To explore whether organisational learning research is feasible, informative and of additional use to the process of commissioning and delivery of NHS services.
- To develop capacity in the NHS workforce so that NHS commissioners and providers can undertake organisational studies research with minimal academic supervision.

The research theme focuses on four areas:
• **Primary care:** Explore, assess and inform the use of preventive and management interventions for chronic illness in primary care to improve service effectiveness and reduce disability.

• **Mental health:** Improve clinical care in mental health through organisational learning research.

• **Children and young people:** Investigate the acceptability, feasibility and effectiveness of implementing in routine NHS and local authority children and young people’s services evidence-based methods for assessment, early intervention and measurement of outcomes of long-term health problems (mental health, disruptive behaviour problems, obesity) in children and young people.

• **Stroke rehabilitation:** Conduct applied stroke rehabilitation research in a defined geographical community and translate research findings into improved outcomes for stroke patients in Nottinghamshire

The implementation theme aims to:

• identify barriers and facilitators to implement innovations;
• identify how barriers and facilitators might be mediated/leveraged;
• provide local level ‘situated’ educational support and national level postgraduate programmes;
• engage, develop and sustain capacity within the NHS to implement and evaluate innovation amongst those delivering services;
• develop measures for and evaluate the effectiveness of BOAST.

The implementation theme applies methods of comparative case study and in-depth investigation of examples of innovation through social network mapping and two hundred interviews. The innovations studied meet local and national priorities and are at the user stage.

The engagement theme entails stakeholder engagement in CLAHRC work and in synthesis and dissemination of CLAHRC work, with a focus on access to care and occupational outcomes.

**Overview of the CLAHRC approach**

The overall strategy is to couple organisational learning and behavioural medicine (which combines behavioural, social and organisational science) to improve patient outcomes in chronic mental and physical illness.
Figure 4.11 NDL logic model of the theory of change
Main challenges to the CLAHRC’s operation
The NDL CLAHRC is experiencing a number of challenges. A central concern has been collaboration tensions: researchers and practitioners have different ways of working. There is also an issue in community engagement: prompting users to define the problems they face is difficult and not always helpful.

Emergent findings on how to bridge the second translation gap
A number of findings on bridging the second translation gap are emerging from the NDL CLAHRC’s experience:

- There are limits to codification of knowledge, and some knowledge must be transferred in person, ‘or else research goes into a black hole’. Practitioners tend not to understand what researchers are thinking, and researchers tend not to appreciate the problems practitioners face. Practitioners are often concerned with whether evidence is being understood and interpreted as researchers intended. Often, ‘practitioners are just not aware of a lot of research that might help them’; researchers have to take the time to bring it to them, not have them go back to get it. In diffusion of research, interpersonal contact is important.

- The CLAHRC can bring together a breadth of themes in one place. For example, RCTs can be a learning as well as an implementation effort, ‘an opportunity to bring people together’. This is significant when funders cannot cover the full range of issues involved in implementation and practice.

- The CLAHRC has found that not all users’ experience is useful, and distinguishing between experience that doesn’t seem to contribute much and experience that is extremely useful is difficult. Without tackling this issue, user involvement risks becoming ‘to a certain extent a political correctness tick box issue’.

- The CLAHRC seems to be finding some therapeutic areas much harder than others in terms of research translation. For example, mental health is informed only sporadically by research and evidence, and practice remains variegated and regional. Translation seems to differ significantly by therapeutic area.

4.8.3 History
The partners had working relationships before the formation of the CLAHRC:

- The area the CLAHRC covers has been working together since 2002, when the Nottingham Primary Care Research Partnership was formed, bringing together all primary care R&D funding recipients from Nottinghamshire.

- Nottingham University Hospital in particular is a centre for the region. It hosts the Trent CLRN, Mid-Trent Cancer Research Network, Medicine for Children LRN and Trent Stroke LRN, along with acute care trusts and PCTs in Derbyshire and Lincolnshire.

- The University of Nottingham and the Nottinghamshire Healthcare NHS Trust have been partners since 2003. The partnership led to the launch of the Institute of Mental Health, now the Institute of Mental Health and Behavioural Medicine, in 2006.
• The partners have been engaged in translational research: 1) through the institute they invest in 10 multidisciplinary chairs; 2) since 2004 the institute has more than 40 managed innovation networks which foster translational research and clinical innovation on mental healthcare by involving health professionals, service users, academics and managers interested in a single health-related topic.

• Nottingham University Hospitals and the University of Nottingham are established to work together effectively: the R&D department and the Medical School are housed together on one campus of the Nottinghamshire University Hospitals.

### 4.8.4 Summary

The NDL CLAHRC has a chair, director, manager, two engagement fellows and 20–25 diffusion fellows funded through NIHR and matching funding. With four research and two implementation themes, it aims to build capacity though its training and diffusion fellows and PhD teaching; by working with clinicians, service users and others through the system; and by developing the capacity of staff to identify and overcome barriers to change.

The outputs will be found in research published in peer-reviewed journals, clear and relevant recommendations, ‘evidence to practice’ guides and a systematic approach to communication, engagement and diffusion. The outcomes will be changed practice in selected sites, a national contribution to guidelines and knowledge of good practice, a change to NHS services reflecting findings, and an enhanced training and education capacity.

The approach depends (among other things) upon the quality and relevance of the research along with the innovative use of engagement and diffusion fellows. The BOAST synthesis and diffusion themes will therefore be especially important outputs. The quality and peer-reviewed nature of the research is seen as important both to reinforce local adoption and to contribute to national guidance and appraisal.

### 4.9 PenCLAHRC

#### 4.9.1 Introduction

**Partnership and governance structures**

The South West Peninsula CLAHRC (PenCLAHRC) is a core partnership consisting of what was the South West Peninsula Clinical Research Collaboration (SWPCRC) – a partnership of local NHS trusts – and the Universities of Exeter and Plymouth (including the Peninsula College of Medicine and Dentistry – PCMD) as the lead HEIs. This core partnership has been facilitated by the local SHA and is complemented by the NIHR CLRN in the south west. The Peninsula Technology Assessment Group (PenTAG) is also a key component, bringing substantial research expertise and close links with the HTA programme and national policy-makers. The main PCTs and SCTs from the region, listed in Table 4.10, are also part of the initiative.
Table 4.9 Primary care trusts and secondary care trusts involved in PenCLAHRC

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<tr>
<th>PCTs</th>
<th>SCTs</th>
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<td>Cornwall and Isles of Scilly PCT</td>
<td>Plymouth Hospitals NHS Trust</td>
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<td>Devon PCT</td>
<td>Royal Cornwall Hospitals NHS Trust</td>
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<td>NHS South West</td>
<td>Royal Devon and Exeter Healthcare Foundation Trust</td>
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<td>Northern Devon Healthcare NHS Trust</td>
<td>South Devon Healthcare NHS Trust</td>
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<tr>
<td>Plymouth Teaching PCT</td>
<td>Devon Partnership NHS Trust</td>
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<tr>
<td>Torbay Care Trust</td>
<td>Cornwall Partnership Trust</td>
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<td></td>
<td>South Western Ambulance Service NHS Trust</td>
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PenCLAHRC therefore covers all NHS trusts in the far south west, including trusts with or currently seeking foundation trust status, the two partnership trusts that focus on mental health and learning disability services, an integrated community health and adult social care trust and the region’s ambulance and urgent care services trust. The local SHA (NHS South West) oversees a population of 5 million, providing strategic leadership of the NHS in the peninsula.

The director of PenCLAHRC is accountable to SWPCRC. The CLAHRC director also chairs an executive group, made up of him, the PenCLAHRC project manager and the research/implementation theme leaders. This group oversees day-to-day management issues and ensures good communication and project integration. Each implementation theme has a theme lead and a separate theme management group. The PenCLAHRC management board (chaired by the dean of PCMD) consists of 23 senior members with representation from all the NHS trusts as well as from the universities and patients. PenCLAHRC builds on the strong joint research governance structures that were already in place across PCMD and its NHS partners.

Figure 4.12 PenCLAHRC governance and structure

High-level aim and key objectives
The rationale for the creation of a medical school (i.e. PCMD) in the south west peninsula was the health gain and economic advantage (and hence further health gain) that would flow from the initiative. The goal of PenCLAHRC is to improve health outcomes for patients and the public through the conduct and translation of patient-focused research. This goal embraces both clinical and cost-effectiveness in the use of evidence-based implementation, and PenCLAHRC strives for national as well as regional impact. On this a leading figure commented: 'the reasons for variation in clinical practice are twofold: first, that we often have evidence and don’t use it; second, that there are an enormous number of clinical questions where we don’t know what the right thing to do is. And that is equally important as translation. Of course translation is important and I do agree that there is a moral imperative to use the evidence that you have. But we cannot lose sight of the fact that the areas where there is evidence are often decided by rather idiosyncratic priority setting by academics. We were keen to be focusing … on this idea of getting the most health gain.’

More specifically, the objectives are:
- to support the identification of research questions that address clinical concerns (within the four key research themes);
- to support and undertake research that tests treatments, interventions and new ways of working in specific clinical areas, to see if they are effective and appropriate for everyday use in the health service;
- where effective interventions are identified, to support research into how NHS staff can implement them into their everyday working practices, so that patients across the local community and beyond receive a better standard of healthcare;
- through PenCLAHRC research and educational activity, to embed and fuel the partnership between the NHS and academia, building research capacity in applied health research and implementation;
- to treble the partnership’s involvement in applied health research to enable them to become a major sustainable contributor to this field for the future;
- to promote engagement and involvement in research that reflects real clinical concerns, contributing to the creation of a research receptive culture in the local NHS.

PenCLAHRC’s priorities are aligned with the priorities of NHS South West.

Thematic focus overview
The four formal research themes are:

- diabetes and cardiovascular health
- mental health and neurology
- development and ageing
- environment and human health.

These themes reflect the existing research strengths within the partnership and include many of the major problem areas for public health and chronic disease and the bulk of NHS expenditure. Although these are separate themes, there is considerable overlap: for
children and the elderly, mental health is a key problem, as is obesity and its consequences relating to vascular risk; people with mental health disorders have substantially raised risks of obesity and diabetes; the natural environment impacts on mental health and opportunities for vascular risk prevention.

However, ‘the different projects that we’re involved with could be characterised as taking place at different stages of the research process so some of the projects are projects which we characterise as implementation projects’. A large component of funded work comes from the question-generating and prioritisation exercises, meaning that ‘the content of what we have done has been more de-novo generated by this CLAHRC than perhaps in other CLAHRCS’. There is a common system for the identification and structuring of research and implementation, and a group of methodologists who work with content experts and local stakeholders to ensure high-quality research which addresses issues of direct relevance: ‘all these activities support and reinforce each other’. In keeping with the PenCLAHRC aim of ensuring that the research leads directly to improvements in health, each research theme links directly into the implementation group. Co-locating multiple implementation initiatives from different areas of practice within a single overarching group, the implementation group seeks to derive generalisable evidence for the whole healthcare community. It mirrors the successful model of PenTAG, which provides research synthesis expertise across the peninsula, as well as for the HTA and NICE: ‘We conduct a range of applied and methodological research which spans the synthesis of existing research, economic and disease modelling, and also primary empirical research into the effectiveness and cost-effectiveness of health technologies, treatments, and health services and programmes. Much of our work is in the field of Health Technology Assessment – scientific research into the effectiveness, cost-effectiveness and broader impact of healthcare interventions to support policy making in the UK and elsewhere.’

Overall, and compared with other CLAHRCs, PenCLAHRC is ‘less focused on substantive areas and more focused on the process of engagement’.

4.9.2 Overview

Overview of the CLAHRC approach
PenCLAHRC aims to produce high-quality, patient-focused research which addresses questions of direct relevance to health policy and clinical practice for members of the partnership and for the wider NHS and social care community in a format that facilitates implementation. PenCLAHRC is committed to identifying priority clinical research questions to bring the best of university research expertise to the benefit of patient care.

