A formative evaluation of CLAHRCs:
Institutional entrepreneurship for service innovation

Chief investigator: Professor Andy Lockett

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Project aims

The research focuses upon the role of CLAHRCs in knowledge exchange to address the "second gap" in translation identified by the Cooksey Report, which highlights challenges associated with implementation of evidence into practice (HM Treasury, 2006).The research builds on recent developments in institutional theory, particularly institutional entrepreneurship, to examine how institutional change can be facilitated to promote effective knowledge exchange in healthcare to benefit CLAHRCs and other translational initiatives in the NHS.

Recognizing the above, and in accordance with the tender document's requirement for formative evaluation underpinned by robust theory to enhance generalizability and learning across the NHS, our proposed aims are:

1. To provide a formative evaluation of CLAHRCs in relation to the generation of applied research, impact on practice and capacity building, across two stages of their development and implementation (see tender document sections: 4.3. establishing the CLARHCs; 4.4. working as a CLARHC).

2. To apply institutional theory to identify and examine the challenges facing CLAHRCs and other translational initiatives

3. To apply the concept of institutional entrepreneurship to make a theoretically informed analysis of how to engender and sustain the translation and exchange of research knowledge into service facing innovation in CLAHRCs and other translational initiatives

Project background

Policy makers face the problem of how to ensure the applied health research they fund translates into new products/services/ways of working for patient benefit, This has been termed the "second gap" in translation by the Cooksey (HM Treasury, 2006) and Tooke Reports (DoH, 2007). This gap concerns the evaluation and identification of those new

interventions that are effective and appropriate for everyday NHS use, and their introduction into routine clinical practice (HM Treasury, 2006). In short, the implementation of evidence based practice, as much its generation, represents a significant problem in realising the benefits of scientific progress for effective healthcare delivery. CLAHRCs were established to address this problem with a mission to forge mutually beneficial, forward-looking partnerships between HEIs and surrounding NHS organizations, focused on improving patient outcomes through the conduct and application of applied health research.

Drawing on Canadian experience (Lomas, 2007), the tender document conceptualises translation of evidence into practice as an interaction model across different stages of the research process. This model highlights how institutional forces (e.g. regulation, professional jurisdiction and hierarchy) at the development stage of applied research strongly influence subsequent research activity and its implementation (Landry *et al*., 2001; Kiefer *et al*., 2005). Institutional influences include the different interests and power relations between stakeholders such as HEIs and the NHS, different groups of clinical professionals, managers, commissioners, and patients (Currie& Suhomlinova, 2006). The tender document also affirms the importance of institutional forces through its concern with the 'legitimacy' of evidence and the interaction of national institutions (e.g. NICE guidelines and Medical Schools) with local implementation of evidence into practice. Institutional forces are central to the second gap, potentially resulting in evidence being translated (or not) in unexpected and sometimes undesirable ways depending upon its acceptability to a wide range of stakeholders (Bartunek *et al*., 2003; Dopson & Fitzgerald, 2005; Harrison *et al*., 2002; Lomas, 2007; Nutley *et al*., 2007, Timmermans& Berg, 2003). In summary, institutional forces mean that the translation of evidence into practice is best thought of as non-linear, recursive and contested (Swan *et al*., 2007).

Recent developments in institutional theory have focused on the processes by which new institutions emerge, especially when they supplanting existing ones. They highlight how change may not only be due to exogenous factors, but may be brought about by the institutional work of endogenous actors. Interest in these actors, and their work, has led to the emergence of a new stream of research into *institutional entrepreneurship* (e.g. Garud, *et al*., 2002; Greenwood & Suddaby, 2006; Hargadon & Douglas, 2001; Hillman& Hitt, 1999; Hinings & Greenwood, 1988; Jain & George, 2007; MacGuire *et al*., 2004; Slack & Hinings, 1994). This concept refers to the activities of endogenous actors (and/or groups), *institutional entrepreneurs*, who work to frame issues and problems, mobilize constituencies, and to spearhead collective attempts to infuse new beliefs, norms, and values into social structures" (Rao *et al*., 2000: 240). In essence, we argue that CLAHRC activity embodies institutional entrepreneurship.

