The National Institute for Health Research Service Delivery and Organisation Network: a descriptive narrative of the network

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Abstract

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Background: Governments from the 1990s have demonstrated a concern with bridging the gaps between biomedical, clinical and health services research (HSR), in particular with bringing the benefits of that research into practice. To address this concern, the National Coordinating Centre for NHS Service Delivery and Organisation Research and Development commissioned a network in 2007 for a period of 5 years to support NHS managers in accessing and engaging with HSR generally and specifically with their research portfolio.

Objectives: The Service Delivery and Organisation (SDO) Network, hosted by the NHS Confederation, aimed to enable managers to improve and develop services by facilitating their access to the latest HSR. Through a combination of push, pull, and linkage and exchange strategies, the network proactively targeted interventions at senior, middle and new managers.

Methods: This report presents a descriptive narrative of the SDO Network building in the political and organisational contexts. Information contained in this report was obtained from informal discussions with the network team, document review, analysis of web content and a review of relevant academic and grey literature. Discussions with former and current SDO Network members of staff helped to capture perceptions of influence and working practices, and suggest significant/high-impact interventions.

Results: The evolution of the SDO Network is captured in four distinct phases of development: initiation of the SDO Network project and its place within a new NHS research and development infrastructure; a period of knowledge transfer and exchange to encourage interactions across interest groups and collaboration with other networks; then a period of increasing complexity and consolidation from research translation to capacity building; and finally the end of project and the new innovation landscape phase.

Conclusion: Lessons for similar initiatives aimed at knowledge mobilisation in the health sector include ensuring an adequate evaluation framework is in place from initiation, to capture impact and inform strategy, and developing a range of collaborative relationships to expand the scope and reach of activities. Future work could compare or contrast the experience of the SDO Network with studies of other networks in health (nationally or internationally) to address its contribution within the wider research literature in this field.

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Contents

List of tables ix

List of boxes xi

List of abbreviations xiii

Plain English summary xv

Scientific summary xvii

Chapter 1 Introduction 1
Project: the Service Delivery and Organisation Network 1
Funder: the NIHR Service Delivery and Organisation programme 1
Host: the NHS Confederation 2
Conceptual background: evidence-based practice and translational research 2
Policy background: bridging gaps towards a more systematic use of research knowledge 4
Structure of the report 7

Chapter 2 Methods of reporting 9

Chapter 3 Phase 1 (2006–7): initiation of the Service Delivery and Organisation Network project and its place within new NHS research and development infrastructure and early strategy 11
Network developments 11
Network governance 12
Policy and research influences on network development during phase 13
Network strategy 2007–8 14
Summary of this period 14

Chapter 4 Phase 2 (2008–10): fostering interactions through the Service Delivery and Organisation Network 17
Network developments 17
Policy and research influences on network during phase 19
Network strategy 2008–10 20
NIHR Collaborations for Leadership in Applied Health Research and Care 20
Staffing 21
Programme of activities, 2009–10 21
'Push' efforts 21
Conferences and events 21
Web technology and communications 23
'Linkage and exchange'/'user-pull' 24
Academic Placement Fellowship pilots in partnership with the Economic and Social Research Council 24
NIHR Service Delivery and Organisation management fellowships 24
Joint Service Delivery and Organisation/Health Services Research Network conference (June 2009, Birmingham) 24
Chief executive engagement and the Chief Executive Officer Forum 26
Summary of this period 27

Chapter 5 Phase 3 (2011–12): complexity and network consolidation in a time of austerity **29**
Network developments 29
Policy and research influences on network development during phase 29
Developments at the NIHR 29
Developments at the NHS Confederation 29
Network strategy 2011–12 30
Programme activities, 2011–12 30
'Push' efforts 30
Web technology and communications 32
'Linkage and exchange'/'user-pull' 32
Co-ordination for fellows 33
Chief executive officer Forum 33
Formal evaluation: outcome analysis findings 34
Successes 34
Scope for improvement 35
Future planning 35
Summary of this period 36

Chapter 6 Phase 4 (2012–13): end of project and a new research and innovation landscape **37**
Network developments 37
Policy and research influences on network development during phase 38
Developments at the NIHR 38
Developments at the NHS Confederation 39
Network strategy 2012–13 39
Summary of this period 39

Chapter 7 Conclusion **41**
Knowledge mobilisation lessons for those involved in or setting up similar initiatives 41
Limitations 42

Acknowledgements **43**

References **45**

Appendix 1 Programme of events 2008–12 **49**

Appendix 2 Chief executive officer Forum content, 2010–12 **51**

Appendix 3 Publication outputs and summaries **55**

Appendix 4 Service Delivery and Organisation Network membership as of March 2012 **57**

DOI: 10.3310/hsdr-08-1718-202

List of tables

TABLE 1 Summary of key national policy developments, influential concepts from academic, research and practice, and network developments 9

DOI: 10.3310/hsdr-08-1718-202

List of boxes

BOX 1 Feedback to the SDO Network initiation meeting: management trainee visit to the CHSRF 13

BOX 2 Issues around HSR in NHS management 15

BOX 3 Action learning sets for new and middle NHS managers 17

BOX 4 First SDO Network interactive learning seminar, May 2008: 'Shifting Care: What's the Evidence?' 18

BOX 5 Acute mental health ward interactive learning events 22

BOX 6 Academic fellowship scheme placements 25

BOX 7 East of England evidence: supporting critical appraisal skills development 31

BOX 8 Improving Dignity in Care for Older People in Hospital: Evidence from Research and Practice 38

DOI: 10.3310/hsdr-08-1718-202

List of abbreviations

AHSC	Academic Health Science Centre	HPD	Health Policy Digest
AHSN	Academic Health Science Network	HSDR	Health Services and Delivery Research
CEO	chief executive officer	HSR	health services research
CHSRF	Canadian Health Services Research Foundation	HSRN	Health Services Research Network
CLAHRC	Collaboration for Leadership in Applied Health Research and Care	KM/CB	knowledge mobilisation and capacity building
DH	Department of Health	NHSC	NHS Confederation
EAC	Evidence Adoption Centre	NIHR	National Institute for Health Research
EAG	Expert Advisory Group	PCT	primary care trust
EBM	evidence-based medicine	R&D	research and development
ESRC	Economic and Social Research Council	RCT	randomised controlled trial
HIEC	Health Innovation and Education Cluster	SDO	Service Delivery and Organisation

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Plain English summary

A recognised challenge in health research is ensuring the findings from studies can be used to improve how services are organised and delivered. A membership network based at the NHS Confederation was funded for a period of 5 years to support health service managers in accessing and using research. The network strategy was to target senior, middle and junior managers through a specialised programme of learning seminars and conferences as well as targeted communication products showcasing the latest research findings. The network also offered capacity building initiatives to support managers in acquiring a new set of skills to assess research critically. The report authors collected all available information about the network to construct a detailed description of its approaches, activities and influences – both political and academic – to offer lessons for those interested in improving research use in similar contexts. Some of these lessons include the need for evaluation early on, working with those already in the system performing related function, and securing individual buy-in rather than operating at the organisational level.

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Scientific summary

Background

The National Institute for Health Research (NIHR) Service Delivery and Organisation (SDO) research programme was created in 1999 and merged with the NIHR Health Services Research programme in 2012 to form the NIHR Health Services and Delivery Research (HSDR) funding stream. During its 13-year existence as the SDO research programme, it had two main objectives:

1. producing a quality knowledge base for the NHS
2. ensuring that this knowledge is widely circulated and used in NHS organisations – a process referred to as knowledge mobilisation.

In order to help fulfil its second objective, the SDO programme commissioned the NHS Confederation (NHSC) in 2006 to develop the SDO Network, which would promote learning throughout the NHS. Since the NHS Confederation had expertise in the health sector and represented more than 97% of NHS organisations in its membership at the time, it was a prominent candidate to broker learning and exchange activities between the health research community and NHS managers.

The aim of the SDO Network was to establish an informational learning network to disseminate service delivery and organisational research findings throughout the NHS. The NHSC's membership relationship with NHS organisations, policy-makers and the research community meant it was very well positioned to communicate the issues affecting health managers and so inform research priorities. The early vision of the SDO Network was that it would become a focal point for facilitating connections between members and stakeholders and invest resources in a number of ways. Given this, a diverse programme of activities was proposed to communicate research findings and facilitate collaborations between stakeholders. The SDO Network would support member-led thematic events and virtual interest groups.

NHS trusts were encouraged to join the SDO Network for free, meaning membership growth was to be a key indicator of network success and reach. In order to join the SDO Network, a chief executive officer (CEO) or chairperson of the NHS trust needed to sign a form to signal the organisation's commitment and willingness to use the research to improve health services.

Objectives

The overall aim of this report is to describe the SDO Network.

Methods

This is a project report of the SDO Network over a period of 5 years.

The information available to inform this report falls into four categories:

1. informal discussions with available members of the SDO Network team ($n = 4$)
2. archival data and company documents: events attendance data and evaluation forms; minutes and agendas; formal reports; operational plans; contracts; job descriptions; strategy documents; interview transcripts; survey results
3. online material: NHSC research networks website, including news updates and links to publications (reports, digests, research summaries); NIHR annual reports

4. academic and grey literature: published articles in academic journals; the NIHR HSDR programme completed research reports; government policy documents and white papers; think tank and policy/research institutions' reports.

The first step was to produce a chronology of network events (2007–13) based on the available archival data and published literature.

Discussions with former and current SDO Network members of staff helped to capture 'softer' aspects – such as perceptions of influence, working practices, tacit knowledge – and suggest significant/high-impact interventions.

