

Research Brief (12/5002)

**Call for proposals: Research to improve knowledge transfer and innovation in
healthcare delivery and organisation**

Closing date: 1.00pm on 17 May 2012

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1. Introduction

1.1 About this call

The NIHR Health Service and Delivery Research (HS&DR) programme wishes to commission research to help NHS organisations make better use of evidence. This is focused on the use of evidence by organisations and managers to inform decisions about services, rather than the transfer of evidence into clinical practice to inform individual clinician/patient interactions.

The Cooksey report on UK health research funding (HM Treasury 2006) identified two gaps in the translation of health research: from basic research to developing new therapies or treatments and, secondly, transferring these into clinical practice. This second gap is seen as increasingly important, given the uneven uptake of effective practice, with some estimates of 35-45% of patients not receiving evidence-based care for any condition (Grol 2001). High level reports on clinical effectiveness have highlighted these deficiencies and identified recommendations for developing research capacity and use (CERAG 2008). In addition, in 2008 NIHR invested £88 million over five years into nine Centres for Leadership in Applied Health Research and Care (CLAHRCs). These are collaborative partnerships between universities and surrounding NHS organisations, with an explicit remit to bridge the ‘second gap in translation’.

Research on knowledge transfer was identified as a key priority for the HS&DR programme at a workshop of senior opinion leaders in the health service management and research community at the end of 2011. The NIHR has funded a substantial body of work in this area, including a SDO programme call on knowledge mobilisation which resulted in ten funded

studies and four large-scale evaluations to assess the national CLAHRCs initiative to bridge health service and research.

The NHS has also put innovation at the top of the service agenda. This was reinforced by the publication in December 2011 of the Department of Health review led by Sir Ian Carruthers, entitled *Innovation, Health and Wealth: Accelerating Adoption and Diffusion in the NHS* (Department of Health 2011). This set out an ambitious set of recommendations to encourage quicker transfer of new practice, ranging from infrastructure change to realignment of system incentives and promotion of particular high-impact initiatives.

This call will build on gaps in the current portfolio and aims to deliver practical benefits to managers and NHS organisations on making better use of research and accelerating innovation. It should also provide helpful evidence for researchers and research funders on how to maximise impact of work and extend the reach to key local decision-makers.

This brief provides an outline of the research needs of the service in this area, as well as guidance to applicants to maximise the chance of success. Specific topics have been identified to complement existing research published or underway in this area. Only research which addresses these particular needs will be commissioned. As this is a complex area, background information on existing evidence and recently commissioned research on knowledge transfer and innovation is given in Annexes 1 and 2.

1.2 Definitions

Note that various terms are used to describe this field of research. These include implementation science, knowledge mobilisation, evidence uptake and knowledge transfer. This brief also covers the related field of uptake or diffusion of innovative practice and interventions. We will use the term **innovation and knowledge transfer** in this brief to encompass the broad field of inquiry.

The research we want to commission is targeted at managers. This includes general managers and clinicians (such as nursing and medical directors, clinical directors, ward managers, general practitioners and locality leads) running or commissioning services. The scope of this call is about broader decisions on healthcare delivery and service design, rather than individual patient diagnosis and treatment options. Research in this call is about both decision-making by managers in organisations and about the organisations themselves, which may affect the way in which innovation and knowledge are transferred.

1.3 Remit of this call

The focus of this call is for research to find and test promising interventions in the NHS to improve the transfer of evidence to organisations and to support managerial decisions. It does not cover work on the implementation of evidence into clinical practice i.e. changing individual clinician behaviour, although there may be future calls for primary research in this area.

This call would not include research to test use of evidence in central or national policy initiatives. Its focus is on transfer of innovation and knowledge to frontline NHS managers –

including clinical leaders – to inform decisions on services, systems and management practice.

1.4 About the HS&DR Programme

The NIHR Health Services and Delivery Research (HS&DR) programme aims to produce rigorous and relevant evidence on the quality, access and organisation of health services, including costs and outcomes in order to improve health and health services. It is focused on research to support decisions by frontline managers and clinical leaders on the appropriateness, quality and cost-effectiveness of care. The HS&DR programme will also promote the effective dissemination of research, engage NHS decision makers in commissioning new research and help build capacity to use and apply evidence among decision makers and in NHS organisations.

It is a new programme which came into effect in January 2012 building on the strengths of two previous NIHR research programmes – the Service Delivery and Organisation (SDO) and Health Service Research (HSR) programmes. This is the first commissioned call of the new programme.