The model adopted, ‘Engagement by design’, builds on the previous experience of the academic leads of working closely with clinicians, service users and NHS and social care organisations. All these stakeholders are involved at all stages of the research process, from the generation of research questions, through the design and conduct of research, to the design and evaluation of implementation strategies.

- Individuals who become involved in PenCLAHRC – academics, clinicians and managers working in NHS organisations and the social care sector, and patients, the
public and third-sector organisations – work together to identify key research/implementation questions.

- A rapid review process identifies what is known about a potential research issue and where key information gaps exist. Depending on the results of the review, this may lead, if the evidence is clear, to the design of implementation strategies or, if evidence is not apparent, to primary or secondary research.
- The design of these research or implementation projects will continue to involve those who originally generated the research question to ensure that projects remain grounded in service requirements and that the need for effective implementation guides research design.
- The five stages of the model bridge the gap between research and practice, identifying effective interventions, implementing them and evaluating the implementation. 'The organising principle is that there are three broad sets of decision-makers involved in the health service: policy-makers at an organisational level, clinicians, and the people who use the service, use the interventions. Our underlying hypothesis was that if we could work out what were the actual problems people perceived as facing them, and what information they needed to make decisions more rationally, then you had a far better chance of getting things to really happen than if you just come along with a separation between – here’s the problem and out there is some research.'
Figure 4.13 PenCLAHRC engagement by design

PenCLAHRC is supported by a prospective, internal, formative evaluation.

4.9.3 History

The SWPCRC was established in 2005 as a partnership between the PCMD (set up in 2002), its parent universities and the local NHS organisations. Its aim was to facilitate the conduct of clinical research across the health community by developing: 1) integrated capacity-building, 2) integrated research networks, 3) shared methodological support, and 4) shared research governance; thereby minimising bureaucracy for the partnership. The successful bid to establish a CLAHRC was managed through the SWPCRC, with PCMD acting as the lead organisation. Most of the CLAHRC partners have a history of recent and explicit collaboration, for example:

- NHS representation on the PCMD joint board of management – which includes the chief executives of the SHA, acute care trusts and PCTs.
- Co-location and oversight of NIHR LRNs and the comprehensive research network, led by NHS staff in conjunction with PCMD clinical academics.
- Creation of a common framework and shared expertise across the partnership to effect knowledge transfer (Peninsula Bio-ventures), and engagement with NHS Innovation South West.
- Creation of the Peninsula Postgraduate Health Institute in 2005 to provide responsive postgraduate taught programmes for the local NHS, including research skilling and service transformation initiatives.
- Prior to the CLAHRC bid, PCMD started reorganising postgraduate taught programme provision through a new graduate school structure, again in conjunction...
with the NHS, to facilitate implementation of evidence; there are discussions with the SHA about a new management and leadership programme to drive associated service improvement.

SWPCRC partners also had prior involvement in activities to translate research evidence into practice in the NHS, including the following:

- Devon Partnership Trust is involved in a Medical Research Council (MRC) funded study identifying barriers to the uptake of measures to improve the physical health of patients with mental illness.
- Royal Cornwall Hospital Trust has developed evidence-based decision-support software for menopause evaluation to guide the introduction of community-based menopause services.
- South Devon Healthcare hosts one of five national Centres of Innovation and Training in Elective Care, a flagship initiative to improve evidence-based care through pathway redesign and training. The trust is also one of three UK Beacon Sites aimed at translating US (Kaiser Permanente) evidence regarding the integrated care of chronic conditions across health and social care.
- The North and East Devon healthcare community collaborated on the Pursuing Perfection in Stroke project involving implementing methodology developed by the Institute of Healthcare Improvement, for rapid evidence-based service improvement in an NHS setting.
- The University of Plymouth has been involved with PCMD in the establishment of Folk.us, a user-led/professional partnership organisation across the south west, to facilitate user involvement in healthcare research.

Overall, there were existing links between academe and the NHS at the highest level and ‘a chunk of goodwill to work from’, and the newness of the medical school was a help too: ‘the medical school had not been around for ever, and that was a big advantage’.
Figure 4.14 PenCLAHRC logic model of the theory of change
Main challenges to the CLAHRC’s operation

- Initial uncertainty about what the CLAHRC’s remit is. ‘To begin with I think it completely puzzled people. All the agencies that had signed up to the creation of this thing then looked at their baby and thought: “What the heck is that?”’ The initial start-up arrangements were influenced by the CLAHRC director, and shaped by existing interests and research programmes and by specific interpretations of the CLAHRC remit.
- Tensions between academic and NHS cultures. The tensions were between producing academic papers and developing a focus on work of real, practical, and immediate value that produces soundly-based, sustainable change.
- Keeping it real.
- Staying relevant and realistic.
- Linking to local health properties.
- Integration with commissioning.
- Fast prioritisation of decisions about research.
- Getting (and retaining) NHS management buy-in, garnering organisational commitment.
- Developing the capacity to respond fast to the problems of the day. ‘What we have done is develop local capacity to maximise the return on new ideas for research … the trusts want stuff now, but can the universities deliver on this?’
- NHS trusts’ abilities to provide input into the PenCLAHRC question-generating model, and to get a perceived return on their matching funding.
- Exploiting other NHS initiatives: ‘Through the CLAHRC we have an increased opportunity to deliver on a range of issues in the SW and, especially, to deliver on the QIPP [Quality, Innovation, Productivity and Prevention] agenda.’
- Debates with trusts about which outcomes should be measured: ‘The acute trusts tend to think in terms of mortality rates, and look for reduction in these.’
- Weakness of implementation in trusts: ‘A lot of money has been spent on leadership programmes in the NHS but much of this has been off-site, directed at top-level leadership, outside day-to-day concerns and needs. The NHS needs to become more like Toyota, who has a coaching expert at each station on line.’
- Raising expectations that PenCLAHRC cannot fulfil – for example, developing research questions through their model which they cannot use themselves: ‘the wealth of potential research which, beyond PenCLAHRC, could be taken off the database of questions and used – so that is another challenge’.
- The new world of no PCTs: ‘How we are going to maintain that link with the provider of services right across the board?’
- Special position of the district general hospitals, whose ‘research interest is small’.
- Research bureaucracy – for example, research governance and ethics arrangements, not being able to get CLAHRC projects adopted under the clinical research network (CRN) portfolio, and the deeper issue of how the various government initiatives (CRNs, HIECs, etc.) work together with the CLAHRCs.
- Extending the CLAHRC over the whole south-west region, to include Bristol and so on.
Emergent findings on how to improve the application and the conduct of applied health research

1. Addressing people’s actual concerns:
   a) Patients: ‘we started [for our own entertainment] talking about the third translation gap because what we know is that a very high proportion of interventions are never used, they are prescribed in some sense but they are not used by the end user. … It makes no difference at all if the clinicians say you do something if you, as a parent, are not convinced that the benefits will outweigh the costs.’ PenCLAHRC has used PenPIG [the Peninsula Patient Involvement Group] and other initiatives to involve patients who can raise ‘the sort of issues that would not be identified by clinicians’. And they recognise the need to ‘fund this adequately because otherwise it is a waste of space’, and getting ‘patients to help develop the partnership’.

   b) Clinicians and policy-makers: ‘If you talk to clinicians about why they do or don’t use an intervention, it’s because they have a specific set of outcomes that they are trying to achieve and that they value in one way or another … . And unless you can tell them about the outcomes they value, they are not interested. And the same for policy-makers … what underlies it for us … is keeping it grounded in the perspective of the person who is going to make the decision. If you don’t, it isn’t going to happen.’ PenCLAHRC has used ‘champions’ or ‘locality leads’ – clinicians who can spread the word about the CLAHRC and work with clinical teams and ask ‘What do you want? What is the problem?’ and then keep involved in the process of developing researchable questions: ‘through them we have seen 800 people’.

   c) NHS management (see above under Main challenges to the CLAHRC’s operation): The PenCLAHRC operational research facility is one response: they have recognised the need to ‘work alongside guys in the service to transform the ways in which care is organised and delivered’. Having identified areas of common interest for the CLAHRC trusts (e.g. length of stay for elderly patients), PenCLAHRC is working with Exeter Business School to provide coaches to work with those delivering the service – ‘learning by design’.

2. The importance of marketing and of early dissemination of findings: ‘delivering results from this sort of work to the NHS now, not after publication in peer reviewed journals’. This is not necessarily a problem: ‘the two approaches to publication of research findings are not incompatible’, but there are difficulties in publishing results of service evaluations and audits in traditional journals.

3. Need for flexibility when working together and the importance of having an emergent approach based on learning: ‘What we are doing in the CLAHRC is forging a set of processes. This means that not everything works; we have had some failures. But what we are putting in place is a sustaining architecture, getting the right people and right processes in place to encourage useful and usable research that is used promptly.’
What will look different if CLAHRCs are successful?

1. Some movement in the culture – so that ‘research really means something’ and collaborative working between different stakeholder groups (including patients and the public) becomes embedded.

2. There will be products from each of the five columns in the process model. These include the following:
   - Delineated research questions, some of which will be taken up by other funders such as HTA, some of which will lead to local studies.
   - Rapid reviews of evidence already available.
   - Help for NHS partners to implement research findings from elsewhere; e.g. work on reducing paediatric admissions.
   - Development of specific tools for implementation based on implementation research.

Secondly, capacity-building, which includes the development of skills among the following:
   - The public, who work with researchers teaching them how to do things better (this is being explored by a PhD student).
   - Clinicians, who are trying to do things differently supported by explicit education and/or by working on research projects.
   - Academics, who will have changed the way they ask research questions, working with families, and so on.
   - Managers, who will become used to people being more explicit about clinical effectiveness and its importance (overcoming the situation in which the clinical effectiveness committee of one acute trust was seen simply as a defence mechanism were they to be inspected, rather than as an active body). The operational research arm of PenCLAHRC is providing secondary research results to people in the NHS.

3. The CLAHRC will be valued as a priority resource for NHS commissioners and providers, and as a means of making sure that their priority research needs are addressed by the university. This advantage will be available to the whole south-west region. We will have demonstrated that we can achieve health economies and effective clinical outcomes at the bedside.

Themes to explore (from the workshop)

- Communicating effectively and managing expectations
- Sustainability of CLAHRC and what might be learnt from other CLAHRCs
- Nature and durability of CLAHRC.

4.9.4 Summary

At the heart of PenCLAHRC is a research and implementation pathway which involves funded academics, user involvement groups, PhD studentships, evidence-based workshops, management and communication. This is supported by a central administrative and management group and informed by four research themes and one implementation theme. It is funded through NIHR and matching funding and draws heavily upon existing relationships and networks.
Outputs will be in a changed culture of collaboration, more effective and speedy dissemination (especially on service redesign) and research that is systematically oriented to the needs of the service. The outcome is a sustainable capacity for doing, translating and using applied health research and its integration in service delivery.

4.10 South Yorkshire

As outlined in our progress report to the SDO submitted in November 2010, the South Yorkshire (SY) CLAHRC is one of two CLAHRCs that did not wish to take part in our evaluation. We have therefore not been able to carry out the key informant interviews or the half-day workshop session necessary to construct an account of its activities and underlying assumptions to date. For this section we have had to rely on a limited evidence base. We have compiled it with the help of the CLAHRC application form, the annual report published by CLAHRC-SY at the end of 2009 and two interviews undertaken with theme leads. This evidence has allowed us to construct only a limited account of CLAHRC-SY’s theory of change and activities.