Results

Research findings

The report is structured chronologically and describes four interconnected and overlapping phases in the SDO Network's evolution:

- phase 1 (2006–7): initiation of the SDO Network project and its place within new NHS research and development infrastructure and early strategy
- phase 2 (2008–10): knowledge transfer and exchange: how the network encouraged interactions across interest groups and collaborated with other networks
- phase 3 (2011–12): complexity and consolidation: from research translation to capacity building
- phase 4 (2012–13): end of project and the new innovation landscape.

Within each section, relevant developments in policy and organisational context are highlighted. So too are academic concepts and frameworks useful for understanding the operational activities of the SDO Network and the NIHR.

Phase 1 (2006–7): initiation of the SDO Network project and its place within new NHS research and development infrastructure and early strategy

In practice, the SDO Network did not begin operations until a full-time position was created for a network manager in November 2007. The NHSC undertook interviews with senior NHS leaders at the end of 2007/early 2008 to inform the shape and focus of the SDO Network. In particular, it sought views from CEOs who expressed an active interest in applying science to management and using organisational research to improve services.

Informal feedback to the NHSC from the NHS community indicated the depth of the Cooksey challenge to translate research 'from bench to bedside' (HM Treasury. *Cooksey Report: A Review of UK Health Research Funding, Chaired by Sir D. Cooksey*. London: HMSO; 2006. p. 12): a culture of accessing research evidence and reflecting before making decisions was seen to be largely absent from NHS managerial practice. There was also demand from the service (the research 'pull' perspective) for SDO research to provide answers to pressing management issues arising from national policies and priorities. The SDO Network would therefore need to ensure its activities linked directly to what NHS organisations were trying to achieve, given the view that research projects often failed to reflect managerial priorities. However, this raised the broader issue of the kinds of evidence the SDO Network should disseminate and the SDO programme's role as a knowledge producer; whether, for example, large-scale, robust scientific studies (big 'E' evidence or Research) or timely and applicable local evidence (little 'e' evidence and research) were most useful.

The SDO Network team decided that, in order to maximise impact, the network would need to proactively target interventions at three different groups: senior, middle and new managers. The hope was that the SDO Network would stimulate demand for research outputs at different tiers of management and so encourage 'research pull' from health-care decision-makers. The NHSC team recognised the need to trial a

variety of interventions and models to offer flexibility for those managers interested in engaging with health services research but time poor because of balancing operational demands.

Phase 2 (2008–10): knowledge transfer and exchange: how the network encouraged interactions across interest groups and collaborated with other networks

For the SDO project, significant developments during the 2009–10 period were growth in membership; securing additional capacity and resources to deliver the network; establishing relations with relevant partners, both inside and out of the NHSC; successfully creating opportunities for frontline managers to learn about research projects relevant to service delivery; and further experimentation with a range of interventions to raise the profile of the SDO research programme.

At the NIHR, the appointment of a director dedicated to knowledge mobilisation and capacity building (KM/CB) was especially noteworthy from a strategic point of view and provided the SDO Network manager with a point of expertise and operational guidance. This director also had insight into the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) infrastructure that came to fruition during this period and assisted the CLAHRC programme manager in developing ways to support inter-regional knowledge sharing between CLAHRC regional hubs.

In retrospect, the traction of SDO Network within the NHSC can be interpreted as relatively weak during this early phase, although an important link was made with the Health Services Research Network (HSRN), culminating in a joint annual conference. This laid a foundation for better intranetwork co-ordination going forwards.

Of course, overshadowing macro events taking place in the UK's economy and in health policy between 2008 and 2010 were highly significant and cannot be overlooked. Financial pressures on NHS trusts, CEOs and frontline managers were growing and the likelihood was that it would become more difficult for organisations to release staff to attend events. Furthermore, the 2010 White Paper, *Liberating the NHS*, (Department of Health. *Equity and Excellence: Liberating the NHS*. London: The Stationery Office; 2010.) brought to the fore new policy imperatives that the SDO Network needed to respond to if it was to remain in touch with frontline service developments and demands.

Phase 3 (2011–12): complexity and consolidation: from research translation to capacity building

During 2011, the SDO Network refined, consolidated and extended its activities to support KM/CB in the NHS. There was an emphasis on improving research synthesis products and outputs, such as the research digest and e-mail newsletters, and on ensuring that messages had a closer match with current health policy and the concerns of NHS managers. These products appeared to fill a gap in the health research market since the SDO Network profiled up-to-date, robust research findings, but in a concise and accessible manner consistent with the NHSC's other communications, which enjoyed a wide readership. Successes in this area were an outcome of continuing close working relations between the SDO Network team and the NIHR SDO programme, despite the departure of the Director of KM/CB. Indeed, in practice, the SDO Programme Director included the SDO Network Manager in the SDO Programme Executive Group, as an observer, signalling commitment to the network as a key knowledge intermediation function.

The expansion of the network's membership base began to plateau after a period of steady growth, although the number of online followers (on Twitter™) and e-mail subscribers increased substantially. Member engagement was steady, perhaps reflecting the policy-oriented focus of activity, with the number of attendees at in-person and online learning events consistently on target.

However, questions were surfacing about the future of the SDO Network and the renewal of its contract. This reflected the high levels of uncertainty throughout the NHS system as it implemented far-reaching reforms and savings plans that would inevitably have a knock-on effect on NHSC networks. For example, the demise of primary care trusts would result in a loss of over 20 organisational members for the SDO Network. There were also questions about whether or not the SDO Network should promote linkages to a wider research knowledge base beyond the SDO portfolio.

A further recalcitrant issue that resurfaced for the SDO Network team was the difficulty in formally capturing and measuring network impact, especially the cost-effectiveness of building awareness and strengthening connections between members across managerial, research and clinical communities of interest.

Phase 4 (2012–13): end of project and the new innovation landscape

The final year of the SDO Network was a period of transition that marked the end of the project and its incorporation into the existing HSRN. There was a continued emphasis on the network's sense-making functions through briefings about the new innovation infrastructure and summarising key research from the SDO portfolio in the form of digests. The network developed closer collaborations with the NHSC's core work programme and the CLAHRC Support Programme to embed SDO research into the wider policy and applied health research worlds. However, a failed membership drive to collect fees for the first time during its existence proved to be too difficult for the network and a scaled-down HSRN emerged at the end of the phase.

Conclusions

The SDO Network should be viewed as one component of an approach to knowledge mobilisation pursued by a single programme of health research funding, the NIHR SDO programme, for a period of 5 years from 2008 to 2012. The characteristics of the network that appear to have aided knowledge mobilisation include its flexible and responsive approach, taking into account wider system changes (i.e. a focus on the operational concerns of managers), and its effort to use best practices to inform the activities and outputs of the network. For example, the range of activities the network pursued at its peak did respond to Lavis *et al.*'s finding that a combination of approaches is needed (Lavis J, Lomas J, Hamid M, Sewankambo N. Assessing country-wide efforts to link research to action. *Bull World Health Organ* 2006;**84**:620–8).

However, there are a number of characteristics that appear to have impeded knowledge mobilisation efforts. These include the focus on one source of research knowledge (i.e. findings from the NIHR SDO programme), rather than drawing upon the wider knowledge base and being more of an integrator of research knowledge. Another issue is that the network did not have any influence on how research knowledge was generated; rather, it should be compared with other end-of-grant approaches which ultimately do not address the known barriers to mobilising knowledge.

Finally, a number of practical lessons are presented in this report which might offer lessons for future initiatives interested in supporting managers in accessing and engaging with research to inform practice. Future work could compare or contrast the experience of the SDO Network with studies of other networks in health (nationally or internationally) to address its contribution within the wider research literature in this field.

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Chapter 1 Introduction

This report provides an account of the Service Delivery and Organisation (SDO) Network's programme of work. The network was funded by the National Institute for Health Research (NIHR) and hosted by the NHS Confederation (NHSC). This report provides a chronological narrative of the network, detailing the historical context and emplacement in the health policy and research landscapes as well as reporting its operational activities and their organisational contexts.

However, although discrete historical phases are used to structure it and guide the reader, there is overlap in network activities across the time periods described, and relationships with stakeholders and contexts were dynamic. Academic concepts and models exerted a profound influence on the SDO Network, reflecting a wider international debate about knowledge translation in health care. The network, located as it was at an interorganisational juncture between a host organisation (the NHSC), a funding body (the NIHR SDO programme) and network 'members' (NHS organisations), was also necessarily dynamic in organisational terms. A wide range of external influences, organisational exigencies, prominent actors and time-specific context shaped the project.

A formal evaluation of the SDO Network did not occur during its 5-year funding period but an outcome analysis was conducted near the end of the project and is reported in a later section. Nonetheless, the SDO Network represents an early project in the NHS to try to make research findings more accessible to those working in the service.

Project: the Service Delivery and Organisation Network

The network was initiated in 2007 as a programme of work contracted to the NHSC until March 2013. It was originally envisaged as 'an informational or knowledge network' (proposal form, NHSC; 2006) designed to promote the uptake of research evidence about service delivery by NHS managers. Funded by the NIHR SDO programme as a programme of work and not a research project, it was decided that the SDO Network would be a free service for NHS organisations interested in accessing and engaging with health services research (HSR) generally and specifically with the research portfolio of the NIHR SDO programme. Over its life course, the SDO Network adopted a brokering role between individuals, institutions and constituencies – of researchers and of service leadership – to facilitate interactions between research and service, and to encourage debate about the relevance of research outputs to service leaders, particularly managers, at different levels of NHS organisations.