The NIHR Health Services and Delivery Research programme is funded by the NIHR, with contributions from NISCHR in Wales and CSO in Scotland.

The programme operates two funding streams (this call is under the commissioned workstream); Health Services Research (Researcher-led) and Healthcare Delivery Research (Commissioned). Researchers in England and Wales are eligible to apply for funding from either workstream under this programme. Researchers in Scotland may apply to the Health Services Research workstream but are not eligible to respond to the Healthcare Delivery Research workstream and should contact the CSO to discuss funding opportunities for HDR type research. Researchers in Northern Ireland should contact NETSCC to discuss their eligibility to apply.

2. Main topic areas

This call aims to generate actionable findings for NHS organisations and leaders on getting research used. The main areas of research need are described below, organised around:

- Research on 'pull' by managers (increasing receptivity and research/innovation capacity of organisations and individual managers)
- Research on 'push' by researchers (i.e. making the research product/innovation more usable)
- Research on knowledge linkage and exchange (bringing service decision-makers and researchers/industry together in different ways).

2.1 First subtheme

Research/Innovation 'PULL' by Service

(1) Measuring absorptive capacity in NHS organisations

Work is needed to develop and validate a measure or set of measures (tool) to assess the capacity in healthcare organisations to accelerate innovation and knowledge transfer and act as learning hubs. This would be similar to national frameworks for measuring safety culture (MAPSAF <http://www.nrls.npsa.nhs.uk/resources/?EntryId45=59796>) and other organisational tools to assess performance/quality/safety culture (Mannion 2009). It could be used as a diagnostic by organisations to assess themselves and/or to measure progress over time. There is also potential for use by other stakeholders such as regulators and those involved in performance management and commissioning.

A recent SDO-funded scoping review in this area concluded, “the bulk of future organisational activity in knowledge mobilization needs to be devoted to building high learning capacity and appropriate core competences in NHS organizations rather than relying on a technological fix to construct formal knowledge management systems.” (Ferlie 2010) At present though, we do not know enough about what these core competences and positive organisational features look like.

This is now being foregrounded in studies which examine organisational ‘readiness’ to use research. Outside health, the concept was developed of absorptive capacity (Cohen and Levinthal 1990) – that is, the factors within organisations that make them enablers of evidence-based practice. This relates to other work on ‘the learning organisation’ (Davies and Nutley 2000), which highlights the potential for more sophisticated types of learning in healthcare organisation (such as double-loop feedback, where organisations use information from audit or review to challenge basic system design). This is an area where knowledge transfer crosses over into service improvement and redesign – a useful shift, given economic pressures and the need for organisations to achieve greater efficiencies and shape services around the needs of patients.

The Canadian Health Services Research Foundation developed a self-assessment tool designed to encourage decision makers to answer questions about how well their organizations are equipped to acquire, assess, adapt, and apply research evidence. The tool, *Is Research Working for You? A Self-Assessment Tool and Discussion Guide for Health Services Management and Policy Organizations*, was recently validated in a process which involved 32 focus groups and relaunched in 2005 (CHSRF 2012). One of the findings of the validation exercise was that the benefit of the tool was less in the scoring by organisations and more as a catalyst for discussion of how to improve use of research and as a diagnostic for key actions. Scoring however can be useful in providing baseline measurement by organisations before implementing specific initiatives designed to improve uptake of research, such as use of knowledge brokers or research leads within healthcare organisations.

Other useful evidence comes from wider organisational research on diffusion of innovations (Greehalgh 2005) and, in particular, organisational readiness or receptive contexts to adopt new knowledge or practice. This review of current evidence concluded that “prerequisites for absorptive capacity include the organization's existing knowledge and skills base (especially its store of tacit, uncodifiable knowledge) and preexisting related technologies, a “learning organization” culture, and proactive leadership directed toward sharing knowledge”. These include both ‘hard’ and ‘soft’ characteristics.

(2) Improving critical review capacity in managers – what works?

Lavis has identified a number of skill deficits and needs in managers around the use of research (Lavis 2003). These include using evidence to frame a problem, assessing research evidence on existing options/solutions and using evidence for best implementation of a solution. Competences include the ability to critically assess all types of evidence and

understand the use of systematic reviews for decisions around systems and organisations. These are not easy tasks.