4.10.1 Overview

Aims and objectives

The CLAHRC-SY focuses on enabling patients with LTCs to self-manage their care and it aims to reduce health inequalities across South Yorkshire. CLAHRC-SY’s mission is to ‘undertake, over the next five years, high-quality, strategic, applied research and related education in order to enable a “step change” in the way research is delivered and services are designed in South Yorkshire; and to foster knowledge transfer that will improve the quality and effectiveness of healthcare delivery across South Yorkshire’ (CLAHRC-SY website 2010). In order to realise this mission, CLAHRC-SY has a set of nine objectives, as follows:

1. To improve the health and well-being of people with LTC in South Yorkshire through a distributed model of health research.
2. To implement an innovative model for conducting applied research and translation which is embedded in the self-management and technology agenda for people with LTC.
3. To provide leadership in the governance of applied research and operate according to rigorous principles.
4. To promote the transfer of knowledge from applied research into practice and facilitate the implementation of new knowledge into health service policy and practice.
5. To encourage commercial exploitation, where appropriate, for the benefit of the South Yorkshire economy.
6. To use existing advances in health technologies within the care pathways of South Yorkshire, enhancing self-management and improving access, choice and personalised care for people with LTC.
7. To work together as an organisationally robust and creative collaboration of HEIs and NHS leaders who will foster capacity and innovation in applied and translational research.
8. To inform and respond to the needs for service commissioning within South Yorkshire.
9. To ensure that the modern NHS workforce fully embraces both the self-care and the technology agendas for LTC (CLAHRC-SY 2009, slightly adapted).

**Structure and partners**

Table 4.10 below shows a breakdown of the CLAHRC-SY partners.

**Table 4.10 CLAHRC-SY key partners**

<table>
<thead>
<tr>
<th>NIHR</th>
<th>HEIs</th>
<th>NHS foundation trusts</th>
<th>NHS PCTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Yorkshire NIHR</td>
<td>University of Sheffield Hallam University</td>
<td>Sheffield teaching hospitals Barnsley Hospital Rotherham NHS foundation trust Sheffield Children's Doncaster and Bassellaw Hospitals Sheffield health and social care</td>
<td>Barnsley Doncaster Rotherham Sheffield</td>
</tr>
</tbody>
</table>

One of the interviewees stressed the existing strengths of the university and how these could be applied to NHS partners in order to make the collaboration more fruitful: ‘This University is very applied … it’s traditionally been very good at working with SMEs [small and medium enterprises] and on that basis simplistically all I’m doing is suggesting that the NHS organisations that we have engage with academia in a similar type of way so rather than being very passive recipients of slowly evolving technology translation they become more active partners in articulating what their needs are. I suppose the CLAHRCs can also help them in defining the criteria of their needs better, that’s my view.’

Another stressed the importance of the CLAHRC in improving patient outcomes: ‘I think there’s making a difference to patients and I think through that it would be nice at the end of the five years of SY CLAHRC if there were services in South Yorkshire who were delivering better care in better ways to patients and I suppose that would be for me empowering for the staff who were delivering those services and to the patients using them so that’s a kind of win–win and also I think CLAHRC is really good at kind of developing capacity and developing critical kind of thinking around the issue of getting research into practice and thinking about working in different ways and hopefully through things like using the healthcare design we’re kind of pushing the way that people think you can approach problems in-house.’

**Themes**

The CLAHRC-SY divides its activities into 11 themes, spread across applied research themes focused on self-management and self-care of LTCs and implementation themes focused on research translation. These themes are illustrated in Figure 4.15 below. The themes in green are the applied research themes and those in blue focus on research translation. They build on existing research strengths of those taking part in the CLAHRC-SY.
In addition, CLAHRC-SY’s annual report states that there have been changes to the planned research and activities since the original bid was submitted. These changes include an extra theme ‘which examines care pathway improvement and the self-management of recurrent and relapsing depression’ and a restructure of the obesity theme to include further NIHR funding ‘to assist with the changes and the development of a childhood obesity project’. Other changes have included additional investment to a project based within Sheffield Children’s Hospital NHS Foundation Trust to ‘encourage adherence to National Institute of Clinical Excellence (NICE) guidelines in the management of attention deficit hyperactivity disorder (ADHD) as an extension to the original award application’ (CLAHRC-SY 2009).

Figure 4.16 below illustrates the governance structure of the CLAHRC-SY, based on the information included in its NIHR application.
**Geographical context and existing collaborations**

CLAHRC-SY covers the whole of South Yorkshire. This area has a population of 1.3 million according to the most recent census (Census 2001) and it covers 1559 sq km. This region experiences poorer health outcomes than other regions in England. It also has a history of strong collaboration prior to its inception. Such collaborations include the Sheffield Health and Social Research Consortium (SHSRC) which has been in existence since 2001. This consortium has provided a forum for NHS trusts, Sheffield City Council and Trent Research and Development Support Unit to work together with both universities in Sheffield to ‘sponsor, manage and facilitate good-quality useful research in health and social care in Sheffield’ (CLAHRC-SY 2008) in the areas of family health, mental health, public health, primary care, intermediate care and social care. In addition, research partners within the SHSRC have initiated a strategy for the translation of research findings into practice through the development of Getting Research into Practice teams. Other existing collaborations that the CLAHRSC-SY has been able to capitalise on have included the Barnsley Health and Social Care Research Alliance and the Combined Universities Inter-professional Learning Unit (CUILU), a joint project between the two Sheffield universities that ended in 2005. The Barnsley Health and Social Care Research Alliance comprises acute and primary care social care providers working with the two universities in Sheffield to carry out applied research, whilst the CUILU aimed to ‘facilitate interprofessional learning through close collaboration with local educational and professional agencies and beacon sites across South Yorkshire’ (CLAHRC-SY 2008).

**4.10.2 Theory of change**

Our insight into the theory of change at play in the CLAHRSC-SY is severely limited as we have had to rely on existing documents and two interview transcripts. From these
documents, we have been able to draw out the following underlying assumptions, which are also represented in the logic model represented immediately below.

- The CLAHRC-SY aims to support health service partners in integrating applied research into their business development and planning processes. By doing this, it is hoped that health service organisations ‘will lower their exposure to the risks associated with bold new initiatives through their incorporation of evidence-based planning and the rigorous evaluation of service changes and novel technological interventions’ (CLAHRC-SY 2009: 17).

- It also seeks to capitalise on the expertise of academic partners in knowledge transfer and research implementation to work in collaboration with health service partners. It is thought that this approach ‘will help to promote more clinically effective care across patient pathways’ and lead to ‘improvements in patient outcomes and patient safety enhancing the quality of care across SY’ (CLAHRC-SY 2009: 20).

- The involvement of both front-line staff (i.e. nurses, administration staff, medical consultants, etc.) and managers is seen as crucial. It is hoped that through their involvement in the CLAHRC, the research produced will be more relevant to them and have a greater chance of being implemented into practice (CLAHRC-SY 2009: 19, 22).
### INPUTS

- **Financial inputs**
  - £20 million from NIHR and partners plus £172k NIHR flexibility and sustainability funding

- **HR resources**
  - Director, associate director, theme and implementation leads, PhD students, etc.

- **Physical infrastructure**

- **Committees and boards**
  - Management board
  - Executive committee
  - Implementation subcommittee

### PROCESSES

- **Promoting and supporting networks across the CLAHRC**
  - Development of joint projects and posts for cross-theme working
  - e.g. use of secondment opportunities for both clinical and university staff to take learning back to their workplace

- **Establishment of strong peer review process**

- **Establishment of strong links to promote scientific rigour and wider dissemination of impacts**

- **Development of training initiatives and other learning opportunities** (e.g. induction of new staff)

- **Involvement of front-line staff and commissioners in research to increase buy-in and relevance**

- **Harnessing existing expertise of academic partners in knowledge transfer and implementation research**

- **Assist partners in embedding applied research into business development and planning process to improve their resilience**

### OUTPUTS

- **Research related outputs**
  - e.g. MUST screening tool, revision of care guidelines, board game technology to help families make healthy eating choices; database of individuals and organisations interested in becoming involved in research

- **Other tangible outputs**
  - Creation of website, dissemination of newsletters, events and training organised, delivery of courses

- **Other outputs**
  - New ways of incorporating CLAHRC’s individuals and activities into partner organisations
  - Established collaboration with partners outside health using Design Council and industrial partners
  - Development of PPI strategy
  - Development of business innovation strategy
  - Development of communication strategy

### OUTCOMES AND IMPACTS

- **Achieved outcomes**
  - Flexible solutions to enable collaborative working
  - Joint learning and reflective practice including joint problem solving

- **Anticipated impacts**
  - Change in the amount and way applied research is carried out across SY
  - Change in the design, evaluation and delivery of services across SY
  - Improvement of how research evidence is used and put into practice to improve patient care
  - Improvement in how practice-based and joint strategic commissioning is informed
  - Integration of CLAHRC-SY programme outputs into daily practice

### Underpinning enablers and barriers

- CLAHRC-SY builds on strong existing networks and collaboration in both applied research and research implementation
- CLAHRC-CY builds on a solid base of established expertise but some feel it might have been more fruitful to involve stakeholders in the setting of priorities to be addressed by the CLAHRC
- Changes in the NHS create a more complex environment where it is challenging to identify the right people to engage
- HR/recruitment have taken longer than expected

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**Figure 4.17 CLAHRC-SY logic model of the theory of change**
Challenges

CLAHRC-SY, like all CLAHRCs, will have to overcome some challenges in order to achieve its aims and objectives. The challenges mentioned in the documents reviewed include these:

- Recruitment has taken longer than expected.
- Changes in the NHS and in particular the restructuring of PCTs: one interviewee felt: ‘change in the PCTs going and changing continues to have an impact. Not so much on us because we work locally with one Trust but for the X project it would have a big impact because we don’t know who we’re going to actually end up talking to or getting permission from.’
- Concerns that some of the research priorities set by CLAHRCs (not just CLAHRC-SY) may be more in line with areas of research expertise of those leading than with the priorities and challenges faced by health service partners: ‘I think one of the difficulties that CLAHRCs may have faced is that the leads past the directors and most of the academics are clearly very focused around their research excellence which is not a barrier necessarily to the other partners but there’s always the implication that people are in it to further their own career or the area that they’re interested in which I think feel could potentially be a bit of an issue, when CLAHRC started because you’re going to be pushed down research routes because of the kudos or the charisma of certain individuals which may not be the best thing in the world for those participating consortium partners.’ ‘If we could reinvent it and do it again what we should really have done is got the stakeholders together, defined what the key challenges were and then work out how our expertise in research could meld in to support that and we could mutually conduct the research.’

4.10.3 Summary

CLAHRC-SY secured funding from NIHR funding for CLAHRCs plus a much smaller sum from NIHR flexibility and sustainability funding. It aims to promote and support networks through which peer-review processes will be strengthened, international links developed, front-line staff and commissioners engaged, and academic and other partners secured to assist knowledge transfer and improved business development.

Research outputs include a screening tool, revised guidelines and other interactive tools for engaging individuals and organisations. Tangible outputs include a new website, newsletters and training. Other outputs concern a more effective business innovation and communication strategy, improved collaboration with partners and new ways of engaging individuals. The outcome is to integrate these programme outputs into the daily practice of NHS and research bodies in the partnership.
CHAPTER 5

The many dimensions of CLAHRCs: identifying key themes for phase 2

‘To begin with I think it completely puzzled people. All the agencies that had signed up to the creation of this thing then looked at their baby and thought: “What the heck is that?”’

Interviewee PenCLAHRC

5.1 Introduction

This chapter concludes the report by bringing together salient features of the CLAHRCs and distinguishing between those that are unique and those that are common. It seeks to develop and arrive at a series of questions, some of which we may go on to explore in more detail (in phase 2). The eventual aim is to understand how these features may influence the outcomes of the CLAHRCs.

5.2 The pathways to a common vision?

CLAHRCs involve collaboration between different stakeholders in health research and the NHS. They are intended to be vehicles for improving patient care through more efficient and effective services that benefit from the improved generation, translation and adoption of knowledge. The initiative is ambitious and shares its aims with other initiatives in and around the NHS.