Funder: the NIHR Service Delivery and Organisation programme

The NIHR SDO research programme was created in 1999 and merged with the NIHR Health Services Research programme in 2012 to form the NIHR Health Services and Delivery Research (HSDR) funding stream. During its 13-year existence as the SDO research programme, it had two main objectives: (1) producing a quality knowledge base for the NHS; (2) ensuring that this knowledge is widely circulated and used in NHS organisations – a process referred to by the term 'knowledge mobilisation'.[1] The programme commissioned research in areas of perceived need and aimed to influence the decision-making of practitioners by making relevant research freely available. It also delivered interventions to strengthen the internal capacity of NHS organisations to use research, such as through fellowship programmes. The SDO Network was funded at part of the knowledge mobilisation objective, as a programme of work contracted to the NHSC.

Host: the NHS Confederation

The NHSC is an independent membership body for a range of organisations that commission and provide NHS services.[2] It receives its income from membership subscriptions, commercial revenues, events (including the emblematic annual conference) and government funding. Members include acute trusts, ambulance trusts, Clinical Commissioning Groups, community health service providers, foundation trusts, mental health providers, primary care trusts (PCTs) and a number of independent and voluntary sector health-care organisations.

The NHSC aims to be a membership body, system connector and thought leader. It conducts analyses of health and social care policy and seeks to influence national and European agendas on behalf of its members. In particular, over the past few years, it has interpreted the potential impact of reforms for NHS organisations, for the workforce and for patients. It makes use of a range of communication channels to engage with members and external stakeholders, such as well-received policy digests, briefings and consultation reports; running a well-attended annual conference; and offering a programme of targeted events and meetings throughout the year.

As well as this core membership offer, the NHSC has encouraged and managed networks to convene and represent interest groups within the sector. These have included foundation trusts, ambulance services, mental health trusts, independent NHS providers, primary care, community service and the HSR constituencies. These networks have orbited the NHSC core with various degrees of autonomy and membership overlap. The emphasis on networks has reflected a conceptual and policy commitment to them as the organisational form best suited to new ways of working with complexity and across sectors. The SDO Network followed this 'network model', although in practice it was less a membership network and more a knowledge intermediation project.

The NHSC was, like all parts of the health and social care sector, undergoing significant transformation during the SDO Network project. Most notably, the Foundation Trust Network signalled its departure from the organisation in February 2011.[3] Although the Confederation's response to sector fragmentation has been reflexive and resilient – largely retaining membership of foundation trusts as well as bringing the new commissioners into membership – this was a period of challenge to its claim to be the 'only body to bring together and speak on behalf of the whole of the NHS'.[2]

Conceptual background: evidence-based practice and translational research

Encouraging NHS managers to take a more active interest in accessing, understanding and applying research evidence is an objective with a rich underpinning of policy and academic debate about the translation of research knowledge into professional decision-making and the relevance of contemporary academic research.

The evidence-based medicine (EBM) movement supports the view that standards of care are likely to be variable where decisions do not incorporate the latest research evidence alongside professional expertise and judgement.[4] It has become a normative, international paradigm, supported by clinicians, policy-makers and academics. Alongside its acceptance, there has been an attempt to formally capture the mechanisms that support the effective use of evidence. This effort has generated debate about how different stakeholders engage with the research process (users, funders, producers); how research evidence should be synthesised; how studies should be commissioned to deliver findings that are timely and useful; and how innovations and research spread through large and complex systems, such as the NHS, which have multiple organisational and professional boundaries.[4–10] These issues extend beyond biomedical and clinical disciplines, as evidence-based principles have been applied to management practice and public policy over the last decade or two.[11–15]

Despite the exponential rise of the EBM movement internationally from the early 1990s, it is now recognised that there are many obstacles to getting external research findings into daily practice.

A growing research literature has emerged focusing on how clinical evidence is (or is not) implemented in health-care settings, listing the barriers to and facilitators of research use.[16–20] In very general terms, examples of barriers to 'research utilisation' can be grouped as follows:

- practical: difficulties in accessing research evidence systematically; cost and time to produce a robust research evidence base; evidence lacking in some areas; lack of funds available for training/continuing professional development[17,19]
- cultural: organisations failing to invest in research and development (R&D); lack of support for knowledge sharing; not 'pro research'[16,19]
- educational–cognitive: professionals unaware how to conduct research or interpret the strengths/weaknesses of evidence; resistant[17,20]
- professional: research evidence conflicting with judgement and experience; evidence not always applicable to complex cases; peer influence; intense workload; patient preferences[17–19]
- political–contextual: different viewpoints on what knowledge or evidence should be implemented locally and how.[18,19]

To remedy the research–practice gap, attention has traditionally been directed at clinical decision-making and compliance (or non-compliance) with evidence-based guidelines, although more recently attention has been on how health-care managers access and use research evidence. Some academics have called for 'evidence-based management' (EBMgt) (in both university teaching and managerial practice) and the linking of 'EBM' and 'EBMgt' in health-care organisations.[20–26] This raises questions of whether or not health-care managers have a solid understanding of the research process; can critically appraise studies; and have ready access to research findings in ways similar to their clinically trained colleagues.

The extension of the evidence-based approach to management teaching and practice remains contentious. EBM uses a hierarchy-of-evidence model, and privileges certain forms of knowledge. Systematic reviews of randomised controlled trials (RCTs) sit at the apex of the hierarchy and are seen as the most reliable form of evidence, while subjective opinions and single qualitative case studies feature at the bottom. The test of evidence is whether or not the findings are reliable, replicable and generalisable across large populations and settings. However, critics argue that, because EBM focuses on a particular type of evidence (appropriate to biomedical knowledge and clinical trial data), it risks overlooking the value of other forms of knowledge – such as qualitative studies and tacit knowledge – which can help explain the context-specific complexity faced by practitioners. So the matter of what kind of non-clinical research should be produced to inform health service delivery is by no means straightforward. Neither is the issue of how professional judgement and tacit understanding sit alongside 'big E' scientific evidence in practice, or how patient preferences are incorporated into clinical decision-making. Given these contingencies, some writers choose to talk of 'evidence-*informed*' decision-making as a more inclusive and collaborative process.[27] Some influential clinical academics have also challenged the traditional assumptions of EBM and suggest that a broader view of knowledge, especially experiential knowledge, might be favourable. For example, Trish Greenhalgh has asked if all policy should be evidence based given the 'fuzzier and more contestable aspects of EBM' (p. 216),[28] and Julian Tudor Hart discusses the difficulties for professional in following prescriptive guidelines which do not factor in coexisting health problems in patients (p. 122).[29] These views do not dismiss the need for high-quality systematic reviews and biomedical evidence in health care (especially given the masses of research evidence in circulation) or the importance of ensuring that research evidence is readily available to health-care decision-makers – even if reviews sometimes raise as many problems and gaps in understanding as they do answers. Rather, they challenge the way in which current manifestations of EBM can exclude other professionally valued forms of knowing.

The EBM debate has largely focused on the production and pedagogical side of the research process (the so-called 'push' perspective). However, the existence of a wealth of evidence is insufficient to ensure its use. This informs thinking about 'knowledge translation', a term used to describe a range of activities designed to disseminate, exchange and implement research to bring about positive effects in a health-care system.[30] Indeed, the complexity of transferring research evidence into professional practice is viewed as such a multifaceted process that 'implementation science' has emerged as a nascent field to understand the methods most effective at promoting the uptake of evidence.[31] Implementation science is a multidisciplinary research area which draws on a spectrum of research methods and evaluation tools: quantitative, qualitative, descriptive accounts, RCTs and systematic reviews. Conceptual and theoretical frameworks have been developed from this field to guide the implementation of evidence and support the spread of innovations.[4,32–35] The literature suggests that a solid theory of implementation in health is still lacking – partly because this is a new field of enquiry – although, over time, implementation frameworks have demonstrated a shift away from simpler, linear understandings of knowledge transfer to more complex, interactive and user-orientated frameworks – a point returned to in later chapters of this report.

Of particular relevance to the development of the SDO Network [and later NIHR Collaborations for Leadership in Applied Health Research and Care, (CLAHRCs)] are collaborative models of knowledge transfer that promote 'linkage and exchange' between health services researchers and potential users.[35] Many such models were evolved and trialled in Canada in the past two decades.[36] The Canadian Foundation for Healthcare Improvement, originally called the Canadian Health Services Research Foundation (CHSRF) until 2012, was formed in 1997 with a remit to 'provide healthcare policy and decision makers with the robust, accessible research they needed to make evidence-informed improvements to healthcare financing, management and delivery'.[37] Among its activities, the foundation has encouraged one-to-one interactions and joint working between health researchers, policy-makers and managers to promote shared understanding, emphasised more user-friendly research outputs and supported the systematic organisation of evidence.[36]

Therefore there is growing awareness about how organisations can positively facilitate the uptake of research evidence and its use in practice, although it is likely that a combination of linkage strategies will be most impactful in 'real world' settings. Lavis *et al.*[37] categorise such efforts as:

- 'push' efforts – led by researchers and 'purveyors' of research and useful when potential users are unaware of a message or disregarding it
- 'user-pull' efforts – where professionals, patients and other stakeholders connect with the research world to get useful information for dealing with decisions/gaps in understanding
- 'exchange' (or 'linkage and exchange') – when research producers form partnerships with groups of users to develop shared understanding and answer questions
- 'integrated efforts' – combining elements of all the above on a larger scale such as through 'knowledge exchange platforms'.