A number of initiatives have been adopted to enhance skills in managers, but these pockets of activity have not been brought together in any systematic way. These include international collaboration to provide tools for evidence-based policymaking in healthcare (such as the EU SUPPORT tools, as set out in Lavis 2009). In this country, training courses on critical appraisal skills have been developed at academic units, think tanks (such as the Kings Fund), research provider units such as the Cochrane Centre and other bodies at national and regional level. Most, but not all, are focused exclusively on the needs of commissioners and managers. The SDO Network has worked with the East of England Evidence Adoption Centre to deliver one day critical appraisal skills training workshops to managers in 2010. The impact of this and similar initiatives have not been evaluated.

Other initiatives have been directed at improving the quality of decision-making by Boards and their use of evidence. This includes on-going work funded by the SDO on Board governance, organisational culture and performance (Mannion 2010).

Related work is around the adoption of innovation by service leaders. There has been little formal study of the behaviours and capacities needed by individuals to promote rapid uptake of best new practice in the health service. But there are studies about the traits of innovation adopters (individuals, rather than organisations) which could be mined further. (Robert 2010).

Building on these activities, the need is for a research study assessing the impact of capacity-building interventions to improve the use of evidence in decision-making. This might take the form of assessments of training or other organisational development activity and could be focused at individuals or teams (such as Boards). Part of the study would include a description of the development of the intervention, based on best theoretical and empirical evidence of likely effectiveness, and to document this in enough detail so that it could be used by other NHS organisations. This would include training and facilitation materials and other resources.

2.2 Second subtheme

'PUSH' by Research/Innovation

(3) Identifying attributes of successful research 'product' and mechanism

The previous section considered organisational readiness to receive or absorb new knowledge. Equally important is the nature of the knowledge itself. Research is needed to review methods and formats of synthesising research evidence for health managers. This would include different research products and services, such as problem-led consultancy activity. The outputs should include standards and best practice in developing syntheses of applied research to service problems.

A perennial concern of managers is that research findings are often tentative and qualified, without providing clear headline messages to support decisions. This is partly a reflection of the difference between paradigms of clinical evidence (to inform clinical practice) and social science research (to inform management practice) (Walshe and Rundall 2001). There is also a difference in this country between an evidence stream which is synthesised and translated into guidelines by a national body (NICE) and the absence of such a vehicle for making sense of organisational and health services research. The different timelines and perspectives of researchers and managers are well noted – but it is still difficult for the busy

commissioner or clinical director to gather together evidence which would help to answer immediate questions, such as 'What is the most cost-effective way of organising our epilepsy service for children? Should we decommission our inpatient eating disorder service?'

Attempts have been made at the national level – such as the NIHR SDO Network or the Centre for Reviews and Dissemination in producing digests of research – and further afield, such as the Mythbusters series by the Canadian to collate evidence around topical issues, often policy-focused. A recent review by Chambers et al (Chambers 2011) documented the range of evidence summaries/policy briefings produced internationally (Chambers 2005). At a local level, attempts have been made to provide quick reviews of evidence around questions posed by managers, for instance seen in CLAHRC Peninsula. Much of this works on a 'consulting' model – discussed as a form of knowledge transfer in recent literature (Jacobson 2005). The authors argue that "knowledge transfer should begin with the needs of knowledge users; although researchers may help users define these needs. Process and product are inextricably linked: a useful product can be the result only of a process that is deliberate, respectful, grounded in the users' context and the researchers' expertise, and open to constant renegotiation."

Commentators have noted that individual studies may produce results very different to that of a systematic review of all studies. The use of systematic reviews has been studied in the context of evidence-based medicine and, indeed, the NIHR Cochrane Centre has commissioned small studies to examine some of the questions around how these are used by frontline clinicians and commissioners, such as a current project on the use of systematic reviews to guide disinvestment decisions (<http://ukcc.cochrane.org/knowledge-brokerage>). Less attention has been given to similar issues around synthesising organisational research for service managers. This might include greater understanding of how to transfer actionable messages based on a body of research knowledge, not just individual studies, and processes to achieve consensus on these messages (Lavis 2005). The SDO Network has produced research digests to synthesise a number of SDO-funded studies, setting findings against what is known from the wider literature with key headline messages for busy managers.

In technology adoption, there are also mechanisms which attempt to ease acceleration of 'good' technologies. These include outputs from the National Technology Adoption Centre, set up in 2007, to provide structured business cases for particular technologies, such as supra-pubic catheters in the form of a 'how to, why to' guide. An SDO-funded study (Llewellyn) is currently considering the impact of such initiatives.