The original Call for Proposals for evaluations of the CLAHRCs was clear about its goals:

- to commission external evaluations of the CLAHRC initiative that reflect the dynamics, processes, emergent properties and diverse impacts of the CLAHRCs as they develop;
- to generate rich formative evidence that can be used for learning as the CLAHRCs grow and develop and that has broader applicability for other universities and health organisations tackling similar challenges outside the CLAHRCs;
- to improve patient outcomes by adding to the evidence base on the impact of closer engagement between the academic community of researchers and the
practice community of healthcare managers and health professionals on the design and conduct of applied health research and its implementation in practice.\(^4\)

In this spirit we are interested in the CLAHRCs not simply as emerging forms of collaboration but specifically how, through all their diverse impacts and activities we can learn more about how a closer engagement between communities of researchers, health practitioners and health managers might lead to improved patient outcomes.

So far we can say that neither the literature reviewed nor the previous institutional examples considered can point to a single template of action. Furthermore, we can see from the previous chapter that there is a great richness and diversity about the CLAHRCs. Does this mean that we can look forward to no generalisable conclusions from this evaluation?

It may help to become slightly more granular in our questions and the same Call for Proposals identifies more specific aims of the CLAHRCs. They are to:

- secure a step change in the way that applied health research is done and applied health research evidence is implemented locally;
- increase capacity to conduct and implement applied health research through collaborative partnerships between universities and NHS organisations;
- link those who conduct applied health research with all those who use it in practice across the health community covered by the Collaboration;
- test and evaluate new initiatives to encourage implementation of applied health research findings into practice;
- create and embed approaches to conducting and implementing research that are specifically designed to take account of the way that health care is increasingly delivered across sectors and across a wide geographical area;
- focus on the needs of patients, and particularly on research targeted at chronic disease and public health interventions;
- improve patient outcomes across the geographic area covered by the Collaboration.

To these more specific questions we can see from the previous chapter that there will be interesting and important insights to be gained. Furthermore, all the CLAHRCs share a vision and a vocabulary about long-lasting change in the NHS achieved through establishing new relationships between applied researchers and NHS decision-makers, and also new behaviours within each of these groups. There is shared optimism about the new pathways that can be forged, linking applied healthcare and medical research to patient outcomes and experiences. However, along with the similarities there are also more nuanced differences. In Table 5.1 we present the broadly shared story of the CLAHRCs, using the data outlined in the previous chapter. In Table 5.2 we show some of the ways in which individual CLAHRCs may compare and contrast with others. The structure that we use to organise these summary tables draws upon a conceptualisation widely used to

\(^4\) http://www.sdo.nihr.ac.uk/files/researchcall/1072-brief.pdf
understand ‘improvement journeys’ in leading the health sector, reminding us that the ultimate aim of the CLAHRCs is to improve healthcare. See, for example, Bate et al. (2008), who argue that there are six core challenges to organising for quality, and these are structural, political, cultural, educational, emotional, and physical and technological.

All CLAHRCs involve efforts to create environments which enable knowledge exchange, communication and learning within and between different communities of practice. They create opportunities and expectations that new groups will join existing networks and that behaviours across organisations will change. Realising such expectations is likely to require some degree of direction, and an ability to align, lead and shape groups and behaviours. However, this report has noted that the CLAHRCs do not necessarily have the ability to direct and control groups of researchers explicitly or to micro-manage clinicians helpfully. Consequently, CLAHRCs should be seen less as unified and homogeneous organisations and more as terrains upon which compromises, trade-offs and tensions are played out. Table 5.1 suggests that this has not prevented some common themes emerging.

In this evaluation we cannot explore every dimension of the improvement journeys being pursued. However, we can focus in on certain key questions which will cast light on the wider picture and we identify a long list of these prior to further focussing down.

### 5.3 The key themes of the CLAHRCs

#### 5.3.1 Governance and accountability

Governance and management arrangements involve the formal structures through which resources are allocated, decisions taken and disputes resolved. They also establish who should be accountable to whom and on what basis. From the outset, all CLAHRCs involved leading figures with experience in establishing and running such arrangements across academic and service-delivery boundaries. All CLAHRCs also share some governance and management challenges that are unavoidable consequences of working in this terrain. For example, those challenges related to navigating and managing dual R&D governance systems (NHS and academia) within a single structure; and to developing capacity, systems, provisions and contingency plans to adapt and respond to changing health system landscapes (such as changes in the nature of commissioning and uncertainty about long-term funding availability). There are, however, differences in the way in which the fundamental governance principles of transparency, accountability and responsibility are operationalised. Some CLAHRCs have centralised ownership, control and management arrangements, while others devolve significant amounts of responsibility and provide for substantial levels of autonomy to constituent partner organisations or to differentiated functional committees. This administrative support is diverse both in nature and in levels of centralisation.

Table 5.1 shows a set of widely shared activities in this respect. There is a concern with effective leadership, a need to balance central direction with professional autonomy and experimentation, a need to align with both local and national priorities (which may not always sit comfortably together), and a need to allocate responsibilities and rights within a system of accountability. Organisationally, CLAHRCs have opted to ‘chunk’ their workload into particular themes, building upon pre-existing relationships linked to clinical areas or to implementation themes. They have then established mechanisms for learning
and sharing insights among these themes. Within this broadly shared set of parameters, Table 5.2 highlights how specific CLAHRCs have addressed the issues, with some favouring more experimentation and variation and others more concerned with aligning and steering.

The focus of some CLAHRCs is on specific health areas (e.g. mental health across the life course), while others tackle a broad range of regional priorities (e.g. chronic diseases or chronic and acute care). Some CLAHRCs have common implementation frameworks across different thematic groupings, while others are tailored to specific projects and themes. All are trying to integrate activities that emphasise applied health research projects and those with an explicit focus on implementation, and to do so through creating environments that enable joint working and knowledge exchange. As described in Chapter 3, the ways in which such environments are brought to life and organised differ. For example, fellowships and studentships in applied health research and implementation science are one of the more common approaches (e.g. post doctorates, PhDs, MDs). Short training courses for researchers and practitioners also exist, and they vary in nature across the CLAHRCs depending on their thematic focus. Dedicated funding for buy-out time from the NHS to enable research activity by clinicians and nurses is another common approach in the CLAHRC activity mix. Some CLAHRCs rely on mixed project teams of clinicians and academics from diverse disciplines (including those that are non-traditional for health services research, such as engineering), and sometimes also including patients, as the primary means of bringing about cultural change; while others emphasise the roles of boundary spanners, knowledge transfer associates or diffusion fellows embedded in trusts. All CLAHRCs support meetings as important forums for knowledge exchange and bridging professional and disciplinary gaps. The degree of emphasis on evaluation activities to create self-improving and reflexive systems varies substantially, as does the stage of development and maturation of evaluation frameworks.

5.3.2 Changing individual and group attitudes and behaviours

We know from the discussion of the literature in Chapter 2 that developing shared norms and embedding behaviour change are central to improving the quality of health services. Common to all CLAHRCs are efforts to change or modify the behaviours and attitudes of researchers and practitioners (or at an organisational level academia and service providers) towards a more common vision of the role of research in the process of improving services. This requires building a shared language and understanding of the functions and working methods of different academic and clinical professions and disciplines, as well as of respective responsibilities in the pathways of producing and implementing research to improve patient care. It also requires an understanding of the constructive roles that patients can play. In particular, all CLAHRCs are trying to raise the profile of research in the NHS, as well as awareness of the importance of doing research in academia that is driven first and foremost by the needs of service providers and users. Prioritisation processes for projects within CLAHRCs tend to be driven by a combination of population needs and the availability of skills, experience and resources to address them in the local research and innovation communities. Changing the attitudes of individuals depends on organisational-level attitudes and behaviours, and high levels of NHS involvement underpin the CLAHRCs’ ethos and theories of change. CLAHRCs also have educational roles through diverse public and patient engagement activities. Communicating the value
of involvement in research of service users to them and, more generally, to NHS decision-makers and the research community, and disseminating information on CLAHRCs activity, outputs and impacts, is part of CLAHRC strategies. However, the ways through which the public are involved, as well as the intensity of their involvement in different stages of the research generation and implementation processes, varies. Some CLAHRCs are trying to engage service users in early stages of identifying the need for research and in research design, and sustain their engagement throughout research conduct and adoption processes (e.g. through soliciting inputs on areas in need of research, through research training and induction programmes for service users, through formal patient or public representative posts within a CLAHRC). Others place comparatively less emphasis on active public involvement in research design and implementation processes, and engage the public mostly through the dissemination of public information about CLAHRC activity as part of an awareness-raising strategy.

Across the CLAHRCs there have been conscious efforts to change the language and culture of research and practice. This has been pursued through leadership and also through developing compelling narratives, providing training and creating opportunities to meet and discuss. Anecdotal evidence suggests that some of the individuals most closely involved have indeed changed their relationship to research and/or healthcare. Later phases in the evaluations may offer the opportunity to investigate this further.

5.3.3 Infrastructure and use of resources
All CLAHRCs are pursuing their activities through a combination of funding from the NIHR and matched funding from local organisations (predominantly NHS trusts). The sustainability of the CLAHRC approach depends in part upon being able to demonstrate the benefits and manage the costs so that the approach is absorbed into the mainstream of provision and research. The physical infrastructure available to participants in CLAHRCs is in some cases geographically dispersed across a region, and in others more centralised with the co-location of different research and implementation teams in shared spaces. Many have reported on the benefits of co-location.

All CLAHRCs are using resources to improve information and communication systems in order to enable more timely and efficient sharing of knowledge and data across stakeholders. Online resources are a way of reaching out to and engaging external stakeholders. However, the key change, the utilisation of health-system resources being brought by the CLAHRC initiative, is a shift away from resource utilisation for pure research activity towards use for implementation. This is leading to a change in the ways in which the skills, expertise, influence and authority of diverse stakeholders are mobilised in research and implementation agendas – from commissioners and NHS managers to patients and the public.

5.4 System shifts
All the CLAHRCs report that they are hoping to achieve a system shift through their activities. These are illustrated in Table 5.2. For example, clearer and stronger incentive structures for NHS and academic staff across academic and health service sectors may be
needed to sustain the cultural change efforts, but such cultural changes also need to become normalised within a new system of healthcare and research. Embedding opportunities for the participation of NHS staff across different stages of research is another area meriting system-level attention. Table 5.2 suggests the system level changes required if the implementation of research findings is to happen more efficiently and with shorter time lags, and if research is to match real-world service needs continuously. A more explicit policy position and a better co-ordinated national strategy for engaging patients and the public in research and implementation activities may help to ensure and sustain their meaningful contributions to service improvement. Central to any such strategy is active communication and demonstration of the benefits of research implementation for the quality of care that individuals and communities receive.

To build a critical mass of NHS and academic staff ‘thinking in the CLAHRC way’ will take time, but proactive efforts to share and exchange insights between CLAHRCs – and with the broader healthcare landscape nationally and internationally – are important for learning and feedback; for ensuring that best practice is implemented, spread and sustained; and for future resource allocation. Related to this is the need for better information sharing about the link between different translational research and implementation initiatives in the overall health-system landscape.