Policy background: bridging gaps towards a more systematic use of research knowledge

The SDO Network was shaped by the concepts and the evidence base of knowledge mobilisation. It was also situated in a fast-changing landscape of research and innovation undergoing rapid policy and infrastructure development. Governments from the 1990s onwards have demonstrated a concern with bridging the gaps between biomedical, clinical and HSR; in particular with bringing the benefits of that research into practice. They have also been quite properly preoccupied with securing the UK's position as a global leader in scientific innovation. These concerns have informed the establishment of new institutions and research programmes within and across the UK health economy.

The evidence base has been the dominant discourse of policy-makers for at least a decade. For example, *Research and Development Towards an Evidence-Based Health Services* stated that health policy decisions should have a scientific basis.[38] In 1999, the National Institute for Clinical Excellence [now the National Institute for Health and Care Excellence, (NICE)] was formed – a key organisation for the implementation of evidence-based practice in the UK. However, routes to implementation have been less assured.

Research and Development for a First Class Service[39] outlined a vision of how this evidence base might be generated and implemented in practice via research partnerships and networks, with money targeted at research priorities, including service delivery. The National Coordinating Centre for NHS Service Delivery and Organisation Research and Development [now the National Coordinating Centre for the Service Delivery and Organisation research programme (NCCSDO)] was established in 1999 and based at the London School of Hygiene & Tropical Medicine. The NCCSDO managed the SDO R&D programme, which had two principle objectives: knowledge production and knowledge mobilisation.[1] Specifically it aimed to:

- *ensure that good research-based evidence about the responsiveness, effectiveness, cost-effectiveness and equity of different models of service is available;*
- *generate the evidence base to encourage health service managers and others to implement appropriate change;*
- *identify and develop appropriate R&D methods;*
- *promote the development of expert R&D capacity;*
- *involve service users and other stakeholders in the Programme.*[40]

Included in the early SDO R&D programme's strategic objectives (the SDO now sits within the NIHR HSDR programme) was funding new research where there was a lack in knowledge about problems in service delivery. The programme also set about promoting the uptake of research evidence by working with other agencies that could help disseminate its own growing research portfolio.

The national research imperative in health care was further reinforced by two important publications in 2006: the Cooksey report[41] and *Best Research for Best Health*.[42] Both documents set ambitions for the NHS to contribute to the UK's 'knowledge economy' and an explicit focus on engendering a 'thriving research culture' which was 'evidence-led' throughout the NHS (p. 6).[43] The Cooksey report[41] recognised the complexity involved in translational research compared with biomedical research. It further concluded that research remained a 'secondary activity' in the NHS and was poorly incentivised (p. 49). Several recommendations were made to address the second 'research translation' gap in health care, the gap between the discovery of new knowledge and the clinical application, so that research findings would travel from 'bench to bedside' (p. 12):[42]

- 'better training for NHS managers and clinical staff to improve the benefits of research and how it can be used to drive clinical and cost improvements in service performance'
- collaboration and engagement between research producers and end users
- improved co-ordination between funding bodies and institutions
- 'a more systematic approach to the adoption of new technologies and interventions in the NHS'
- the formal establishment of the NIHR as an agency of the Department of Health (DH)
- priority focus on therapies and medicines that address the UK's 'unmet health needs' and disease priorities.

During this same time period, *A Framework for Action*,[44] Professor Lord Darzi's review of health care in the capital (published in July 2007 by NHS London), recommended the creation of Academic Health Science Centres (AHSCs). Five centres were established: three in London, one in Cambridge and one in Manchester. Modelled on similar centres in the USA and Europe, the AHSCs linked universities and NHS organisations to form hybrid centres of global research excellence to address the first translational gap, sometimes known as 'bench to bedside', the movement of knowledge from research into a potential clinical product or tool. However, the second designation of AHSCs, to be announced, is taking place against a global recalibration of academic health science. This recalibration characterises AHSCs as 'ideally poised to become system integrators that are capable of bridging (both) translational gaps':[45] type 1, 'discovery', the gap between the need for knowledge and the discovery of that knowledge, and type 2, 'research into practice', the movement of new tools into health-care practice, realising their benefit in improved patient care.

It was another recommendation from Professor Lord Darzi[44] that led to the establishment of 17 Health Innovation and Education Clusters (HIECs), an attempt to promote innovation in the NHS by combining the expertise of industry, health and education at a local level.[47] HIECs emphasised the mechanics of local collaboration to drive innovation and improvement and the building of local capacity to assess and adopt best practice.

Most recently, in December 2011, the Prime Minister, David Cameron, launched a joint departmental initiative linking the DH and the Department for Business, Innovation & Skills (BIS) to integrate health innovation and research. Broadly the BIS *Strategy for UK Life Sciences*[46] introduced supply-side measures to support the life sciences sector. Its counterpart from the DH, *Innovation Health and Wealth*,[47] focused on NHS engagement and compliance. These two strategy documents designated Academic Health Science Networks (AHSNs)[48] as the systematic delivery mechanism for the adoption and spread of innovation at scale and pace to improve patient and population health outcomes and to drive wealth creation by supporting health sector-led partnerships with universities and industry. The networks offer the most comprehensive infrastructure to date that seeks to address the second translational gap and by implication places knowledge management and the mechanics of knowledge mobilisation and knowledge intermediation at the heart of service improvement.

The lifetime of the SDO Network project has thus seen a proliferation of research and innovation infrastructure seeking to systematise and integrate the research–care continuum.

Another central development – one strategically related to the NHSC's own work – was the DH's growing interest in network forms of organisation. For example, managed clinical networks were chosen as the organisational model for implementing the *Cancer Plan*[49] but also for other improvements in progress across other service areas – such as sexual health, mental health and children's care. Scientific and innovation networks were similarly created to facilitate connections between the UK's scientific research base and health economy, as in the case of Genetics Knowledge Parks.[50]

Networks and network governance are salient topics in the academic literature, especially in the disciplines of sociology, public management, and management and organisation studies. It is a theoretically rich area of study although the emphasis on networks in policy discourse is a relatively recent phenomenon, becoming notable under New Labour's leadership in the late 1990s. The empirical knowledge base for the use of networks in health care was, however, more limited, especially in specific areas of service delivery. The SDO therefore commissioned a number of studies looking at these collaborative and distributed models, their theoretical origins and their effectiveness.[50–52]

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Structure of the report

The report is structured chronologically and describes four interconnected and overlapping phases in the SDO Network's evolution:

- phase 1 (2006–7): initiation of the SDO Network project and its place within new NHS R&D infrastructure and early strategy
- phase 2 (2008–10): knowledge transfer and exchange: how the network encouraged interactions across interest groups and collaborated with other networks
- phase 3 (2011–12): complexity and consolidation: from research translation to capacity building
- phase 4 (2012–13): end of project and the new innovation landscape.

Within each section, relevant developments in policy and organisational context are highlighted. So too are academic concepts and frameworks useful for understanding influences on the operational activities of the SDO Network and the NIHR. Vignettes describe interventions that appear to have had greatest impact based on feedback from key informant discussions.

A short chapter first summarises the information available about the project used to inform the report.

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Chapter 2 Methods of reporting

This report describes the network's programme of work over its initiation and 5-year funding period.

The information available to inform this report falls into four categories:

- informal discussions with available members of the SDO Network team ($n = 4$)
- archival data and network documents: events attendance data and evaluation forms; minutes and agendas; formal reports; operational plans; contracts; job descriptions; strategy documents; interview transcripts; survey results
- online material: NHSC research networks website, including news updates and links to publications (reports, digests, research summaries); NIHR annual reports
- academic and grey literature: published articles in academic journals; NIHR HS&RD completed research reports; government policy documents and White Papers; think tank and policy/research institutions' reports.

First, a chronology of network events (2007–13) was produced based on the available archival data and published literature. Where relevant, academic concepts about knowledge transfer and national health policy R&D structures that shaped the network's approaches are referenced (*Table 1*).

Then discussions with former and current members of SDO Network staff helped to capture 'softer' aspects – such as perceptions of influence, working practices and tacit knowledge – and suggest significant/high-impact interventions.

This is a descriptive report providing an overview of the SDO Network as a programme of work funded as a 5-year project to mobilise knowledge from the NIHR SDO programme.