There are particular problems around the nature of social science evidence, which makes accumulation of knowledge difficult (Walshe and Rundall). Strict criteria on levels of evidence, as adopted for systematic review, often exclude key policy documents and observational and other research which explains the context and realities of services and systems. However, there are also risks in relaxing standards of evidence review for management research. A study commissioned by the NIHR SDO programme is currently being funded to develop standards for realist or narrative synthesis, used where a wide range of evidence including grey literature, consensus statements and mixed methods may be needed to inform policy and practice in a given area without losing rigour.

Greenhalgh's useful review of diffusion of innovations considers the evidence on attributes of innovative practice which are likely to lead to good uptake. These include the simplicity of the message/product, the relative advantage in terms of effectiveness and cost-effectiveness and compatibility with organisational and professional norms. Particular issues around health service research outputs might include the relationship of message to policy/service context; timeliness and opportunities to influence practice/service decisions and contribution to delivering productivity/efficiency challenges. This might include the way in which

evidence can inform decommissioning decisions – or ‘reverse innovation’ (Department of Health 2011).

Research is needed to consider impact of different research ‘products’ and evaluate attempts to provide a responsive-mode review of evidence to address the needs of service managers. Assessment of research products would include critical review of formats – including tailored messages for different audiences, what types of questions are best addressed at local and national level – and methods of synthesis and scoping in complex areas of service management. Assessment of consulting and responsive problem-led research activity would also be useful, as well as methods employed by management consultancy and other ‘knowledge providers’ to synthesise findings for managers. The outputs should be more than descriptive case studies, with clear recommendations for future models of research synthesis and production of evidence.

2.3 Third subtheme

Knowledge linkage and exchange

(4) Evaluating linkage and exchange activities

Research is needed to evaluate the impact of interactive events in getting research used by managers. This would include retrospective evaluation of past activity and synthesising this in usable form. Successful teams could use present and future research projects within the NIHR HS&DR programme to evaluate the design, delivery and evaluation of learning events which bring together NHS managers and researchers. The aim would be to research and understand the impact of such learning events and to produce practical guidance for researchers (not just in this programme) on how best to design, deliver and target such interventions. In addition, the impact of initiatives to develop partnership working between industry and technology users (clinicians) to develop and spread innovation could usefully be evaluated

While early models saw knowledge transfer as a one-way flow from producers of research to the recipients, the need for more interactive modes of linkage and exchange is now well recognised (Lomas 2000). Existing evidence points to the importance of interaction and face-to-face contact between research producers and users in effective knowledge transfer (Lavis 2003). However, little is known about how best to do this (Mitton 2005).

Recent evidence has pointed to examples of such exchange between researchers and decision-makers in health. These include formal and informal initiatives ranging from tailored products and messages, briefing events and forums, as well as other forms of partnership. In the UK, such activities have taken various forms including wider initiatives such as the ESRC Knowledge Transfer Partnerships encouraging embedded working between research users and producers. The WHO has funded ‘rapid reaction evidence seminars’ through its European Observatory on Health Systems and Policies. The aim is to bring together policymakers and service leaders with researchers to understand best evidence on a given area, organised at short notice to fit with management timelines. This seems a promising initiative but there is little documented evidence of how this has worked or likely impact.

In the UK, other relevant work includes recent investment by the CLAHRCs in a range of linkage mechanisms, including staff working as ‘boundary spanners’ between NHS organisations and academics.

The NIHR SDO programme also funded the SDO network since 2008, hosted by the NHS Confederation, which has held a number of themed events, including topic-based 'marketplace' interactions showcasing both service developments and recent research in areas such as self-care for chronic conditions or workforce. There have also been more general events for very senior managers to hear latest research findings and discuss in a closed forum.

At a project level, researchers have been encouraged to consider at an early stage how best to engage key target stakeholders with the findings of their research. Within the SDO programme, these have included seminars, toolkits and decision support (ranging from resources to help managers in identifying appropriate community nursing skillmix to modelling services for stepped care in depression). More innovative approaches have included making a film using research findings to highlight issues on caring for elderly patients with dementia on general wards.

Much of the academic evidence in this area (particularly, international) has focused on interactions between researchers and central (or federal/regional) policy-makers. Little attention has been given to the interaction between individual service managers and the research community and the effectiveness of different forms of activity.

As well as exchange activity between service and research, there is also a need for linkages between service and industry to develop and implement new technologies. The recent policy report on innovation (DH 2011) emphasised the need for new partnerships and ways of bringing together clinicians and relevant industry, such as pharmaceutical, biotech and other health technology developers. Robert in his review of technology adoption strategies in the literature and across the health service, noted a range of events such as horizon scanning initiatives, specialist workshops and partnerships to test prototype solutions (Robert 2010). Some CLAHRCs have also forged new links between patients, clinicians and design and other industry partners to develop new solutions relating to the built environment or design of enablement aids (see, for instance, <http://clahrc-sy.nihr.ac.uk/theme-uchd-introduction.html>).