The aspiration of the CLAHRCs appears to be for a new generation of researchers and clinicians with changed professional identities and motivations. They should be supported with a different set of incentives and drivers – both national and local – and a commissioning approach committed to reinforcing the aims of the CLAHRC. We have not taken a view in this report on how likely it is that the CLAHRCs will deliver such a shift. We shall return to this question in our final report.
### Table 5.1 Common themes emerging across all CLAHRCs

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<thead>
<tr>
<th>Structural and political</th>
<th>Cultural, educational and norms</th>
<th>Infrastructure: Financial and physical</th>
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<tbody>
<tr>
<td>Governance and accountability</td>
<td>Organisational structure of CLAHRCs including activities and themes</td>
<td>Societal attitudes &amp; behaviours</td>
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<tr>
<td>Strong leadership: managers experienced in working across boundaries</td>
<td>Split themes between applied research themes and implementation themes</td>
<td>Ensure value of having public involvement in research is widely disseminated and training support is provided</td>
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<tr>
<td>Centralised devolution: Centralised structure to set directions combined with devolved responsibility to themes</td>
<td>Joint working and learning between themes</td>
<td>Support collaboration between all partners through meetings, joint projects, etc to enable common understanding of each other’s work, incentives, etc</td>
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<td>Local/National priorities: Ensure themes fit with local and national priorities of the health (and social care) services</td>
<td>Focus on areas of expertise and on needs of users and service delivery personnel</td>
<td>Develop a common language for all partners to communicate</td>
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<tr>
<td>What needs to be done to bridge the second translation gap</td>
<td>Evaluation: Develop evaluation programmes and indicators to measure progress against objectives</td>
<td>Staff motivation: Mobilise staff around common mission and vision to produce implementable research to improve</td>
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<tr>
<td>Engagement: Build and retain engagement of partners through “feeling of shared success”</td>
<td>Create a sustainable research infrastructure focused on the needs of the health service and patients</td>
<td>Empowerment through participation: Make engagement of users, staff, and patients in research routine (through all stages) and meaningful (contribute to best practice)</td>
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<tr>
<td>System shifts</td>
<td>Implementation of research findings happens throughout life of project rather than at the end so it’s a dynamic process and service deliverers can see “returns” in the shorter term which also keeps them engaged</td>
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<td>Vision for success</td>
<td>Change incentives for NHS and academic staff to focus on patient outcomes: For example, reduce emphasis on production of peer reviewed articles for academic researchers and broaden focus from &quot;day to day&quot; delivery to include reflection on current practice (for NHS staff).</td>
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**Leadership is flexible and responsive to needs of users and service delivery personnel**

- Achieve long lasting changes in the way both NHS and academia view and carry out research
- Joint working: From health research and health services working in silos to joint working
- Create shared understanding of applied research in both the NHS and academia
- Potential for positive impact on local economy through development of technologies locally
- Resilience to external changes as best practice is built into planning process rather than "bolted on"

**Create more equitable and responsive service for users**

- Acknowledgement that different therapeutic areas have structurally different translation dynamics. Some areas might even be 'harder' to translate than others.
- Joint priorities: Producing relevant findings and best practice becomes a joint priority for both NHS staff and academics
- New ways of working: NHS staff open to questioning their methods and academic researchers increasingly interested in the needs of users and service delivery personnel
- Information sharing and governance issues are overcome to facilitate relevant research
- Additional funding is secured to build on system changes initiated in first 5 years of the CLAHRC. CLAHRC becomes a sustainable and self-standing infrastructure for the implementation of applied research into practice.

**NHS staff are given time to spend on applied research**
<table>
<thead>
<tr>
<th>What needs to be done to bridge the second translation gap</th>
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<th>Cultural, educational and emotional</th>
<th>Infrastructure: Financial and physical</th>
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<td><strong>CLAHRCs Governance and accountability</strong></td>
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<td>BBC</td>
<td>Management arrangements informed by the Engineering and Physical Research Council (EPRC) guidelines.</td>
<td>Focus on preventative services, on pre-implementation evaluation of interventions and capturing potential effects of service delivery interventions</td>
<td>Use of influential “boundary spanners” (individuals that can bridge disciplinary and professional boundaries between academia and service delivery sectors)</td>
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<td></td>
<td>Distributed leadership across themes</td>
<td>&quot;Unique themes&quot;: effect of new housing interventions on health</td>
<td>CLAHRC fellowship schemes for NHS managers</td>
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<td></td>
<td>Driven by academics with relevant service experience</td>
<td>the use of IT to improve patient safety</td>
<td>PhD students in applied health research</td>
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<td></td>
<td>Retain NHS management buy-in</td>
<td>Re-design maternity support services for multi-ethnic disadvantaged groups</td>
<td>Hosted by the University Hospitals Birmingham NHS Foundation</td>
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<td></td>
<td></td>
<td>Involvement of commissioners in meetings and research agenda settings</td>
<td>Robust internal communications infrastructure to facilitate communications between all partners</td>
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<td></td>
<td></td>
<td>Use of “boundary spanners” and “knowledge exchange champions”</td>
<td>Prospective evaluation of service change – 50% of resources dedicated to evaluation</td>
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<td>Physical co-location of CLAHRC staff</td>
<td>Seeking to obtain additional funding to sustain activities</td>
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<td>C&amp;P</td>
<td>Central management and support system to free up researchers’ time</td>
<td>Focus on community mental health across the life course</td>
<td>Use of “boundary spanners” and “knowledge exchange champions”</td>
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<td>Internal and external communications strategy to ensure all are</td>
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**Table 5.2 Individual CLAHRCs approaches and system shifts**

- **BBC**: Management arrangements informed by the Engineering and Physical Research Council (EPRC) guidelines. Distributed leadership across themes Driven by academics with relevant service experience Retain NHS management buy-in Focus on preventative services, on pre-implementation evaluation of interventions and capturing potential effects of service delivery interventions "Unique themes": effect of new housing interventions on health the use of IT to improve patient safety Re-design maternity support services for multi-ethnic disadvantaged groups

- **C&P**: Central management and support system to free up researchers’ time Focus on community mental health across the life course Internal and external communications strategy to ensure all are Use of “boundary spanners” and “knowledge exchange champions” Physical co-location of CLAHRC staff

- **Prospective evaluation of service change – 50% of resources dedicated to evaluation** Seeking to obtain additional funding to sustain activities
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<th>Individual attitudes &amp; behaviours</th>
<th>Infrastructure: Financial and physical</th>
<th>Use of resources</th>
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</table>
| Governance Group takes the lead in putting in place systems to support research governance and infrastructure | • Involvement of Local Authorities  
• Focus on established strengths in life course approaches to mental health  
• Involvement of partners with expertise in implementation; and service change and evidence-based innovation  
• Driven by needs of service users and providers rather than academic interest – focus on areas with least research attention and biggest need for improved services | • CLAHRC fellowship scheme for clinicians and NHS managers  
• PhD students and CLAHRC visiting fellows  
• Secondment opportunities for nurses and PAs for consultants to engage in research | • Cross-disciplinary training programme  
• Seeking to attract additional funding to sustain activities  
• Building internal evaluation capacity  
• Systematic review to identify current best practice and focus resources | |
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| LYBRA  | • Clinical leadership to ensure the research retains its clinical focus  
Scientific Steering Group has oversight of research methodologies used in themes. Group comprises academics with international reputation. | • Themes draw on established expertise but also reflect patient pathways rather than organisational interests  
• Particular focus on chronic diseases  
• Outputs assessed against a series of performance indicators including measurable patient benefit, publications, grant income and research fellowships | • Secure involvement of patients and the public in research  
LYBRA will work through the new Local Involvement Networks (LINks) which aim to give citizens a stronger voice in how their health and social care services are delivered. | • Secure commissioners' involvement | • Physical administrative centre based at the University of Leeds | • Secure additional funding to sustain capacity beyond initial funding period |
| LNR    | • Scientific Committee advises Executive Group and revises detailed plans of research studies before | • Focus on conducting applied health research in Long Term Conditions in new ways | • Involvement of patients, the public and clinicians in research  
• Use of training to deliver | • Use of coordinators embedded in the Trusts  
• Use of “translation teams” to create | | • Secure additional funding to sustain capacity beyond initial funding period |
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<td>NW London</td>
<td>Centralised governance</td>
<td>Focus on interventions’ cost</td>
<td>Patient and public</td>
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</table>

- Research themes focused on different stages of care and on implementation rather than on specific diseases
- Evaluation embedded within some of these themes
- Research focus driven by patient needs and areas of public health importance
- Interaction with experts in translation both in the UK and abroad to disseminate experience and draw on the experiences of others
- Models of education developed by the CLAHRC
- Important to involve “clinical researchers” who have an interest on both sides (i.e. academia and the NHS)
- Ownership of the research within the NHS
- Committee is also responsible for reviewing outputs.
- Funds research projects in 3 rounds.
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<td>Steering Group holds the Director to account for the management and performance of the CLAHRC including oversight of finances and implementation of policies and procedures.</td>
<td>Training associates including clinicians through Knowledge Transfer Partnerships</td>
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<td>Initial focus on vascular diseases as the single most important source of morbidity and premature mortality in the area</td>
<td>Training PhDs and MDs through implementation themes</td>
<td>Building interactive simulation models to assist commissioners in assessing costs and patient outcomes resulting from changes in care pathways</td>
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<td>Support patients’ self-management</td>
<td>Emphasis on the development and evaluation of inter-related interventions to support self management and improve quality of care</td>
<td>Common implementation framework for disease themes</td>
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<td>Emphasis on the development and evaluation of inter-related interventions to support self management and improve quality of care</td>
<td>Use of “diffusion fellows” who focus on research-based innovations in clinical practice and make clinical staff more</td>
<td>Identify where patient care is failing</td>
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<td>NDL</td>
<td>Governance consists of three overlapping systems: centre governance, research governance and partnership</td>
<td>Approach characterised as “proof of concept” with exploration of how feasible and useful the organisational</td>
<td>Use of “lessons’ learnt road shows”</td>
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<td>Focus on dissemination through the website, annual conferences,</td>
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GM: Initial focus on vascular diseases as the single most important source of morbidity and premature mortality in the area.

NDL: Governance consists of three overlapping systems: centre governance, research governance and partnership.
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<td>governance. Partnership governance structured through two Board sub-panels focused respectively on commissioners, health service users, carers and the public.</td>
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<td><strong>SW Peninsula</strong></td>
<td>All partners are represented on the Management Board</td>
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<td>Patient and carer-led Advisory Group to ensure adequate account is taken of the need for involvement in all aspects of the CLAHRC’s work</td>
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| South Yorkshire | • Board provides governance and strategic steer for the programme.  
• PPI strategy group advises on public and patient involvement in the CLAHRC.  
• Strong peer review process in place to ensure high quality of CLAHRC research | • Central model is based on concepts of self-management and self-care  
• Focus on enabling patients with Long Term Conditions to self-manage their care  
• Capitalise on expertise of academic partners in knowledge transfer  
• Establishment | • Involvement of frontline staff and managers to produce research that is relevant  
• Involvement of patients and the public through PPI strategy | • Secondment opportunities for both clinical and university staff to enable them to learn about each other | • Support to disseminate outputs | • Funding for projects they are not able to fund  
• Dissemination through publications  
• Ensure NHS management buy-in through involvement in research and return on matched funding |

- Leads have previous experience from working across boundaries  
- Importance of internal formative evaluation  
- Leads have previous experience from working across boundaries  
- Importance of internal formative evaluation  
- Board provides governance and strategic steer for the programme.  
- PPI strategy group advises on public and patient involvement in the CLAHRC.  
- Strong peer review process in place to ensure high quality of CLAHRC research.