TABLE 1 Summary of key national policy developments, influential concepts from academic, research and practice, and network developments

Time period	Key national policy developments	Influential concepts (academia, research and practice)	Organisational influences (NHSC SDO Network)
1990s–2005	1997: *Research and Development Towards an Evidence-Based Health Service* (DH)[38] published 1999: NICE established 1999: SDO programme established to increase the portfolio of research relevant to health-care managers 2000: *Research and Development for a First Class Service* (DH)[39] published	EBM movement and knowledge translation literature is dominant paradigm CHSRF – leader of thought in translational research – established in Canada 2003: Concepts of linkage and exchange to move research into policy introduced in Canada 2004: Trish Greenhalgh *et al.*'s systematic review of the literature on diffusion, dissemination and sustainability of innovations in health service delivery and organisation[6] 2004: NIHR SDO research on networks published	2004: NHSC Director of Policy influenced by developing literature on networks 2005: Health Services Research Network launch at NHSC

continued

TABLE 1 Summary of key national policy developments, influential concepts from academic, research and practice, and network developments (*continued*)

Time period	Key national policy developments	Influential concepts (academia, research and practice)	Organisational influences (NHSC SDO Network)
2006–7	2006: *Best Research for Best Health* (DH)[42] published 2006: NIHR established 2006: *Cooksey Report: A Review of UK Health Research Funding* (HM Treasury)[41] gets research on the management agenda 2007: Comprehensive Spending Review – largest increase in funding for health research announced 2007: First AHSC established and joined by four more		2007: SDO Network launch at NHSC 2007: an SDO management trainee conducted interviews in Canada and England to understand perspectives on how knowledge networks function
2008–10	2008: NHS Next Stage Review published[53] 2008: Establishment of nine NIHR CLAHRCs 2009: Establishment of 17 HIECs	Health agencies such as the World Health Organization (WHO) and CHSRF emphasise interactive, collaborative and brokering strategies to better connect knowledge to action	2008: NIHR SDO appoints a Director of Knowledge Mobilisation and Capacity Building 2008–11: SDO Network Operational Group active 2008: a proposal to extend the remit of the SDO Network was approved 2010: launch of CLAHRC Support programme at NHSC
2011–12	2011: *Life Sciences Strategy* published[46] 2011: *Innovation, Health and Wealth*[47] signalled a change to the innovation landscape, including the designation of AHSNs	Concepts of embedding research, facilitating uptake through organisational and individual increased capacity were influential	2011: outcome analysis of SDO Network commissioned 2012: staff turnover in the SDO Network team
2012–13	2012: *Health and Social Care Act*[54] 2012: New NIHR HSDR programme, merger of two former NIHR programmes: the Health Services Research programme and the SDO programme 2013: Licensing of 15 AHSNs		2012: SDO Network closure and incorporation into the HSRN portfolio

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Chapter 3 Phase 1 (2006–7): initiation of the Service Delivery and Organisation Network project and its place within new NHS research and development infrastructure and early strategy

Network developments

> *Networks may stimulate creativity and innovation by providing increased opportunities for interaction of people from different disciplines and organisations.*
>
> *(p. 63)*[55]

The NHSC was commissioned by the SDO programme in 2006 to develop a network that would promote learning throughout the NHS. Since the NHSC had expertise in the health sector and represented more than 97% of NHS organisations in its membership at the time, it was a prominent candidate to broker learning and exchange activities between the health research community and NHS managers.

Yet the chance to deliver the SDO Network also offered the NHSC an opportunity to meet its own organisational needs and overarching objectives, for example:

- having influence across research, NHS, academic and health policy communities
- progressing co-ordinated, internally managed networks as a business model for growth and business sustainability
- improving patient care by helping NHS organisations to deliver more effective health services based on research outcomes.

The chance to implement the SDO Network programme coincided with the NHSC's strategic interest in networks, which emerged under the guidance of the organisation's policy director. The policy director had published several papers on the role (and possible advantages) of clinical networks as co-ordinating mechanisms in health care and coauthored an early NHSC discussion paper on the subject in 2001.[55,56] Over the years, the NHSC had acquired an experience base in network management, having initiated specialist networks across organisational boundaries and sectors, such as the Health Services Research Network (HSRN) launched in May 2005. This network connects research organisations that have an interest in HSR: mostly research institutions and NHS organisations.

In 2006, the organisation submitted a proposal to create the new 'SDO Network', building on its experience and activity with the NHS. The aim was to establish an informational learning network to disseminate service delivery and organisational research findings throughout the NHS. The NHSC's membership relationship with NHS organisations, policy-makers and the research community meant it was very well positioned to communicate the issues affecting health managers and so inform research priorities. The early vision of the SDO Network was that it would become a focal point for facilitating connections between members and stakeholders and invest resources in a number of ways. Given this, a diverse programme of activities was proposed to communicate research findings and facilitate

collaborations between stakeholders. The SDO Network would support member-led thematic events and support virtual interest groups. The original proposal stated (NHSC; 2006):

> *SDO-net would aim to support and inspire members to collaborate in new ways and to promote a two-way development of SDO research agendas and application of findings in practice, policy and dissemination.*

NHS trusts were encouraged to join the SDO Network for free, meaning membership growth was to be a key indicator of network success and reach. The fact that it was a free service signalled the value placed on translational research and knowledge mobilisation by the SDO programme and DH at the time. However, given that other NHSC networks were based on a paid subscription model, conversely it is possible that NHS organisations may have undervalued this service given its free status. This is of course difficult to prove retrospectively, but it does raise the question of whether or not a free organisational membership model was the best route to access individual NHS managers and foster their engagement with research. In order to join the SDO Network, a CEO or chairperson of the NHS trust needed to sign a form to signal the organisation's commitment and willingness to use the research to improve health services. Yet this left the onus on the specific trusts to promote the SDO Network internally and it is possible that this commitment never went beyond senior tiers of management and/or R&D leads.

The kinds of activities planned for the SDO Network at this formative stage are summarised below:

- communication channels: web page, forum and e-mail updates to disseminate research knowledge; consistent with NHSC-style outputs using clear language to convey complex ideas
- convening specific interest groups: enable network members to interact with wider audiences to form collaborations
- annual SDO conference/workshop and seminars where NHS managers, policy-makers and health researchers can meet and exchange views
- access to the NHSC annual conference and exhibition.

In terms of costs, hosting the SDO Network at the NHSC did have the added advantage of direct access to infrastructure and internal capacity, which would help lower network running costs (i.e. membership registration and database management, publishing and marketing, event organisation, etc.).

Network governance

In practice, the SDO Network did not begin operations until a full-time position was created for a network manager in November 2007. For governance purposes, the SDO Network was overseen by the SDO Network Implementation Group at the outset to assist its initial delivery (November 2007 to January 2008). The first meeting involved representatives from SDO and the NHS Confederation and CEOs of NHS trusts who were early SDO Network joiners. At this meeting an NHS management trainee on a placement with the SDO programme fed back his experience of visiting the CHSRF to inform plans for the SDO network (*Box 1*).

It was later agreed to form an operational group that would meet as often as required, and an advisory board that would meet two or three times a year and provide strategic oversight for the SDO Network, including:

- advice regarding the needs of NHS health-care trusts for SDO Network products and services
- advice regarding how the wider health servicers research community could feed into the work of the SDO Network.

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BOX 1 Feedback to the SDO Network initiation meeting: management trainee visit to the CHSRF

An SDO management trainee conducted interviews in Canada and England to understand perspectives on how knowledge networks function. His learning was relevant to the developing SDO Network, and he was invited to present at the first meeting of the implementation group in November 2007.

The trainee highlighted the philosophy of 'linkage and exchange' that informed the CHSRF's methods for bridging different 'communities of practice' and 'knowledge brokerage' to connect researchers and decision makers.

The interactive, face-to-face, collaborative and fluid aspects of knowledge networks were perceived as central. In the words of the trainee:

> *Many networks are informed by the idea of a 'natural experiment', as opposed to delivering a list of specific outcomes.*

> *Face-to-to face contact is paramount in Canadian HSR networks. Other means of connecting people and communicating information (e.g. web portals; online peer groups; databases of research projects and research findings; paper publications etc.) generally serve to support face-to-face interactions.*

However, the problematic issue of assessing the success of knowledge networks was raised:

> *CHSRF networks have not yet escaped the notorious difficult of defining success criteria for knowledge mobilisation.*

Reproduced with permission from Stephen Ryan's document presented to the SDO Network Implementation Group on 13 November 2007, NHS Confederation.

Policy and research influences on network development during phase

There were important staff changes within the NIHR SDO programme team during this period. The SDO Programme appointed a Director of Knowledge Mobilisation and Capacity Building (KM/CB) to provide expertise in public services management, organisational learning, the role of research evidence in practice and methods of knowledge transfer and exchange.

The SDO Network Operational Group tended to meet quarterly: the SDO Director, SDO Director of KM/CB (who chaired the meetings), the NHS Confederation Director of Policy and the SDO Network Manager. As the internal support team expanded at the NHSC, so participation and the remit of these meetings grew. Meetings began in July 2008 and continued until 2011. The Operational Group was responsible for discussing decisions around the themes of events; communications; membership recruitment; partnerships with other organisations; and general progress and performance of the SDO Network as a whole. A representative from the NIHR Evaluation, Trials and Studies Coordinating Centre, which administered the SDO Network contract, also participated in relevant meetings, such as when annual work plans were being reviewed.

The SDO Network team was invited to join the NIHR SDO's Expert Advisory Group (EAG) and attend NIHR SDO programme Executive Group meetings as an observer – chiefly to contribute to discussions about knowledge mobilisation.

Internally, the SDO Network and its employees were governed by the NHSC's corporate governance arrangements and policies. This meant that progress updates were supplied regularly to the Corporate Board and Senior Management Group, which provided additional oversight of the network.

There were discussions about commissioning an external evaluation of the SDO Network, and evaluation proposals were submitted to the NHSC by consultancies. However, these did not go ahead and a full impact assessment was not conducted until 2011.

Network strategy 2007–8

The NHSC undertook interviews with senior NHS leaders at the end of 2007/early 2008 to inform the shape and focus of the SDO Network. In particular, they sought views from CEOs who expressed an active interest in applying science to management and using organisational research to improve services.

Informal feedback to the NHSC from the NHS community indicated the depth of the Cooksey challenge to translate research 'from bench to bedside' (p. 12):[41] a culture of accessing research evidence and reflecting before making decisions was seen to be largely absent from NHS managerial practice. There was also demand from the service (the research 'pull' perspective) for SDO research to provide answers to pressing management issues arising from national policies and priorities. The SDO Network would therefore need to ensure that its activities linked directly to what NHS organisations were trying to achieve, given the view that research projects often failed to reflect managerial priorities. However, this raised the broader issue of the kinds of evidence the SDO Network should disseminate and the SDO programme's role as a knowledge producer; whether, for example, large scale, robust scientific studies (big 'E' evidence or research) or timely and applicable local evidence (little 'e' evidence and research) were most useful.