The ability of an individual (or group) to engage in entrepreneurship may be influenced by their institutional position (DiMaggio, 1988; Fligstein, 1997). Those who occupy positions with structural legitimacy (i.e. formal positions of power) are arguably best placed to bring about institutional change because they have the authority to compel others' compliance. Conversely, institutional entrepreneurs who occupy positions that do not have structural legitimacy may be less successful. The empirical evidence, however, presents a more complex picture (see: Garud *et al*., 2002; Greenwood & Suddaby, 2006; Hargadon & Douglas, 2001; Hillman& Hitt, 1999; Hinings & Greenwood, 1988; Jain& George, 2007; MacGuire et al., 2004; Slack & Hinings, 1994). An institutional entrepreneur's success is determined both by their subject position and by their ability to connect their objectives to the activities and interests of other actors in the field (Fligstein, 1997). In short, its success is

dependent upon capacity to mediate structural holes and constraints of institutional arrangements (Burt, 2005). Institutional entrepreneurs may also use discursive processes (Hardy& Maguire 2008; Heracleous & Barrett, 2001) to frame and legitimate their arguments by aligning them with the values of stakeholders (MacGuire *et al*., 2004). This approach has important parallels with the literature on policy entrepreneurs who are able to frame and moderate discourse to legitimate their activities (CHSRF, 2003) and on moral entrepreneurs in the promotion of legislation or regulation (Becker, 1963).

In summary, CLAHRCs are mandated to overcome existing institutional problems of translating research into practice to promote service innovation through institutional change. Our focus is on identifying and analysing the actions of the institutional entrepreneurs in developing and implementing the CLAHRCs. Consistent with institutional entrepreneurship research emphasising the need for a broad perspective on institutional working (Suddaby & Lawrence, 2006 & 2007; Lounsbury & Crumley, 2007), and the SDO's call to pay close attention to the involvement of a wider array of field-level actors and activities (e.g. Maguire *et al*., 2004) with the introduction of the CLAHRCs, we view institutional entrepreneurship as transcending any one specific individual. The institutional entrepreneurs may be drawn from a range of different stakeholder groups including: CLAHRC directors, scientific programme managers, commissioners, clinicians, service users etc. Taking a broad perspective on institutional work enables us to encompass intra and inter organizational issues both within and across the NHS and Universities. A recent DH funded study of mainstreaming genetics innovation (see: Currie *et al*., 2008) surfaced the following dimensions of institutional entrepreneurship that are indicative of the practical outcomes that may emerge from the study: (1) institutional entrepreneurship is undertaken by a range of individuals drawn from different stakeholder groups; (2) institutional entrepreneurs are most effective when combining structural and normative legitimacy in order to build support for change; (3) institutional change is promoted by aligning new institutions with existing stakeholder interests and communicating them in a language which is appropriate (Lockett *et al*., 2009).

Our research questions are:

RQ1: What institutional challenges and institutional entrepreneurship responses shape the engagement of potential stakeholders as CLARHCs are implemented?

RQ2: What institutional challenges and solutions are shaping the commissioning of evidence-based practice through CLAHRCs?

RQ3: What generalizable lessons can be derived from the CLAHRC experience for promoting knowledge exchange to benefit healthcare delivery?

Need for the project

Policy makers face the problem of how to ensure that the applied health research they fund translates into new products, services or ways of working for patient benefit, by facilitating the evaluation and identification of those new interventions that are effective and appropriate for everyday NHS use, and their introduction into routine clinical practice. But just as challenging as generating evidence about how to improve the health service is the task of implementing this evidence in NHS practice. Collaborations for Leadership in Applied

Health Research and Care (CLAHRCs) were established by the National Institute for Health Research to address this problem, with a mission to forge mutually beneficial partnerships between universities and surrounding NHS organizations, focused on improving patient outcomes through the conduct and application of applied health research.

Institutional forces (e.g. regulation, professional jurisdiction and hierarchy) are central to the difficulties faced when it comes to implementing research based evidence in practice. These forces include the competing interests of different stakeholder groups such as those in universities and those in the NHS, different groups of clinical professionals, managers, commissioners, and patients. For example, where academics in universities may be more interested in the generation of research and the publication of results (since these are most associated with career progression), clinicians are likely to be more concerned with the challenges of implementing this research to improve patient care, potentially giving rise to a gap at a crucial stage in the process of moving from evidence to practice. These kinds of institutional forces may mean that evidence is 'translated' into practice in unexpected and sometimes undesirable ways, depending upon its acceptability to a wide range of stakeholders.

This project will address the need to better understand the translation gap through a formative evaluation of CLAHRCs, funded by the National Institute for Health Research, in the early stages of their development. It will identify the institutional conditions (e.g. policy, regulation and performance indicators; professional roles and cultures; organisational boundaries, such as between commissioners and providers) that help or obstruct the process of implementing research evidence in practice in the NHS. Following this, it explores the role of "institutional entrepreneurship" in promoting more effective knowledge transfer: i.e. how individuals and groups transform these institutional conditions to promote change. The project will use case studies of selected CLAHRCs to inform analysis and solutions to the challenges of implementing research evidence in healthcare.