- Community will remain involved throughout to ensure projects remain grounded in service requirements  
- Emergent approach based on learning  
- Organisations as part of the evidence-based practice initiative  
- Opportunities for public engagement

- Central model is based on concepts of self-management and self-care  
- Focus on enabling patients with Long Term Conditions to self-manage their care  
- Capitalise on expertise of academic partners in knowledge transfer  
- Establishment
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<td>of strong international links and partnerships outside health</td>
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<td>BBC</td>
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<td>Knowledge and evidence implemented as it develops as opposed to only at the end of the pipeline</td>
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<td>C&amp;P</td>
<td>Flexible and resilient structure for a changing environment</td>
<td>Address challenges in arbitrary transition from children to adult services</td>
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<td>Balance and manage ambitions of research groups</td>
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<td>LYBRA</td>
<td>Research generated by CLAHRC directs commissioning of clinical services</td>
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<td><strong>LNR</strong></td>
<td>Governance and accountability</td>
<td>Organisational structure of CLAHRCs including activities and themes</td>
<td>Societal attitudes &amp; behaviours</td>
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| Chief Executives of partner Trusts are involved in the research process to “get things done” | • Change current ways of working to improve patient outcomes  
• Produce more locally relevant research with the involvement of NHS staff | Integrate needs of clinicians into the research process | Influence Trusts to invest in research that can help their decision making beyond CLAHRC |
| **NW London** | Shift focus to improving patients' self-management and self-care | Create mass of researchers and clinicians with shared understanding  
• Accelerate uptake of interventions into practice  
• Patients at the centre of research | | Utilising information to drive evidence based implementation and practice by adopting industrial standards of quality in the NHS |
<p>| <strong>GM</strong> | | | | | |</p>
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<td>NDL</td>
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<td>• Provide new approaches to care that commissioners may want to commission • Change the culture of the local NHS by developing and demonstrating the effectiveness of a multi-method diffusion strategy to teach stakeholders to utilise organisational learning</td>
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<td>SW Peninsula</td>
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<td>Change the way applied health research is conducted and valued by the health community (and external research funders) such that it sustainable beyond the life of the</td>
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<td>South Yorkshire</td>
<td>Incorporation of evidence-based planning and evaluation into applied research</td>
<td>Change the way research is delivered by focusing on knowledge transfer to improve care</td>
<td>CLAHRC</td>
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<td>Vision for success</td>
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<td>BBC</td>
<td>Address time-lag between research translation and adoption</td>
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<td>Generate sustainable applied research capacity of region covered</td>
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<td>C&amp;P</td>
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<td>Implementation of initiatives and practice that works and abandonment of those that don’t work</td>
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- Building sustainable systems for academia and NHS to work together
- Achieve increased and integrated capacity to improve service delivery
- Impact on local economy through implementation of locally produced technologies
- Overcome information sharing and governance problems
- Sustaining interests of partners in applied research beyond the CLAHRC
- Build capacity of

- Application of findings and best practice generated by the CLAHRC nationally
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<td>clinicians and NHS managers to consume research evidence for service delivery</td>
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<td>• Make research more responsive to the needs of patients and care providers</td>
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<td>LYBRA</td>
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<td>• Build capacity of the NHS</td>
<td>Evaluation of cost effectiveness of initiatives and research findings to check if can be routinely implemented into practice</td>
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<td></td>
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<td>• Building researchers’ ability to respond to frontline needs</td>
<td>• Inform practice based on evidence</td>
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<td>• Build capacity of commissioners and service providers to innovate</td>
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<td>• Tackle health inequalities and improve patient outcomes</td>
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<td>LNR</td>
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<td>• Increase research capacity in the</td>
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<td>NW London</td>
<td>Patients experience a seamless journey with consistent delivery of high quality care that is evidence-based</td>
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<td>NHS</td>
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<td>• Increase the involvement of all stakeholders in research including the public</td>
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<td>• Best practice in LNR disseminated widely as local population representative of wider population</td>
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<td>Empower individuals to design, influence and implement change</td>
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<td>• Building and testing a systematic approach for the rapid adoption of clinically effective interventions</td>
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<td>• Develop a model for the conduct and application of health research that is transferable across the NHS</td>
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<td>GM</td>
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<td>Build local NHS capacity to plan and implement</td>
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- **CLAHRCs**
- **NDL**
- **SW Peninsula**
- **South Yorkshire**

- Improve the standard of routine care
- Develop an NHS workforce able to carry out organisational learning research and implementation with minimal academic support
- Improve health outcomes for patients and the public regionally and nationally
- Build capacity for carrying out applied health research
- Reduce inequalities across the region
5.5 **Emerging questions for further investigation**

In this section we begin a process of identifying themes to be explored in phase 2. The list has been identified through internal team discussions followed by discussions with the advisory group. Our selection criteria have been to identify questions which:

- are relatively under researched (as identified through our literature review)
- have potentially high impact with transferable lessons
- are relevant to the success of the CLAHRCs
- are not being covered by one of the three other evaluations
- are capable of being researched across CLAHRCs to support comparisons and contrasts.

We have discussed these issues at a learning event with CLAHRCs directors, as well as with our advisory board. Subsequently some of the questions will be selected as themes for more detailed investigation in phase 2. We have listed them here starting with the more macro level questions of the relationships between the CLAHRCs and, on the one hand the broader translational landscape and, on the other hand, the NHS. More meso level questions concern issues such as governance and operational flexibility, and towards the end there are more micro questions about engagement and participation. However, we do not wish to imply that this ordering suggests any order of importance and, in any case, there are macro-, meso- and micro-level dimensions to each of these questions. Our long list of eight questions is listed below:

1. **How do CLAHRCs fit into the broader translational research and implementation landscape of the NIHR (and other funders) at present, and how might they fit in the future?**
   - Is the place of CLAHRCs in the broader translational research and implementation landscape clear? How much co-ordination versus duplication; collaboration versus competition; sharing, learning and exchange is there between different initiatives (e.g. BRCs, BRUs, HEICs, CRNs) nationally and locally?
   - To what extent are CLAHRCs focusing on generating new research and to what extent are they translating and implementing existing bodies of research evidence to improve services?
   - To what extent are CLAHRCs a temporary platform for spring-boarding wider-scale change? Or a longer-term initiative?
   - Are CLAHRCs scalable? To what extent are specific models dependent on disciplinary / health area focus and or geography? How important is it that CLAHRCs are seen as relating to particular health economies?
2. **High levels of NHS involvement underpin the CLAHRC ethos and theory of change. What is the real scale of NHS involvement in CLAHRCs, and at what levels?**
   - Which elements of the NHS are involved: managers, commissioners, providers?
   - Are CLAHRCs leading to organisational-level changes in cultures and attitudes or only to changes in pockets within organisations and specific individuals?
   - How can CLAHRCs engage NHS managers at the highest and at middle levels and ensure their buy-in for CLAHRC activities?
   - Why is this important for sustainability and impact?
   - What is driving NHS interest in CLAHRCs and why?

3. **What is the impact of different governance and management structures on CLAHRCs’ activities and outputs?**
   - What are the distinguishing features of different governance and management arrangements which exist across CLAHRCs?
   - How can dual R&D governance systems (academia and NHS) be managed within a single structure? What are the lines of accountability in CLAHRCs?
   - How important are centralised management and co-ordination platforms (e.g. for financial management, communications, human resources, ethics) for CLAHRC activities?
   - How much of management and leadership activity is centralised rather than distributed across different CLAHRC organisations (and within them)?
   - How important are formal procedures as opposed to informal mechanisms of management?
   - What types of advisory board arrangements exist and how do CLAHRCs use their advisory boards?
   - How can individuals with dual commitments (e.g. to NHS, academia, CLAHRC) be best supported through governance and management arrangements?
   - What suite of KPIs is most likely to support learning and accountability?

4. **What levels of operational flexibility do CLAHRCs need in order to deliver on their goals effectively, and how is such flexibility best enabled and nurtured?**
   - How much adaptation and change (deviation from original plans) takes place across CLAHRCs?
   - In what areas of CLAHRC activity is there most adaptation, and why? What drives the need for adaptation?
• How are requisite levels of flexibility and adaptiveness enabled and nurtured in CLAHRCs (both in terms of formal structures and practices and informal behavioural norms)? What roles do absorptive capacities and combinative capabilities play?

5. **How are effective multiple-stakeholder and multidisciplinary research and implementation teams for service improvement built? What can we learn from the CLAHRC model and what mechanisms are being used to enable this?**
   • What are the barriers to cross-organisational cross-stakeholder/multidisciplinary working? What incentives and motivations exist, and what are the enabling mechanisms?
   • How are CLAHRCs contributing to a critical mass of ‘NHS-savvy’ academic researchers and ‘research-savvy’ NHS practitioners?
   • Who are champions of change / boundary spanners in CLAHRCs and what is the scope of their influence on change implementation and service improvement? What roles do these people play? What are some of their traits? What levels in a hierarchy are they from? What do their backgrounds tend to be? How are they identified and nurtured? What skills and mechanisms of influence do they use?
   • How sustainable are the changes CLAHRCs are making and to what extent are they succeeding in embedding a new, more collaborative way of doing things?

6. **What are the different models of public and patient engagement at play in CLAHRCs? What value has PPI brought?**
   • To what extent are patients / the public really involved?
   • How are they involved (through which mix of mechanisms)?
   • At what stages of CLAHRC activity are they involved and what is their role? What value do they bring to addressing the second translation gap?

7. **How can knowledge and evidence to inform service improvements be best communicated and disseminated to those who need to hear it in policy and practice circles?**
   • Who is the audience for CLARHC evidence?
   • What is the diversity of communication, dissemination and engagement channels? (A crucial component of this is the balance CLAHRCs achieve between communicating with and exciting people, and managing expectations.)

8. **What value does a CLAHRC bring to the different stakeholders involved? What does it mean to different parties?**
• To what extent are individual and collective perceptions of value aligned and compatible? How does this influence the way the CLAHRC is evolving and pursuing the vision and goals originally set?

5.6 Concluding remarks

We have identified a body of literature reflecting an area of research characterised by conceptual pluralism, a variety of models, alternative ways of framing the evidence, and competing causal explanations. We know that there is a need for more theory-based, context-sensitive, embedded evaluation in this area. The CLAHRCs offer an important opportunity to understand further both the theory and the practice of reshaping the activities of research producers and research users (and the boundaries between them) with the intention of improving the care provided and the health outcomes. We now have a much more detailed understanding of the activities involved in achieving this, the context of these activities, and some of the criteria seen to be associated with success.

The CLAHRCs will not, on their own and once and for all, bridge what has been called (however inappropriately) the second translation gap. However, in Chapter 4 and again in this concluding chapter, we have seen that there has been variety, creativity and effort applied to addressing a substantial problem. Although the CLAHRCs will not resolve the lack of consensus in the literature, they will – across all four evaluations – provide an opportunity to look carefully at specific dimensions of the problems and develop a scientific basis for addressing them. In phase 2 of our evaluation we intend to focus on a small number of key issues, and by the end of that phase reduce the uncertainty about whether or not these activities have the potential for improving health services through a new relationship between research and healthcare systems.
List of references


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APPENDICES
Appendix A: Study protocol

Evaluation protocol approved by ethics committee
01 March 2010

Narrowing the second translation gap: evaluating CLAHRCs’ potential, strategies and contributions

Core Team
Professor Tom Ling, RAND Europe
Dr Sonja Marjanovic, RAND Europe
Dr Stephen Hanney, Brunel University
Dr Bryony Soper, Brunel University
Dr Tim Milewa, Brunel University

Background
Nine Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) were established in October 2008 by the National Institute for Health Research (NIHR). Their aim is to encourage and strengthen collaborations between universities and local NHS organisations. These collaborations are focused on improving patient outcomes through changing the way applied health research is conducted, and strengthening the use of research results in healthcare practice. Each of these collaborations shares some overarching purposes, but there are also many differences reflecting local circumstances, including local research and healthcare priorities and historic strengths. RAND Europe and the Health Economics Research Group at Brunel University have been commissioned by the NIHR Service Delivery Office as one of four teams evaluating CLAHRCs.

The Cooksey Report on UK health research funding (HM Treasury 2006) identified two gaps in the translation of health research into practice. The first gap is in translating ideas from basic and clinical research into the development of new products, technologies and approaches to the treatment of disease and illness. The second gap is in implementing these products, technologies and service approaches in clinical practice.

Our evaluation of CLAHRCs focuses on the second translation gap. In an approach that will evolve as the CLAHRCs establish their ways of working, we will explore the various interventions and strategies being adopted by CLAHRCs to address the second gap. We
will identify common features between CLAHRCs, explore promising ideas, and examine the strengths and weaknesses of distinct interventions. Our style of working will be collaborative, and we hope to contribute to shared learning and improvement during the lives of the CLAHRCs. Through doing so, we hope to provide pragmatic support to future decisions in this important area.