A brief synopsis of the points raised by senior leaders as documented in the meeting minutes over the course of the 19 meetings held is provided in *Box 2*.

Summary of this period

The first phase of development saw the SDO Network determine a suitable programme of activity in order to maximise impact. The network would proactively target interventions at three different groups: senior, middle and new managers. The hope was that the SDO Network would stimulate demand for research outputs at different tiers of management and so encourage 'research pull' from health-care decision-makers. The NHSC team recognised the need to trial a variety of interventions and models to offer flexibility for those managers interested in engaging with HSR but time poor because of balancing operational demands.

BOX 2 Issues around HSR in NHS management

- A different focus is required for organisational research from clinical research.
- There is a lack of emphasis in the NHS on translating research findings into practice (need for expertise in implementation to embed HSR).
- Many managers do not have the basic skills to understand research: critical appraisal skills, numeracy and ability to conduct a literature search.
- Managers need to know (1) how to access research and evidence, and (2) how to use research to influence and support their arguments.
- Awareness raising is required at all levels: CEOs, middle managers, nurse managers and clinical managers.
- Academic research projects do not tend to reflect managerial priorities, and have long time scales.
- Research needs to have tangible outputs to improve service delivery and practice.
- Trusts are particularly interested in evaluations.

Suggestions

- Value of using action learning sets within the SDO Network, as they encourage learning from real-life examples. Make sets multidisciplinary and focus on the evidence base.
- Need face-to-face contact/meetings to promote trust.
- Engage NHS managers in the research agenda in a structured and coherent way through the SDO Network.
- Involve stakeholders with significant influence.
- Connect members in ways that are 'unburdensome'.
- Produce short, easy-to-read research summaries that are practical and not too academic.
- Signpost where managers can go for additional information and other agencies that can support NHS trusts and managers.
- Carefully 'brand' the SDO Network.
- Avoid being 'London centric'. Have regional events/presence.

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Chapter 4 Phase 2 (2008–10): fostering interactions through the Service Delivery and Organisation Network

Network developments

> *Collaborative research is a journey without a clear destination.*
>
> *(p. 5)*[57]

After initial scoping work and discussions with service leaders, the full-time manager worked on the SDO Network's branding, website and membership recruitment strategy. Opportunities were sought to promote the SDO Network across other NHSC networks – such as the HSRN and Mental Health Network – and conferences, and form partnerships with relevant agencies.

Introductory workshops were delivered at the annual NHSC conference and joint SDO Network/HSRN conference to introduce NHS managers and researchers to the SDO Network. A relationship was formed between the SDO Network team and Managers in Partnership – the trade union for NHS managers, representing around 6000 members – to promote SDO research at their annual conference.

The SDO Network team also established a partnership agreement with the Economic and Social Research Council (ESRC) to jointly fund academic fellowships in NHS trusts; this idea had arisen during the original bid process. Three posts were approved and subsequently advertised.

One of the first learning events to be led by the SDO Network started in 2008 and was a series of action learning sets for new and middle NHS managers (*Box 3*). The first interactive learning seminar was also run in 2008 as a half-day event (*Box 4*).

BOX 3 Action learning sets for new and middle NHS managers

Two action learning sets (ALSs) took place between 2008 and 2009 in the North East and North West SHA regions to enable managers to access and use research. External speakers contributed and discussed current SDO research projects.

One group (North West) was aimed at new managers who had up to 6 years' experience in the NHS. This ALS was facilitated by Manchester Business School and aimed to support the personal development of managers and reflective management practice; effective techniques for accessing HSR; a supportive learning space; and community of practice. The set met for half-day sessions on seven occasions from September 2008 to June 2009. Ten individuals participated, meeting at different locations across the North West. Formal evaluation feedback from set members was positive:

> *Strengthened the need to use research in day-to-day work, especially around reviewing services and looking for areas of best practice.*
>
> *I am more open now to looking at research in my job.*

The second group (North East) focused on middle managers. Topics covered organisational culture in the NHS; 'achieving evidence-based management'; and how the SDO Network could support managers. The first session was held on 5 September 2008. Unfortunately, owing to the pressures of the day job and the challenge of securing protected time, the subsequent poor attendance meant there were no further sessions.

SHA, Strategic Health Authority.
Source: 'Evaluation of the SDO Networks and North West SHA Action Learning – September 2008 to June 2009', August 2009.

BOX 4 First SDO Network interactive learning seminar, May 2008: 'Shifting Care: What's the Evidence?'

This half-day event sold out 3 weeks before the event took place. The aim of the seminar was to bring together the knowledge from the HSR community and management practice regarding shifting care from hospitals to community settings. It was also an opportunity to advertise the membership service provided by the SDO Network.

Sixty delegates attended and were invited to discuss the challenges and opportunities faced when transferring services from hospitals to the community, and suggest areas for further research.

Overall, feedback from delegates (response rate 58%) was positive, with 77% agreeing that their main objective for attending the event was met.

In response to the question 'What did you gain from attending today's event?', some NHS delegates commented on the usefulness of the content for their day-to-day role. For example:

> *An understanding of what enables the service to shift, what you need to be aware of. Interesting discussion with colleagues.*
>
> *An opportunity to start thinking through the possibility of shifting our specialist service from secondary to primary care.*

Responding to the same question, delegates from the academic community noted a similar level of usefulness for their work:

> *A greater understanding of the complexities involved and that, as an academic institution, we need to consider our problems of preparation in this changing healthcare climate.*

An impressive 19 out of 35 delegates that completed the evaluation form noted that they would do something different as a result of the event, including the following actions:

> *Challenge commissioners on their evidence base for their actions.*
>
> *Communicate some of the evidence, as previously only personal thoughts.*
>
> *Access research coming from SDO.*

Memory sticks were uploaded with the general information about the SDO Network, SDO research summaries and speaker presentations and handed out to attendees.

E-mail bulletins were circulated to members and potential members using the easy-read format of NHSC publications. The first e-newsletter, sent out in July 2008, focused on the implications of the Darzi Next Stage Review for NHS managers interested in research, evaluation and innovation.[53] The main points highlighted to members were:

- the creation of NHS Evidence as a knowledge portal for access to clinical and non-clinical evidence and best practice
- an expanded role for NICE to set and approve independent quality standards, and to synthesise and spread knowledge
- strategic health authorities' legal duty to promote innovation, and the availability of new regional innovation funds to support this nationally
- the creation of HIECs to bring together partners, across primary, community and secondary care, universities and colleges, and industry
- the creation of AHSCs.

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Policy and research influences on network during phase

As outlined in the background section, the publication in June 2008 of the NHS Next Stage Review[53] confirmed the commitment of the DH to developing a more systematic approach to the spread of innovations and the creation of a network infrastructure to support research translation in the NHS. Key to this was investment in knowledge partnerships between universities and NHS organisations such as through the formation of CLAHRCs, AHSCs and HIECs.

The NIHR SDO programme's contribution within this evolving context was to capitalise on its portfolio of completed and ongoing research projects focused on service delivery. Conceptual ideas about linkage and exchange, knowledge interaction and capacity building were important for meeting this objective and planning interventions that would have impact. These ideas fed into the SDO programme's knowledge mobilisation strategy, which took shape from 2008 and referred to:

> *The interactive exchange of research-based findings and ideas between researchers and managers – and capacity building – the ability to access and use management research within the NHS.*
>
> *(p. 28)*[58]

The appointment of a Director of KM/CB to the SDO programme is particularly noteworthy because it signalled a new period of leadership specifically in the area of knowledge mobilisation.

The Director of KM/CB's own work suggested that viewing 'knowledge transfer' as a simple, linear and contextual process misrepresented the complexity of how evidence actually informs practice.[59] This is because context and local understandings influence evidence use, and managers and policy-makers tend to adopt problem-centred, pragmatic approaches towards knowledge use, drawing on a range of information sources. This view has been shared by empirical studies on knowledge mobilisation in health care and recent NIHR-funded projects, for example Dopson and Fitzgerald,[60] Swan *et al.*,[61] Gabbay and Le May,[62] Dopson *et al.*,[63] Davies and Davies (NHSC; 2008) and Øvretveit *et al.*[64] These contemporary studies suggest that concentrating on research 'push' activities alone (i.e. the use of research evidence in a top-down chain, from researcher to end user) will be only partially successful in bringing about behavioural or culture change in the NHS. Research 'pull' is an equally important part of the process, where research is generated on the basis of practitioners' needs, as is 'intermediation' or 'linkage and exchange' efforts which bring together different stakeholders to work in partnership around research topics.

In this context, it was suggested by the Director of KM/CB that a dynamic strategy be employed to meet SDO programme and SDO Network objectives. Specifically, initiatives should be:

- *social and interactive: learning takes place through dialogue and interaction across diverse parties; therefore promoting knowledge mobilisation will require the creation of a variety of interactive events, placements and learning opportunities.*
- *contextual and problem-led: knowledge is not created in a vacuum but is created and recreated in specific service contexts as problems are faced; this suggests that the better starting point for learning and debate is more often the context/problem rather than research findings per se.*
- *carried out in partnership: creating active engagement and connection between service contexts and relevant research requires diverse parties to be engaged: service and policy professionals, service users and researchers of varied interests and disciplines.*

Quoted with permission from Davies H, Davies S, Supporting Knowledge Mobilisation and Capacity Building through NIHR SDO*, Document Version 1.3. NHS Confederation; 2008.*

To help oversee the knowledge mobilisation strategy within the NIHR SDO programme, the director established an EAG to provide advice and guidance and inform the development of new initiatives. The main task of the EAG was to serve as a sounding board as the KM/CB strategy evolved and as initiatives progressed.