The project will begin by reviewing all nine commissioned CLAHRCs, before selecting the four most suitable sites for detailed case study. We will research the process of institutional change using complementary approaches. Social network analysis will enable us to map relationships and patterns of knowledge exchange within the CLAHRCs. From this, we will identify areas of these networks where knowledge exchange is effective and areas where it appears problematic in relation to the work of institutional entrepreneurs. This will inform in-depth case analysis through qualitative methods, including interviews and observations. The study will engage all relevant stakeholders, including policy makers, clinical practitioners, NHS managers, applied health researchers, and service users, all of whom will also be represented on an advisory committee.

Overall, the aim is to contribute to the more effective implementation of research evidence into practice by understanding institutional entrepreneurship, and offering formative lessons for CLAHRCs and other initiatives. This might include, for example: how to bring managers, clinicians and researchers together in implementing evidence; how to communicate innovations to diverse groups; how to reconcile different groups' competing interests.

Project methods (including plan of analysis)

We will use mixed methods: both quantitative social network analysis (SNA) and qualitative interviews. SNA will map patterns of knowledge exchange that either sustain, or inhibit, the translation of research into practice; i.e. the *what* of translation. Qualitative interviews will examine the institutional forces (e.g. regulatory, normative or cultural/cognitive) that may stymie, and the institutional entrepreneurship that engenders sustained institutional change to promote effective knowledge translation; i.e. to examine the *how* of knowledge translation. These complementary methods enable us to develop a rich understanding of the processes underlying translation. They relate to 5 work packages as follows.

In WP1 we will perform the literature review of relevant research relating to knowledge exchange in comparative healthcare system, institutional theory and institutional entrepreneurship. Particular attention will be given to the strategies and mechanisms by which they have developed knowledge exchange between researchers and decision makers by fostering communication, collaboration, and new partnerships. The output from WP1 will inform the interview schedules for WPs 3 & 5.

In WP3 we will perform 6 exploratory interviews in each of the 9 CLAHRCs (54 in total) to evaluate the generation of applied research, impact on practice and capacity building across two early stages of their development and implementation (see tender document sections: 4.3. establishing the CLARHCs, 4.4. working as a CLARHC). In order to counter any partiality the Cambridge group will evaluate the Nottingham CLAHRC and vice versa. All interviews will be transcribed and analysed using NVIVO.

On the basis of WP3 we will select 4 cases to examine in greater detail in WPs 4 & 5. These cases will be selected as a theoretical sample offering sufficient variation in knowledge transfer processes for comparative case analysis and theoretical development (Eisenhardt, 1989 &1991; Pettigrew *et al*., 1992; Yin, 1994). In WP4 we will employ SNA analysis and WP5 in-depth case analysis employing qualitative methods as outlined below.

WP4 will involve SNA analysis to map the relationships and knowledge flows between people, groups, and organizations using relevant software (UCINET). This will involve a sociometric survey of interaction and knowledge exchange, which will provide relationship data based on actors' ego networks. We will collect the data electronically from members of the selected CLAHRCs, working through their Directors to facilitate access. The SNA will enable us to identify any structural holes where knowledge is not being exchanged and translated (Burt, 2005), which will inform our in-depth case studies in WP5.

WP5 will involve conducting 4 in-depth case studies (selected on the basis of WP3). The case studies, and associated semi-structured questionnaires, will be informed by the initial literature review and analysis of comparative healthcare systems in WP1. Also, the SNA in WP4 will help to identify key personnel to interview. In total we will interview 15 individuals associated with 4 selected CLAHRCs to examine the process of institutional entrepreneurship, and associated institutional work, as the CLAHRCs function to translate research into practice (i.e. 60 in total). The interviews will also provide us with an opportunity to investigate how the processes of institutional entrepreneurship may affect the structures of, and information flows within, the CLAHRC networks.

Finally, relevant documentation will be collected and analysed: e.g. mission statements; minutes of meetings; publicity material. We will use a software package (e.g. NVIVO) to manage the data generated from interviews and observation. WP5 and WP7 will involve

applying methods suggested by Miles and Huberman (1984) to develop common and differential factors across the cases. Guided by our institutional theory framework (Suddaby, 2006), conceptual insights will be drawn out and refined during an iterative process as the case studies progress. To avoid confirmatory biases we will keep two researchers at a distance from the field observations and focused on conceptualization and analysis of the material and interpretations developed by the other researchers (Doz, 1996).

Project plan of investigation

The plan of investigation evaluation has been designed as 8 work packages over 3 years to address the project aims. During the project the PI moved from the University of Nottingham to the University of Warwick, and a researcher left the project, and so a no cost extension was sought and granted for 8 months).