**Aims**

Our project aims to:

- improve understandings of attempts to bridge the second translation gap in ways that make sense to policy-makers, practitioners, and academic researchers;
- contribute to recommendations that are evidence based, acceptable and feasible, given health research and practice architectures and policy drivers;
- contribute to the methodologies used in studying the translation gap, and multi-agency and evolving interventions/programmes.

**Key research questions**

This project will seek to answer one overarching and three subsidiary questions:

- How, and how effectively, do CLAHRCs address the second translation gap?
  - How, and how effectively, do CLAHRCs support local health research?
  - How, and how effectively, do CLAHRCs build local infrastructures to utilise globally and locally generated health research for local patient benefit?
  - Does bringing together activities for health research and activities for delivering health research benefit both sets of activities equally (e.g. by stimulating local research that is more relevant to the needs of patients or by encouraging a ‘research-literate’ local community)?

**Study design and methods – summary**

This is a three-year project with three phases. Our approach will be to understand better the sequence of activities supported by CLAHRCs and to assess how far they contribute to bridging the second translation gap. We will draw upon some of the concepts and analytical approaches developed in literature on how to manage innovation, and on how knowledge is produced and used in organisations.

In phase 1 we will identify types of interventions (and combinations of interventions) used by the CLAHRCs to address the second translation gap, and examine the logic behind their approach. We will do this through drawing upon existing research, analysing documentation from the CLAHRCs, and learning from workshops with multiple stakeholders in each CLAHRC. We would like to develop a typology of interventions the CLAHRCs are using to encourage and increase the adoption or research and innovations in healthcare practice. We are assuming that some approaches will be used in many
CLAHRCs and some might be used only in isolated cases. In phase 2 we will select four or five types of interventions, based on the degree to which the intervention is innovative, develops new understanding, and is capable of being generalised; and on the extent to which the intervention, if generalised, is likely to have a significant impact. We will then collect detailed evidence to assess the extent to which the intervention is achieving its intended outcomes, the extent to which there are unintended outcomes, and the extent to which we can be certain that the outcomes are causally a result of the intervention. We will build on a case-study approach and primarily use evidence from workshops, key informant interviews and effort-consequence analysis. In phase 3 we will draw together the data and analyses and identify lessons learnt, before developing conclusions and recommendations. We will assess our recommendations for feasibility, suitability and acceptability through a series of workshops with academics, policy-makers and practitioners.

**Outputs**

NIHR has made a significant investment in CLAHRCs on the understanding that these sorts of interactive collaborations can make an important contribution to the use of research. The outputs of this study should be relevant to the NIHR and other health research funders, healthcare practitioners, academics and policy-makers. Through a combination of reports, briefs and workshops, we will regularly feed back our emerging findings to the SDO, to other evaluation teams and to CLAHRCs. We will also actively participate in conferences, as well as forums with policy-makers and healthcare practitioners, and intend to publish our findings in peer-reviewed journals. Our final outputs from this project will also include documents tailored to the unique discourse and priorities of academic, practitioner and policy communities.

**Details of each phase**

Each phase of the study is detailed below:

**PHASE 1**

During the first phase, we will work collaboratively with all CLAHRCs to build a taxonomy of their approaches to the second translation gap (i.e. the gap in health research translation that refers to implementing research-informed product and service innovations into clinical practice). Each CLAHRC is likely to have more than one approach to the second translation gap, and each approach may be present in more than one CLAHRC. We will look at the approaches being adopted by CLAHRCs, identifying and exploring: (a) the types of interventions being used by CLAHRCs to promote practice change and the mechanisms through which they operate (e.g. interactions, social influence, facilitation); (b) the various levels at which these interventions will be used to promote change in practice (e.g. individual, organisational, system wide); and (c) the logic behind the intervention (i.e. why the CLAHRC believes that implementing certain interventions, in certain contexts and with specific inputs, should result in specific outcomes).

Our concern will be to capture initiatives to support improvements in clinical practice:
• at a micro-level – interventions that promote translation among individual practitioners within a single organisation (e.g. targeting research findings on doctors and nurses in a primary care practice setting, coupled with feedback opportunities);
• by managers and practitioners working in different organisations – among these we include interventions that aim to enhance the roles service managers can play in supporting improvements in clinical care;
• at a macro-level – interventions that promote translation designed to facilitate organisations to organisation partnership (e.g. across research and healthcare sectors such as the CLAHRCs themselves).

At the end of phase 1 we will draft a first interim report, and feed back our early findings to all CLAHRCs, the SDO, and the wider community of policy-makers and practitioners in and around the SDO.

• The core methods to be used in phase 1 include literature review, document review and primary data collection through workshops/interviews with CLAHRCs. More details about different components and timelines for phase 1 are provided below.
• Refining the evaluation design: it is important that the initial design and approach has been scrutinised by academics and practitioners within CLAHRCs. (November–December 2009; completed)
• Reviewing key literature and assessing its significance for the evaluation project. (November 2009 – March 2010)
• Kick-off meetings with SDO and CLAHRCs. The SDO organised kick-off meetings with all the funded evaluation teams and with the CLAHRC directors in October 2009 and February 2010 respectively. At these meetings discussion and consensus building took place on issues of co-ordinating evaluation activities, minimising burden on CLAHRC time, and maximising learning.
• Reviewing background information / CLAHRC documentation to assist in the scoping of CLAHRC ways of working and as inputs for data gathering at workshops/interviews. (November 2009 – end February 2010; completed)
• Scoping the ways of working / logic models with each CLAHRC through meetings with each CLAHRC team and key informant interviews. (May 2010 – September 2010)
  o In terms of interviews with each CLAHRC, we will interview three to four people per CLAHRC. This is likely to include clinicians, academics, managers and commissioners. The interviews will provide background information on the details of CLAHRC implementation strategies, approaches and activities; why these were selected to achieve the CLAHRC goals; who will be managing and delivering them; and anticipated milestones and targets for outputs. These insights will guide subsequent workshops.
  o In terms of workshops, there will be one workshop at each CLAHRC to take place at the lead institution, and to involve five to six representatives of different stakeholder groups and organisations within a CLAHRC.
• Using meetings with CLAHRCs, their application forms and CLAHRCs’ own developing documentation, we will model the logic(s) of intervention / ways of working for each CLAHRC. This will include describing the existing inputs, the processes (implementation plans) through which the second translation gap is to be addressed by the CLAHRC, and the expected outputs/outcomes from CLAHRC activity. (September–November 2010)

• We will then hold a national learning event for CLAHRCs, SDO and other SDO-funded evaluation teams (involving also our advisory group). We will disseminate and discuss our emerging findings, and identify questions which would benefit from further investigation. (November 2010)

• We will then meet with our advisory group, consider the significance of different intervention approaches and hold an initial discussion about which approaches to investigate further in phase 2. (November 2010)

• Produce first interim report: identifying key models/ways of working, their significance, and the agenda for further evaluation in phase 2. (December 2010)

• Quality assurance on first interim report by two peer reviewers. (December 2010)

PHASE 2

At the start of phase 2 we will draw on the analysis from phase 1, and on CLAHRCs’ self-evaluations, to identify the strengths and weaknesses of key strategic approaches to the second translation gap, and any complementarities or conflicts that emerge when different approaches (interventions and combinations of interventions) are implemented together or in parallel. We will then select a limited number (4–5) of case studies of approaches (interventions and/or combinations of interventions) to study in more detail, and develop an evaluation protocol for each. These protocols will include developing a ‘thick’ description of the approaches and contexts in which they are being used; an analysis of what is required to deliver them (including, to the extent possible, costs and time commitments); an analysis of processes of implementation; and, where available, outcome/consequence data. The selection of cases to study in more detail will depend on findings from phase 1 research. This might include particularly common, innovative and/or promising interventions and combinations of interventions.

For each case study we will also capture more detail about key organisations, the frequency and depth of relationships and interactions, the flow of information and resources, and how continued relationships are sustained and incentivised. We will revisit the logic models behind the approaches, and we will feed back our developing understanding of each approach to the teams concerned. This will be through a formal meeting with key team members, and through informal contacts, in order to validate findings and share learning.

We will also examine four to five alternative approaches to CLAHRCs. The selection of alternative approaches will be informed by the emergent findings, implications and lessons learnt from previous phases, from the cross-case study analyses, and discussion with our advisory group and the SDO. We are interested in investigating how similar or distinct the alternative interventions and strategies and their effects are, in comparison to those deployed by CLAHRCs. We would examine the alternative approaches based on the same
criteria of efficiency and effectiveness that will be used when evaluating CLAHRCs’ strategies and interventions.

The core methods to be used in phase 2 include case studies operationalised via workshops and interviews with stakeholders, qualitative ‘effort-consequence analysis’ (with effort proxied by time and cost commitments when possible), and triangulation of phase 2 findings against information from phase 1 research and the literature. More details of different components and timelines for phase 2 are provided below.

- Select approaches (up to 5) for in-depth evaluation in agreement with the advisory group and SDO. This will involve examining in more detail certain ways of working which will cast light on each of our subsidiary research questions. (December 2010 – March 2011)
- Stakeholder workshops for each case study engaging key representatives from different stakeholder groups (e.g. academics, clinicians/practitioners, representatives of patients and the public in their professional capacity, commissioners – 10–15 participants). The workshops will allow us to gain more in-depth understanding of logic(s) of intervention and develop a map of processes involved. We will also identify and agree the categories of costs involved in the CLAHRC (e.g. time commitments, financial). (March–August 2011)
- Selection of alternative approaches (up to 5) in order to examine how the aims of each of the CLAHRC approaches have, or have not, been successfully pursued in alternative approaches. (August 2011)
- Stakeholder workshops examining alternative approaches. (September–November 2011)
- ‘Effort’ estimation activities for models on in-depth sites and comparator sites building on stakeholder workshop and with follow-up interviews (8–10). This will include estimations of time commitments, financial inputs and other categories of effort. (September–November 2011)
- Validation interviews for in-depth case study and for alternative approach examinations (3 telephone interviews per site, involving a cross-section of stakeholders but including researchers, clinicians and service-user representatives). (December–February 2012)
- Produce second interim report on emerging findings and discuss with advisory group. (March–April 2012)
- Quality assurance on second interim report by two peer reviewers. (April 2012)
- Present emerging findings to SDO and other evaluation teams funded by SDO. (May 2012)

PHASE 3

The third phase will explore the implications of our findings for improving current policy and practice in the establishment of ‘beneficial forward-looking partnerships between universities and their surrounding NHS organisations’, including contributions to increase the capacity of NHS organisations to engage with and apply research (‘absorptive capacity’) and to encourage the effective involvement of patients and the public. We will demonstrate how this adds to, challenges or reinforces existing international research. Throughout we will seek to work interactively with CLAHRCs to support learning. We
will write a final report and a short briefing document, and will conduct a series of meetings to discuss our findings with policy-makers, relevant academics, NHS practitioners and managers, and representatives from patient and public associations. These interactions will be conducted in liaison with SDO. We will hold a final workshop with all CLAHRCs and the SDO to discuss our findings. We will also prepare papers and presentations for peer-reviewed journals and conferences, and prepare and present policy-oriented briefings for the Department of Health and organisations such as the Nuffield Trust, funder-oriented material for the funders of medical research (such as NIHR, Wellcome Trust, MRC, the Health Foundation, medical research charities), and management-oriented material for forums such as the NHS Confederation.