Summary

This research call aims to generate useful findings for managers and organisations on the transfer of knowledge. This complements and builds on research already funded within NIHR on knowledge mobilisation. It focuses on practical areas where organisations can take action to improve the quality of decision-making by better use of evidence. The particular areas of research need identified in this call are:

- Measuring absorptive capacity in NHS organisations (primary research)
- Improving critical review capacity in managers – what works? (primary research)
- Evaluating methods of synthesising research to address service problems (primary research)
- Evaluating linkage and exchange initiatives (primary research)

Section 3 of this call for proposals offers general guidance to applicants on what makes for a successful application to the HS&DR programme, while section 4 sets out our expectations in relation to research outputs and knowledge mobilisation, section 5 explains how applications are assessed and selected and section 6 gives the timetable for this call.

3. General guidance for applicants

NB: This is general guidance and not all the sections will apply to the specific call

Our main concern is to commission research which is well designed; will be effectively carried out by the research team; will provide findings which meet the needs of the NIHR HS&DR programme and the NHS management and leadership community it serves; and will be used to improve health services. With these aims in mind, we offer the following general guidance to applicants. We do not prescribe or prohibit particular approaches to research, but we encourage applicants to take account of this guidance in their project proposals, and point out that the HS&DR HDR Panel and Commissioning Board will take account of this guidance when they assess and select proposals.

Research team makeup and expertise

Our key concern is that projects should have a research team with the right skills to undertake the research. It is important that the team has the necessary expertise, but is not so large that project management will be difficult. Projects are likely to use a team with significant input from diverse disciplines appropriate to the content and methods of the project. All applicants need to show that they will commit appropriate time and effort to the project, and the use of large teams of applicants with little or no apparent time commitment to the project is discouraged. Full proposals should make it clear what responsibilities and roles will be fulfilled within the project by each team member.

The chief investigator or principal applicant should generally be the person who has contributed most to the intellectual and practical development of the proposal, and who will take lead responsibility for its implementation. This is not necessarily the most senior investigator in the research team. Where the principal applicant has a limited past track record in holding grants, we will look for evidence that they will be supported and mentored by more experienced co-applicants.

NHS management engagement

Our key concern is that NHS managers should be directly engaged or involved with HS&DR research projects because this will produce research that is more closely grounded in and reflective of their concerns and makes the subsequent uptake and application of research findings more likely.

We particularly welcome project proposals in which an NHS manager is formally part of the project team as a co-applicant, and in which they (and/or other NHS managers) play a significant part in the project. Their contribution may be to facilitate or enable research access to organisations, to be directly involved in research fieldwork, to comment on and contribute to emerging findings, and to be involved in knowledge mobilisation (see below). We think that direct NHS management involvement in proposals of this kind shows commitment to and support for the research from the NHS organisations involved. The time of NHS manager(s) as co-applicants can be costed into the proposal, as part of the Research Costs.

There are other ways in which NHS management support for the proposed research can be demonstrated, such as co-opting managers to project advisory or steering groups, the inclusion with full proposals of a letter or statement of support from senior leaders in relevant NHS organisations.

Gains for the service

Not all research will individually result in potential savings or direct gains for the service. However it may lead to a better understanding of organisations, systems or services and contribute to that body of knowledge. Where it is appropriate, studies should include a

cost-effectiveness component with a view to helping managers and service providers make decisions and identify potential for savings. As a publicly funded programme in a time of restraint, researchers should look to demonstrate potential savings and gains for the service, where appropriate. This includes setting out in broad terms the likely impact and implications of this work for the wider service at outline stage.

Research methods

Our key concern is that the research proposed is well designed, will be well conducted, and will add to knowledge in the area. It is not our intention here to specify particular research methods, but to highlight areas where we have found common weaknesses in the past.

Proposals need to make proper use of relevant theory and of the findings in the existing literature to frame their research questions. Although at outline stage, comprehensive referencing is not required, illustrative sources and indication of the grounding in a body of literature should be given. Theoretical, descriptive evaluations, proposals which appear not to be informed by the existing literature and projects which appear to replicate rather than add to existing research are unlikely to be funded. Research questions need to be very clearly stated and framed – in terms which are sufficiently detailed and specific. This includes a clear description of the intervention which is being assessed (where relevant) and articulating the objectives and aims of the research.