Health agencies such as the World Health Organization and CHSRF were also emphasising interactive, collaborative and brokering strategies to better connect knowledge to action, meaning that the guiding principles advocated above echoed thinking in other parts of the international health research community, particularly North America.[30,35,37,38,57]

The SDO Network's function as a 'knowledge broker' and co-ordinator of face-to-face interactions was central to the SDO programme's own knowledge mobilisation strategy. However, despite steady progress, the range of opportunities that could be pursued from within the network was limited because only one full-time member of staff led the work at the NHSC. Membership had grown to 51 NHS organisations (plus two commercial associates) but there was scope to go further.

Network strategy 2008–10

In November 2008, a proposal to extend the remit of the SDO Network was approved by the SDO programme Director, securing the network until at least December 2011. It represented a more ambitious goal for the SDO Network to lead HSR knowledge transfer in the UK, including, but also extending beyond, the SDO's own research portfolio. The contract 'uplift' allowed for increased staffing capacity at the NHSC to support the delivery of additional learning events, web content and published materials. There was to be a renewed focus on engaging NHS CEOs and supporting research implementation and capacity building. Importantly, the SDO Network planned to lend logistical support to the new partnerships and infrastructure formed following the Darzi review,[44] especially the first round of nine CLAHRCs commissioned in October 2008 for a 5-year period.

The objectives of the expanded SDO Network going forward were therefore to provide:

- events, e-bulletins and a dynamic website utilising new web technology
- a programme for NHS CEOs built around the CEO forum to create senior 'research-savvy' senior leaders able to champion research and innovation in the NHS
- infrastructure to support the CLAHRC initiative.

NIHR Collaborations for Leadership in Applied Health Research and Care

The aim of the CLAHRC programme was to create regional hubs that could conduct applied health research and support the implementation of research evidence into practice. As such, CLAHRCs serve to address the 'translation gap' identified in the Cooksey review[41] while improving patient outcomes (e.g. for conditions such as heart disease, stroke and diabetes). In practice, each CLAHRC has developed a partnership model between a regional university and surrounding NHS organisations, although organisational and management arrangements vary between regions. CLAHRCs involve multiple interest groups – clinicians, patients, researchers, academics and health service managers – and are geographically distributed collaborations.

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Staffing

Because of the formative and dispersed nature of the CLAHRC programme, a full-time CLAHRC programme manager was funded to work within the SDO Network and support knowledge sharing between the nine regions. An events and web support office post was also created, which would eventually bring the SDO Network team to three full-time members of staff.

However, in practice, there was staff turnover at the NHSC – as in any organisation – and these posts did not always overlap neatly. The first SDO Network Manager reported working far more closely with the Director for KM/CB at the NIHR SDO than with the NHSC's policy director. Therefore, in the early days of the SDO Network the team was externally oriented towards the NIHR and growing the NHS membership base, meaning there was less of a planned focus on tying up activities and gaining traction for the SDO Network within the NHSC.

Programme of activities, 2009–10

After the contract extension, and with a larger team to deliver the SDO Network, there was an increase in activity as detailed below. The types of interventions that were delivered between early 2009 and the end of 2010 are grouped thematically – along the lines of the typology suggested by Lavis *et al.*,[37] which guided the network strategy during this phase.

'Push' efforts

Conferences and events

The SDO Network fed into a number of well-attended, NHS-focused annual conferences running themed sessions and working to raise awareness of the SDO Network (e.g. through information stands, networking events):

- NHSC.
- NHS Employers.
- The King's Fund.
- Management in Practice.

In particular, the NHSC's annual conference stood out as pivotal for raising the profile of the SDO Network and was viewed as an area for future development. For example, inviting a high-profile speaker from Google™ had attracted 180 delegates to one session.

Partnerships were formed between the SDO Network and other networks to jointly deliver events across sector interest areas:

- Technology Adoption Centre.
- CLAHRCs.
- HSRN.
- Mental Health Network.

A series of themed, stand-alone learning workshops also took place:

- Taking charge: evidence for self care in the UK.
- Creating effective clinical networks in a competitive environment.
- Acute mental health ward (*Box 5*).

BOX 5 Acute mental health ward interactive learning events

The NHSC Mental Health Network and SDO Network collaborated to deliver two events that would present a mixture of research evidence, NHS input and service user experience. The overall theme was how to improve acute mental health care wards for services users, carers and staff. In total, 152 individuals attended across both events (mostly middle-level managers) and overall feedback was very positive.

December 2009, Nottingham: speakers (56 delegates)

'Keeping patients safer on acute mental health wards' – Professor of Psychiatric Nursing, City University.

'Acute in-patient psychiatry: residential alternatives to hospital admission' – Professor in Social and Community Psychiatry, University College London.

'Improving inpatient psychiatric services for black and minority ethnic patients: an outline of the BME Expert Panel Review of Royal College of Psychiatrist's inpatient standards' – National Director DRE, National Mental Health Development Unit.

'Improving safety and quality In psychiatric intensive care' – Lead nurse, Northumberland, Tyne and Wear NHS Trust.

'Being a service user in an acute mental health ward' – Engagement and involvement worker for Lancaster and Morecambe mental health service user forum, Together UK.

March 2010, London: speakers (96 delegates)

'Keeping patients safer on acute mental health wards' – Professor of Psychiatric Nursing, City University.

'Factors affecting staff morale on acute mental health wards' – Professor in Social and Community Psychiatry, University College London.

'Improving inpatient psychiatric services for black and minority ethnic patients: an outline of the BME Expert Panel Review of Royal College of Psychiatrist's inpatient standards' – National Director DRE, National Mental Health Development Unit.

'Joint crisis plans' – Professor, King's College London.

'Open Your Mind' campaign – Project Manager, NHS Employers.

'Productive Mental Health Ward programme at Bedfordshire and Luton Mental Health & Social Care Partnership NHS Trust' – Consultants, Bedfordshire and Luton Mental Health and Social Care Partnership NHS Trust.

'Integrated acute mental health services at Norfolk & Waveney Mental Health NHS Foundation Trust' – Consultant psychiatrist, Norfolk and Waveney Mental Health NHS Foundation Trust.

'Being a service user in an acute mental health ward' – Deputy Director, South Region, Together UK.

BOX 5 Acute mental health ward interactive learning events (*continued*)

Some delegate feedback

Extremely valuable conference – inspired me to address areas of practice in my clinical role.

Highly recommended – one of the best events I have been to in a long time.

Fantastic, inspiring day with lots of ideas and information to inform innovation and practice.

Very well chaired with a good balance of speakers, marketplace session was great, fab venue and food.

A full table of the events which were organised by the SDO Network – or which had input from the core team – can be found in *Appendix 1*.

Web technology and communications

The SDO Network's web pages on the NHSC website were developed to establish a focal online presence and raise the profile of the programme. A Twitter™ account was opened in October 2009 as a quick, low-cost way to raise awareness.

The SDO Network sent quarterly e-mail newsletters to its members, which focused on the findings of SDO-funded research projects (including links to full reports), forthcoming learning events, presentations from previous events (downloadable) and new research calls. Newsletter items were edited down in an attempt to improve 'click-through' rates to the main website, and this proved effective.

The steadily growing online presence of the SDO Network in its early phase is indicated by the following figures:

- The average monthly number of web page visits to SDO Network rose from 470 visits in April 2009 to 1164 visits by March 2010.
- The top five most visited SDO Network web pages in 2009/10 were home page, events, academic placement fellowships, news and action learning sets.
- There were 279 e-mail newsletter subscribers in March 2010.

An important collaboration with the HSRN resulted in production of the *Being a Good Research Partner* briefing in October 2010.[65] This proved to be the most popular briefing downloaded from the NHSC website in the last quarter of 2010. There were 1279 page views by the end of the year and 6250 hard copies of the report were also distributed.

Providing memory sticks containing SDO research and SDO Network resources to delegates at events and exhibitions had proved popular initially. However, NHS security and data protection policies meant these were not suitable for general use and so were no longer produced by the SDO Network.

It was further concluded that more work was required to improve access to the SDO Network website through developing headline stories and forming links with other NHSC networks and the organisation's web team.

'Linkage and exchange'/'user-pull'

Academic Placement Fellowship pilots in partnership with the Economic and Social Research Council

The Academic Placement Fellowship scheme aimed to promote interactive knowledge exchange between academia and NHS organisations. It was cofunded by the SDO programme and ESRC, as well as participating NHS organisations. The fellowship placements enabled an experienced academic to be partnered with a host NHS organisation for between 6 and 12 months in order to deliver a relevant health services project and support research skills development for NHS staff. The scheme offered flexibility for participating NHS trusts and academics; a pre-defined fellowship model was not pursued since fellowship contributions were likely to change over the course of a placement.

The SDO Network assisted the scheme by securing host NHS organisations and later supporting academic fellows' knowledge exchange activities once a project was completed. The SDO Network manager was available to discuss placements and applications with interested NHS organisations.

The sharing of knowledge was a main component of the fellowship scheme, and emphasis was placed by the funders on communicating projects to the host organisations both during and after the placement to ensure reach and impact. But there was also an objective for learning to be communicated more widely across the NHS, and here the SDO Network was able to provide specific support for knowledge interaction activities and profile raising.

Four placements were carried out from 2009 onwards, as detailed in *Box 6*.