The core methods to be used in phase 3 include workshops and interviews with stakeholders, and triangulation of evidence from previous work packages and the literature. More details on different components and timelines for phase 3 are provided below:

- Preparing and writing final report and briefing document. (June–November 2012)
- Quality assurance on final report and briefing document by two peer reviewers. (November 2012)
- Final meeting with advisory group to discuss findings and dissemination strategy. (October 2012)
- Preparing and presenting articles for peer-reviewed journals/conferences. (June–December 2012)
- Presenting findings to policy-makers and policy researchers (Department of Health, NHS Confederation, Nuffield Trust, health research charities). (June–December 2012)
- Workshop with CLAHRCs and SDO to discuss findings. (August–November 2012)
- Presentation of final portfolio of work and budget to SDO. (December 2012)
- Collaborating with SDO in overall presentation of findings from across the evaluation. (August–December 2012)
Appendix B: Interview protocols: senior figures in CLAHRCs

The first phase of the project is to identify and assess the strategies CLAHRCs are developing, teasing out the (perhaps implicit) causal pathways being explicitly used or implicitly assumed. We also wish to understand how CLAHRCs understand the contexts in which they are working, and what they see the enabling and barrier factors in these contexts to be. We would also like to explore any interplay between distinct strategies being adopted in CLAHRCs, where these are being implemented in combination or in parallel. For example, are they developing a portfolio of activities that are only loosely related under the umbrella of the CLAHRC, or is the package of activities selected in order to get some value added by doing them together?

Interview guidance

1. What attracted you to the idea of becoming a CLAHRC? / Why did you choose to become involved?
2. What are your core objectives and implementation activities, and how do you think these specific activities will lead to the realisation of objectives? Can you please clarify your implementation strategy (note: we need to understand in director’s terms what they will actually be doing so we have guidance for the taxonomy) and how this may have changed since proposal/application phases?
3. How has the portfolio of activities been selected? / How will it be selected? What do you think is the added value of doing all of these simultaneously? Or is the CLAHRC more of a helpful umbrella for establishing a bundle of activities that are only loosely related?
4. If the CLAHRC was successful, how would things be different in, say 3, 5 or 10 years’ time?
5. Do you think that there are any local factors that will help you to succeed? And are there local barriers to overcome?
6. What are the national factors that will help / be barriers to achieving your CLAHRC’s objectives?
7. What do you expect to be the main contributions of your CLAHRC? Why do you think they will succeed?
Appendix C: Project information form

Project Information Form

Version 2
08 June 2010

Narrowing the second translation gap: evaluating CLAHRCs’ potential, strategies and contributions

Lead Investigator:
Professor Tom Ling
RAND Europe
Westbrook Centre
Milton Road
Cambridge, CB4 1YG
Email: TLing@rand.org
Tel: 01223 353 329

Purpose of the study

Background to the study

- This study is the result of an open invitation to tender issued by the SDO to which RAND Europe and Brunel University responded jointly with a proposal. Following a peer reviewed evaluation of all proposals submitted in response to this open invitation, the SDO appointed RAND Europe to carry out this study.
- Nine Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) were established in October 2008 by the National Institute for Health Research. Their aim is to encourage and strengthen collaborations between universities and local NHS organisations. These collaborations are focused on improving patient outcomes through changing the way applied health research is conducted, and strengthening the use of research results in health and social care practice. Each of these collaborations shares some overarching purposes, but there are also many differences reflecting local circumstances, including local research and healthcare priorities and historic strengths. RAND Europe and the Health
Economics Research Group at Brunel University have been commissioned by the NIHR Service Delivery Office as one of four teams evaluating CLAHRCs.

- The Cooksey Report on UK health research funding (HM Treasury 2006) identified two gaps in the translation of health research into practice. The first gap is in translating ideas from basic and clinical research into the development of new products, technologies and approaches to the treatment of disease and illness. The second gap is in implementing these products, technologies and service approaches in clinical and social care practice.

- Our evaluation of CLAHRCs focuses on the second translation gap. In an approach that will evolve as the CLAHRCs establish their ways of working, we will explore the various interventions and strategies being adopted by CLAHRCs to address the second gap. We will identify common features between CLAHRCs, explore promising ideas, and examine the strengths and weaknesses of distinct interventions. Our style of working will be collaborative, and we hope to contribute to shared learning and improvement during the lives of the CLAHRCs. Through doing so, we hope to provide pragmatic support to future decisions in this important area.

**Aims**

- Our project aims to:
  - improve understandings of attempts to bridge the second translation gap in ways that make sense to policy-makers, practitioners, and academic researchers
  - contribute to recommendations that are evidence based, acceptable and feasible given health research and practice architectures and policy drivers
  - contribute to the methodologies used in studying the translation gap, and multi-agency and evolving interventions/programmes.

**Key research questions**

- This project will seek to answer one overarching and three subsidiary questions:
  - How, and how effectively, do CLAHRCs address the second translation gap?
    - How, and how effectively, do CLAHRCs support local health research?
    - How, and how effectively, do CLAHRCs build local infrastructures to utilise globally and locally generated health research for local patient benefit?
    - Does bringing together activities for health research and activities for delivering health research benefit both sets of activities equally (e.g. by stimulating local research that is more relevant to the needs of patients or by encouraging a ‘research-literate’ local community)?
**Study design and methods**

- This is a three-year project with three phases. Our approach will be to understand better the activities supported by CLAHRCs and to assess how far they contribute to bridging the second translation gap. The evaluation approach is multi-method, and combines literature and document reviews, interviews and workshops with representatives of key stakeholders in the CLAHRCs.

- In phase 1 we will identify types of interventions (and combinations of interventions) used by the CLAHRCs to address the second translation gap, and examine the logic behind the approaches. We will do this through drawing upon existing research, analysing documentation from the CLAHRCs, and learning from workshops with multiple stakeholders in each CLAHRC. We would like to develop a typology of interventions the CLAHRCs are using to encourage and increase the adoption of research and innovations in healthcare practice. We are assuming that some approaches will be used in many CLAHRCs and some might be used only in isolated cases.

- In phase 2 we will select four or five types of interventions to study in more detail. Criteria will include the degree to which the intervention is innovative, develops new understanding, and is capable of being generalised; and the extent to which the intervention, if generalised, is likely to have a significant impact. We will then collect detailed evidence to assess the extent to which the intervention is achieving its intended outcomes, the extent to which there are unintended outcomes, and the extent to which we can be certain that the outcomes are causally a result of the intervention. We will build on a case-study approach and primarily use evidence from workshops, key informant interviews and qualitative effort-consequence analysis.

- In phase 3 we will draw together the data and analyses and identify lessons learnt, before developing conclusions and recommendations for NHS managers and practitioners, as well as policy-makers. We will assess our recommendations for feasibility, suitability and acceptability through a series of workshops with academics, policy-makers and practitioners.

**Outputs**

- NIHR has made a significant investment in CLAHRCs on the understanding that these sorts of interactive collaborations can make an important contribution to the use of research and ultimately to patient benefit. The outputs of this study should be relevant to the NIHR and other health research funders, healthcare practitioners, academics and policy-makers. Through a combination of reports, briefs and workshops, we will regularly feed back of our emerging findings to the SDO, to other evaluation teams and to CLAHRCs. We will also actively participate in conferences, as well as forums with policy-makers and healthcare practitioners, and intend to publish our findings in peer-reviewed journals. Our final outputs from this project will also include documents tailored to the unique discourse and priorities of academic, practitioner and policy communities.
How we selected you

We selected you for possible participation in interviews because of one or both of the following factors:

- You are a member of staff in a CLAHRC.
- You were purposely selected as a qualitative sample covering the range of people that are likely to play a considerable role in implementing the CLAHRC’s interventions.

What we will ask you to do

Participation in the study could include any of the following activities:

- A face-to-face interview of up to an hour. This interview will be recorded to provide an accurate record of the conversation and to allow the researcher(s) to concentrate on the interviewing process. You may request that the recording is stopped at any time, without having to give any reason for this request. You may also request to clarify or withdraw any statements made during the course of the interview. We may use anonymous quotes from the interview without your permission; however, we will not use attributable quotes without your express permission.

- A telephone interview. This interview will be recorded to provide an accurate record of the conversation and to allow the researcher(s) to concentrate on the interviewing process. You may request that the recording is stopped at any time, without having to give any reason for this request. We may use anonymous quotes from the interview without your permission; however, we will not use attributable quotes without your express permission.

- Interviews may be followed up with email correspondence. We will not use quotes from any emails without your express permission.

- Workshop participation: following a workshop, the evaluation team will draw up a workshop report summarising the issues discussed and findings. You will be able to validate the evaluation team’s report for accurate representation of views. We may use anonymous quotes from the workshops without your permission; however, we will not use attributable quotes without your express permission.

Payment

You will not be paid for this involvement in this study.

Risks of participation

We do not foresee any risks of participation in this study.
Benefits of participation

This evaluation will help us understand what types of interventions and features of NHS–academia collaborations help in moving research advancements into clinical practice, ultimately for patient benefit. We plan to disseminate the findings from this evaluation widely. It is anticipated that the outcomes of this evaluation will include a publicly available report, peer-reviewed articles, and presentations.

Consent

Written consent will be obtained either in writing, or by email, or recorded in an interview.

Confidentiality

We will use the information you give us for research purposes only. Audio recordings of interviews will be erased at the end of the study. Research materials will be securely archived for ten years and then destroyed.

Although we will strive to avoid disclosing information that will identify you in reports on this project, given the nature of the research it is possible that knowledgeable researchers in the field could identify you from contextual information about your contribution. We cannot remove all such contextual information because, for example, it is critical to understanding how research is translated into practice.

We will not, however, use attributable quotes without your express permission.

Voluntariness

Your participation in the study is completely voluntary. You may refuse to participate, or you may stop participating at any time and for any reason, without any penalty. We may also discontinue your participation or stop the study at any time if circumstances warrant.

Whom to contact for more information

If you have any questions about the study, please contact Professor Tom Ling, director of evaluation and audit at RAND Europe; telephone: 01223.353.329, email: tling@rand.org.
Appendix D: Consent form template

Consent Form
Version 2
14 June 2010

Study title
Narrowing the second translation gap: evaluating CLAHRCs’ potential, strategies and contributions

Lead Investigator:
Professor Tom Ling
RAND Europe
Westbrook Centre
Milton Road
Cambridge, CB4 1YG

Consent by participant
Please tick each box to indicate you have read the corresponding statement:

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have read the information sheet concerning this study and I understand what will be required of me and what will happen to me if I take part in it.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>My questions concerning this study have been answered by Professor Tom Ling.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I understand that at any time I may withdraw from this study without giving a reason and this will not penalise me in any way.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I agree to take part in this study.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I do / do not agree for this interview to be recorded (please delete as appropriate). If I agree for this interview to be recorded I</td>
<td></td>
</tr>
</tbody>
</table>
understand that I may request the recording to be stopped or erased at any time, without having to give any reason for this request.

| 6. I understand that at any time during the interview I may request to clarify any statements made during the course of the interview. | □ |
| 7. I do / do not agree to be quoted anonymously in any publications arising from this study (please delete as appropriate). | □ |

Name of participant ………………………………………………………………………
Signed ………………………………………
Date ………………………………………

For more information about this study, please contact Professor Tom Ling at tling@rand.org, or by telephone on +44.1223.353.329.
## Appendix E: Workshop outline for participants

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timing (estimates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome and outline of the workshop</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Warm-up discussion (issues to be covered include what participants</td>
<td>1 hr 20 minutes</td>
</tr>
<tr>
<td>find most exciting about working with the CLAHRC, intended</td>
<td></td>
</tr>
<tr>
<td>outcomes of the CLAHRCs, opportunities, etc.)</td>
<td></td>
</tr>
<tr>
<td>Mapping the activities of the CLAHRC</td>
<td></td>
</tr>
<tr>
<td>Break</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Exploring innovative ways of delivering the CLAHRC’s activities as</td>
<td>1 hr 40 minutes</td>
</tr>
<tr>
<td>well as facilitators and challenges/barriers to their success</td>
<td></td>
</tr>
<tr>
<td>Discussion about intended outcomes, early and future impacts</td>
<td></td>
</tr>
<tr>
<td>Discussion on what could be done differently to improve the CLAHRC’s</td>
<td></td>
</tr>
<tr>
<td>performance and input into what would be most helpful for the</td>
<td></td>
</tr>
<tr>
<td>evaluation team to look at in the coming year.</td>
<td></td>
</tr>
<tr>
<td>Workshop closes.</td>
<td>5 minutes</td>
</tr>
</tbody>
</table>