The research methods proposed must be appropriate to the nature of the research questions, and to the theoretical framework for the project. It is important that the proposal makes a clear link between the research questions and the intended empirical approach and fieldwork, showing what data will be gathered and how it will be used. The approach to data analysis must be clearly explained. The proposal needs to show that the research team has considered and addressed the logistics and practical realities of undertaking the research – gaining ethical and research governance approval, securing access, recruitment, data collection and management, etc.

Studies should be realistically costed to take account of these activities. Where trial methodology is proposed, researchers would be advised to have got input from local trial taken advice from their local clinical trials unit or officer.

Researchers should be mindful of the need for generaliseability of results and the relevance of the outputs for the service as a whole. This may affect the study design – for instance, single case studies are only likely to be supported only exceptionally.

The plan of investigation should set out clearly and in some detail the proposed methodology. It should include a Gantt chart or project timetable showing clearly the planned dates of different project phases and of project outputs.

Public involvement

It is a core concern of the HS&DR programme that all commissioned projects should pay appropriate attention to the needs and experiences of all relevant stakeholders (including local communities, individual members of the public, users of services, carers and minority ethnic communities as well as healthcare practitioners and managers) during the design, execution and communication of the research. Proposed projects should be explicit in describing their arrangements for public and patient involvement and in communicating how the proposed work has potential implications for service delivery that could lead to enhanced public and community engagement. The application includes a section for the non-expert and care should be given to 'pitching' the proposal at a public audience, avoiding jargon and explaining clearly the expected benefits of the research.

Research governance

Applicants should show that they understand and that their proposal complies with the Research Governance Framework for the NHS. Successful applicants will be required to provide proof of research ethics committee approval for their project, if it is required, before funding commences. The project plan should take realistic account of the time required to secure ethics and governance approval.

Costs and value for money

Project costs will be carefully scrutinised and must always be well justified and demonstrate value for money. NIHR programmes currently fund Higher Education Institutions (HEI) at a maximum of 80% of Full Economic Cost (except for equipment over £50,000 – 100%). For non-HEI institutions, NIHR may fund 100% of costs. However, the NIHR HS&DR programme reserves the right to award a grant for less than this maximum and for less than the amount sought by applicants.

4. Research output dissemination and knowledge mobilisation and transfer activities

Our key concern is to ensure that projects funded by the HS&DR programme are designed from the outset to produce useful, timely and relevant research findings which are then used. Experience suggests that this is most likely if researchers collaborate with NHS managers throughout the life of a project, and aim to produce a variety of research outputs – not just a final report and one or more papers for academic peer reviewed journals.

All full proposals submitted to the HS&DR programme must include a detailed section on research outputs and knowledge mobilisation in the full plan of investigation which is attached to the proposal when it is submitted. We would expect to see that section and the project plan detailing the outputs and knowledge mobilisation activities which are planned across the life of the project, and the resources section of the proposal showing that sufficient resources have been allocated within the project budget to undertake these knowledge mobilisation activities. In general terms, all projects which are longer than 12 months are expected to produce some interim outputs during the life of the project as well as those at the end of the project.

The outputs and knowledge mobilisation activities shown in the project proposal are likely to include some or all of the following:

- A final and full research report detailing all the work undertaken and supporting technical appendices (up to a maximum 50,000 words), an abstract and an executive summary (up to 2000 words). This is a required output. The executive summary must be focused on results/findings and suitable for use separately from the report as a briefing for NHS managers. Care should be given to using appropriate language and tone, so that results are compelling and clear. The report must use the layout template provided. Following scientific peer review and editing/revision, the report will be made available on the HS&DR programme website. This is a required output from all projects.
- A set of PowerPoint slides (up to 10 maximum) which present the main findings from the research and are designed for use by the research team or others in disseminating the research findings to the NHS. The slides must use the template provided. They will be made available alongside the report on the HS&DR programme website. This is a required output from all projects.

- Journal papers for appropriate academic peer reviewed journals, designed to ensure the research forms part of the scientific literature and is available to other researchers.
- Articles for professional journals which are read by the NHS management community and which will be helpful in raising wider awareness of the research findings.
- Seminars, workshops, conferences or other interactive events at which the research team will present and discuss the research and its findings with NHS managers
- Guidelines, toolkits, measurement instruments or other practical methods or systems designed to enable NHS managers to use the research findings in practice. We are looking for practical, innovative ideas – such as questions arising from the research that non-executive directors could raise at Board meetings or similar.