WP1 (Months 1-6): We will begin progressing ethics and R&D approvals prior to funding for research commencing, thus shortening ‘down time' for fieldwork. On appointment the research fellows will undertake literature reviews simultaneously of knowledge exchange in comparative healthcare system, institutional theory and institutional entrepreneurship, which the PI will bring together to inform subsequent fieldwork.

WP2 (Months 7-12): Fieldwork (54 interviews across all 9 CLAHRCs) and analysis of the institutional challenges and solutions that surround the engagement of key partner organizations and individuals as the CLAHRCs mobilize following the award of funding. The research will encompass the CLAHRC Director, clinical research lead, implementation research lead, 2 NHS leads (provider and commissioner) and a service user focus group, drawn from existing CLAHRC service user involvement structures. We will develop a typology of how the different CLARHCs intend to overcome the institutional factors that stymie effective knowledge exchange. On the basis of this analysis we will select four CLARHCs, undertaken in consultation with the project advisory board and SDO, following production of early interim report, for further in-depth investigation of their implementation and commissioning of evidence-based practice.

WP3 (Month 12): Formative dissemination event focusing on immediate practical lessons relating to the engagement of CLAHRC partners. The event to include presentations to CLAHRC Directors and senior CLAHRC staff, and to be repeated over the duration of the project.

WP4 (Months 13-40 [additional 8 months included]): SNA Fieldwork (mapping of sample of 4 CLAHRC networks using socio-metric questionnaires and SNA) to identify early patterns of knowledge exchange in the light of institutional challenges (Objective 1, Objective 2, RQ3). In total we will conduct two rounds of SNA analysis. Round 1 will be conducted in months 16-17 to examine the early development of the CLAHRC networks, which will be based on retrospective accounts of networks. Round 2 will be conducted in months 39-40 (originally 31-32) to focus on the later stages of CLAHRC development. As such the SNA analysis will span the duration of the project. The SNA will run in parallel, and inform, the in-depth fieldwork we will conduct in WP5.

WP5 (Months 13-40 [additional 8 months included): Fieldwork (60 interviews across 4 CLAHRCs) and analysis of the institutional challenges and solutions that surround deeper

and broader engagement of potential stakeholders as the CLAHRCs progress following initial mobilization, and the commissioning of evidence-based practice produced through CLAHRCs. In addition, the interviews will provide us with an opportunity to examine how the processes of institutional entrepreneurship may affect the structures of, and information flows within, the CLAHRC networks. These interviews will encompass the aforementioned respondents in WP3 in each of the 4 sampled CLAHRCs, plus other key stakeholders, identified through chain referential sampling within the sociometric questionnaire in WP4. WP5 will complement WP4 (which identifies patterns of knowledge mobilization) by explaining how the institutional challenges to knowledge mobilization can be mediated through institutional entrepreneurship.

WP6 (Month 32 [additional 8 months included]): Formative dissemination event for CLAHRC stakeholders regarding immediate practical lessons to inform their ongoing development in the commissioning of evidence-based practice. The event to be a national event, with an open invitation.

WP7 (Months 40-44 [additional 8 months included]): The production of a briefing document that can be circulated to all CLAHRCs based on lessons learned from our CLAHRC project.

WP8 (Months 40-44 [additional 8 months included]): Generalization of the lessons for enhancing knowledge exchange for the benefit of healthcare delivery beyond the CLAHRC experience to other NHS translational initiatives, including production of final report.

Project proposals for the involvement of stakeholders

We have ensured, and will continue to ensure, that stakeholders will be central to the design, execution and dissemination of our research in the following ways:

1. CLAHRC NHS partners have been consulted in the development of the research.

2. Professor Currie, Director of the CLAHRC NDL, is a co-applicant and a user of the findings. Along with his counterpart from CLAHRC Cambridge and Peterborough, Professor Jones, he has advised extensively on the formative aspects of the research.

3. The research team will be managed by an Advisory Board. This will consist of members drawn from relevant stakeholder groups including: CLAHRC Directors: Peter Jones (Cambridge) plus one other to be identified following award of funding; NHS Executive Directors: Mike Cooke (Nottingham) plus one other to be identified following award of funding; Service User: CLARHC NDL & CLAHRC C&P will commit 1 service user each from their User & Carer Panel, which forms part of the high level governance of both CLARHCs. In addition, the Advisory Board will provide ad hoc advice during the course of the project and formally convene twice per year of the project through a teleconference facility where necessary.

4. Dissemination events to CLAHRC Directors very 12 months (i.e. 12 months, 24 months and 36 months), and the preparation of a CLAHRC briefing document from the project.

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