This list is illustrative rather than comprehensive, and we will welcome project proposals which include other forms of output dissemination and knowledge mobilisation and transfer activities.

5. Process for proposal selection

Whilst we have not set a maximum duration or cost for projects, value for money will be scrutinised and all costs must be justified. Applicants should be aware that changes of costs between outline and full proposal will have to be fully explained, and we therefore encourage applicants to be as realistic as possible when costing their outline proposals. Realistic costs are also very important at commissioning as the HS&DR programme does not normally accept requests for variations to contracts for additional time or funding once projects have been contracted.

Applications for this call will be assessed in two stages. Firstly, outline proposals will be sought. Once remit and competitiveness checks¹ have been made, they will then be reviewed by the HS&DR Healthcare Delivery Research (HDR) Panel. The primary criterion against which the Panel assesses outline proposals is that of **NHS need for the research** – in other words, whether the proposed research will be useful to research users in the NHS, and is likely to contribute to improving decision making. It will use four main criteria to make this judgement:

- Relevance of the proposed research to the themes set out in this call for proposals
- Relevance of the proposed research to the needs, interests and current and future challenges for the management community in the NHS.
- Likelihood that the proposed research will produce findings which are timely, useful to and capable of application by the management community in the NHS
- Likelihood that the proposed research will promote the greater engagement between the academic research community and the health management community in the NHS, and will encourage development of links between academic institutions and NHS organisations.

Applicants whose proposals are shortlisted will be asked to develop a full proposal for assessment by the HS&DR HDR Commissioning Board. This board's primary concern will

¹ '**Non-Competitive**' means that a proposal is not of a *sufficiently high* standard to be taken forward for further assessment in comparison with other proposals received and funded by the HS&DR programme because it has little or no realistic prospect of funding. This may be because of scientific quality, cost, scale/duration, or the makeup of the project team.

be the **quality of the proposed research**. It will use two main criteria to make this judgement:

- Scientific rigour and quality of the proposed research, and the expertise and track record of the research team.
- Value for money of the proposed research, taking into account the overall cost and the scale, scope and duration of the work involved.

6. Application process and timetable

Should you have any questions or require any further clarification please refer to the NETSCC FAQs at [HS&DR programme - FAQs](#), if the answer to your question cannot be found please email your query to hsdrinfo@soton.ac.uk with the reference number (12/5002) and title for the call for proposals as the email header. Applicants should be aware that while every effort will be made to respond to enquiries in a timely fashion, **these should be received at least two weeks before the call closing date.**

The process of commissioning will be in **two stages** and applicants should submit **outline proposals** via the HS&DR website by **1pm on 17 May 2012**. No late proposals will be considered. No paper-based only submissions will be considered.

Applicants will be notified of the outcome of their outline application in **July 2012**.

Shortlisted applicants will be invited to submit a full proposal via the HS&DR website (a link will be sent to shortlisted applicants). Applicants will be notified of the outcome of their full proposal application in **December 2012**. Please note that these dates may be subject to change.

Transparency agenda

In line with the government's transparency agenda, any contract resulting from this tender may be published in its entirety to the general public. Further information on the transparency agenda is at:

<http://transparency.number10.gov.uk/>

http://www.ogc.gov.uk/policy_and_standards_framework_transparency.asp

<http://www.contractsfinder.businesslink.gov.uk/>

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Annex 1: Background on research need

Background on research need

A significant body of literature has developed focusing on the ways in which research or innovations get used in the health service. These combine theoretical work on the process of knowledge uptake to studies evaluating the impact of initiatives to improve uptake. Although applied to health, many theories of knowledge are drawn from wider organisational and management research – comprehensively reviewed in a recent SDO-funded scoping study (Ferlie 2010).

As with the wider literature, knowledge about how evidence is used by healthcare organisations have evolved over time. Earlier work was based on more simplistic models of diffusion (Rogers 1995), assuming rational and linear transfer of knowledge impeded by various barriers. More recent studies emphasise the complex and dynamic interplay of evidence and its use (Greenhalgh 2004, Dopson and Fitzgerald 2005).

The Greenhalgh review of diffusion of innovations identified some key findings from a review of over 200 empirical studies in this dispersed literature. The review summarised assertions in the literature for key innovation attributes that predicted, but did not guarantee, successful adoption; highlighted the importance of social influence and networks and the complex and contingent nature of the adoption process; identified some of the ‘hard’ and ‘soft’ characteristics which encourage or inhibit innovation and noted the messy, ‘stop-start’ nature of the process by which technology use becomes routine and mainstream. The review also identified key gaps in what is known from the evidence base. These included the lack of hard empirical evidence for widely cited “adopter traits”; the lack of focus on innovations that arise peripherally and spread informally (as is often the case in the NHS), rather than through central, top-down channels; the limited generalizability of work from outside the NHS on how innovations spread; and the near absence of studies focusing primarily on the sustainability of complex service innovations.

The related evidence base on knowledge transfer and use has largely to date focused on the use of information by individuals (Rogers 2005) – be they clinicians, managers or policy-makers. This is particularly true of evidence on how clinicians use evidence or guidelines in daily clinical practice (for instance, Grol and Grimshaw 2003). There is now fairly clear evidence on the benefits of complex, multifaceted strategies - a recent updated review concluded that “while guidelines, feedback and educational interventions achieve small to moderate impacts in isolation, they are far more effective when combined in multiple strategies.” (Boaz 2011) Less effort has been invested in understanding the organisational determinants and contexts which may lead to research being used (Mitton 2007) (Tetroe 2008).

There are important differences between the way that evidence is used in clinical and managerial practice (Walshe and Rundall 2001). These include differences in culture, practice and nature of knowledge as well as distinct timelines and decision types which make the transition from evidence-based medicine to evidence-based management problematic. These difficulties have been acknowledged in various attempts to improve knowledge transfer to health service managers, through infrastructure changes and collaborations. At an international level, these include initiatives across Europe, such as the

WHO European Observatory on Health System and Policies (including rapid reaction evidence seminars). At a national level, the dominant influence remains the work of Jonathan Lomas and colleagues in the last twenty years at the Canadian Health Services Research Foundation. Within this country, activities include work funded by the NIHR Centre for Reviews and Dissemination and local initiatives (funded by the CLAHRCs and elsewhere) to employ staff as boundary spanners bridging the gap between management and practice. However, there is still relatively little empirical research evidence on what works best to facilitate better knowledge transfer for health service managers.

Annex 2: Relevant work funded by NIHR

This call is designed to complement work that is already funded. A brief description is given below of the most relevant work, focused on past work of the HS&DR programme and CLAHRCs although other individual studies on knowledge transfer have been funded elsewhere for instance, the Medical Research Council issued a call in 2006 on implementation research, but only one study was funded).

HS&DR Portfolio

The main relevant studies include evaluation of the CLAHRCs (four major studies totalling more than £2 million, one with a distinct focus on implementation activities) and research on knowledge mobilisation (ten studies funded by the SDO programme from autumn 2010 at a total cost of around £3 million). This call included a scoping review on knowledge mobilization (Ferlie 2010) is now published and informed this call.

Other relevant work relates to management practice, including studies of how managers use evidence in decision-making.

The HS&DR programme also has a substantive portfolio on technology adoption. This included an authoritative review of diffusion of innovations published in 2004, which is widely cited (Greenhalgh 2004) and a specific review of organisational factors in the NHS which may encourage or inhibit technology adoption (Robert 2009). A call was issued by the SDO programme in 2008, which resulted in three substantive studies on aspects of technology adoption using interpretative case study methods, ranging from success of NHS-derived (versus 'external') technologies, adoption space of early-emerging technologies and assessing the spread of particular challenging technologies, in conjunction with the National Technology Adoption Centre.

Another relevant study within the HS&DR portfolio (HSR) is a three year project by Glenn Robert (09/2001/25) on knowledge exchange between health sectors and the role of boundary spanners.

Also of interest is a commissioned one year evaluation by Imperial College from autumn 2010 of the SDO-funded management fellows, as these are a form of knowledge broker (Lomas 2004), designed to bridge the gap between managers and researchers.

Details of projects are available at <http://www.netscc.ac.uk/hsdr/project.php>

CLAHRCs

Many projects within CLAHRCs are a combination of research and implementation activities, sometimes as action research projects. However, particular initiatives relevant to knowledge transfer across the nine CLAHRCs include dedicated activity in Leeds, York and Bradford (working with the NIHR Centre for Reviews and Dissemination) in translating research into practice with exemplar projects in stroke and mental health; a number of trials on tailored guidelines for instance on obesity in primary care at Leicestershire, Northamptonshire and Rutland; and evaluation of innovative implementation strategies on VTE prevention and oral nutrition in South Yorkshire. Other relevant activities relate to technology development and uptake, with partnership between industry and the service/patients. These are just a few examples from a wide range of activities across the nine CLAHRCs.