NIHR Service Delivery and Organisation management fellowships

Management fellowships represented another strand of the NIHR SDO programme's ongoing strategy for KM/CB. Management fellows are experienced NHS managers in post who by virtue of the fellowship, are linked to an academic research team commissioned to deliver an SDO study. By becoming practically engaged with the delivery of a research project over a relatively long period of time, management fellows offer the research team a different lens and experience base for implementing the study and interpreting the data. In return, management fellows acquire insight into the research production process and have opportunities to develop their skills in this area. Management fellows also provide teams with a direct connection to a NHS organisation, useful for planning dissemination and knowledge mobilisation activities.

The SDO Network organised a forum for the management fellows to meet and share their experience. The first meeting of the forum was hosted at the NHSC in August 2010 and featured a session run by a team conducting an SDO-funded evaluation of the fellowship scheme. The SDO Network would continue to provide support for the fellows based on the success and perceived usefulness of the first meeting.

Joint Service Delivery and Organisation/Health Services Research Network conference (June 2009, Birmingham)

Collaboration between the SDO Network and HSRN presented an opportunity for furthering linkage and exchange efforts between health service researchers and NHS managers. Although this particular conference had a strong research focus and was 'academic heavy', it offered potential for networking between researchers and NHS managers. In 2009, 311 delegates attended, and 337 in 2010, most of whom were researchers. A key lesson learned from these events was how to ensure a more diverse range of speakers and attract more NHS managers.

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BOX 6 Academic fellowship scheme placements

Fellow 1: East of England Strategic Health Authority (2009–10)

The fellow developed an evaluation of the Productive Ward programme (Releasing Time to Care), developed by the NHS Institute for Improvement and Innovation.

Three trusts were selected to take part in an in-depth review of the impact of the Productive Ward programme, and various data were analysed from a wide range of trusts across the East of England.

The fellow concluded about her placement:

> *One final reflection is that the whole experience – working in a different environment, location, part of the public sector and learning from colleagues with different professional backgrounds, skills and knowledge bases – provided a stimulating, sometimes arduous, but ultimately rewarding working year, one which will certainly stay with me for years to come.*

Fellow 2: South East Coast Ambulance NHS Trust (date unknown)

The fellow conducted an evaluation of an innovative pilot scheme developed around 25 CCPs to tackle the 5–8% of patients who require very high levels of care more effectively. The research fellowship aimed to produce an evaluation report to help future policy-makers decide whether or not CCPs are effective and could be rolled out across the country. It included a cost–benefit analysis that concluded that introducing CCPs helps reduce avoidable deaths, save lives and offer better value for money. Several telephone interviews were made to understand the role of Australian advanced paramedics as a useful international comparison.

> *It is a win–win situation for both parties, enhancing collaboration and sharing knowledge on both sides.*

A full research report was coproduced by the NHSC's SDO Network and ASN: *Critical Care Paramedics: Delivering Enhanced Pre-hospital Trauma and Resuscitation Care: A Cost-Effective Approach*. The work was further disseminated through network news updates and a learning webinar in 2011.

Fellow 3: NHS East of England (2009–10)

NHS East of England had made 11 pledges aimed at improving health care and public health in the region. The purpose of the fellowship was to help fill in the gaps in the research base on interventions to enable the effective implementation of the pledges set out in *Towards the Best Together.*[66] This involved identifying the research evidence base in key clinical areas.

The fellow worked alongside pledge leads and their team to identify and categorise the research evidence required to support interventions and to develop research questions and areas for innovation where the evidence was weak. The fellowship aimed to enable the team to produce publications for peer-reviewed journals where NHS data could support arguments for interventions in pledge areas.

Fellow 4: Cambridge University Health Partners (2010)

The fellow developed performance indicators to capture the added value of partnership working across the innovation architecture for Cambridge University Health Partners (CUHP): the AHSC, HIEC and CLAHRC.

A full 58-page report was delivered in October 2010 and its conclusions presented to the board of CUHP in November 2010.

ASN, Ambulance Service Network; CCP, critical care paramedic.

Chief executive officer engagement and the Chief Executive Officer Forum

Following the SDO Network contract extension there was a deliberate attempt to change the approach to the CEO Forum from a one-off meeting to an integral part of the network's knowledge mobilisation strategy. Proposals expressed the ambition of creating a 'one-stop shop for CEOs interested in the implementation of health research' (NHSC; 2009). The aim was to support CEOs to promote research and innovation in the NHS organisations they led and translate research findings into practical, evidence-based solutions.

The 'new' CEO Forum had the following objectives:

- Increase diffusion of research knowledge within the NHS senior management community.
- Stimulate use of the evidence base in the management and development of health services.
- Develop stronger links between SDO research and CEOs.
- Provide a forum to discuss emergent themes from SDO- and NIHR-funded research and their implications for the NHS with leading CEOs.
- Foster active sharing of research knowledge within the NHS senior management community and support knowledge exchange.
- Create a cadre of research-savvy CEOs who can act as the leading edge of the senior NHS management community in accessing and using research.

In order to gather intelligence regarding the best way to take the CEO Forum forward, the SDO Network manager held six telephone interviews with CEOs who had previously attended the CEO Forum or were likely to be interested in attending the forum in the future. The key issues from these discussions based on minute papers were:

- The CEOs found the forum a convivial evening to hear about interesting research ideas and network with like-minded CEOs.
- There was a weak link between hearing about new research and actually implementing these ideas in practice, although the CLAHRC programme was looking to address some of these issues.
- The majority of CEOs were happy to participate in the forum if they lived or worked centrally, but would not travel far to attend these meetings.
- The general format of an evening work meeting with dinner was seen as an effective format to entice busy CEOs to attend.

It was consequently decided to have North and South regional forums, with each meeting chaired by a respected CEO, held in the evening and followed by dinner. The aim was to run four meetings per annum, two in each region. The option of holding an annual meeting to bring together both regional forums was considered.

The ideal format of the events was intended as follows:

- Leading SDO researchers presented their recent project findings.
- The CEOs had opportunity to discuss and reflect on the research, and whether or not it spoke to their experience.
- A lead speaker from the health policy community or NHS implementation organisation (such as the NHSC, the NHS Institute for Innovation and Improvement in Healthcare, The King's Fund, the Health Foundation or the Nuffield Trust) contributed perspectives/presented.
- There was representation from the NIHR SDO programme.

Although the plans clearly emphasised a research 'push' agenda and showcasing of SDO research to CEOs, the forum was designed to promote discussion between senior NHS managers and experienced health service researchers. Exchange was an in-built principle so that participants could share knowledge and perspectives in a relatively small group and comfortable setting.

The Southern (London) CEO Forum launched in February 2010 and attracted interest from 29 CEOs, with eight actually attending. A similar programme was followed in June at the Northern (Leeds) Forum.

The proposed criteria of success for these events were (1) the number of delegates that attended; (2) awareness of the SDO programme across delegates; (3) types of delegates; and (4) delegate feedback and follow-up.

Early, informal feedback was gathered by telephone interviews with participating CEOs. The main findings were:

- more CEOs were needed
- research featured was relevant and of interest to the group
- contacts were being made between SDO-funded researchers and local NHS CEOs through the forum and the relationships were reported to be fruitful.

The events were held in high-quality venues to help attract CEOs, and there was a deliberate intention to ensure that the forums were small enough so that CEOs and researchers would have time to meet properly and discuss the themes raised in the presentations. This meant the forum had relatively high costs compared with normal SDO Network meetings and events. The number of delegates attending had a clear knock-on effect on the cost-effectiveness of the programme, with a low turn-out increasing the pro rata delegate rate. A key learning early on was therefore the necessity of fostering ongoing relationships with CEOs and securing dates in their diaries well in advance to reduce the number of last-minute cancellations or no-shows. From an organising perspective, there was a careful balance to be met between group size, costs and sustaining levels of engagement and interest.

Summary of this period

For the SDO project, significant developments during 2009–10 were growth in membership; securing additional capacity and resources to deliver the network; establishing relations with relevant partners, both inside and out of the NHSC; successfully creating opportunities for frontline managers to learn about research projects relevant to service delivery; and further experimentation with a range of interventions to raise the profile of the SDO research programme.

At the NIHR, the appointment of a director dedicated to KM/CB was especially noteworthy from a strategic point of view and provided the SDO Network manager with a point of expertise and operational guidance. This director also had insight into the CLAHRC infrastructure that came to fruition during this period and assisted the CLAHRC programme manager in developing ways to support inter-regional knowledge sharing between CLAHRC regional hubs.

In retrospect, traction of SDO Network within the NHSC can be interpreted as relatively weak during this early phase, although an important link was made with the HSRN culminating in a joint annual conference. This set a foundation for better intranetwork co-ordination going forwards.

Of course, overshadowing macro events taking place in the UK's economy and in health policy between 2008 and 2010 were highly significant and cannot be overlooked. Financial pressures on NHS trusts, CEOs and frontline managers were growing and the likelihood was that it would become more difficult for organisations to release staff to attend events. Furthermore, the 2010 White Paper, *Liberating the NHS*,[67] brought to the fore new policy imperatives that the SDO Network needed to respond to if it was to remain in touch with frontline service developments and demands.

Having tracked the rationale behind strategic operations during this early period as well as the steady growth of the SDO Network membership, we pay particular attention to the impact of historic, contextual events on the SDO Network as it attempted to consolidate its brokering role in *Chapter 5*.

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Chapter 5 Phase 3 (2011–12): complexity and network consolidation in a time of austerity

Network developments

By March 2011, 92 NHS organisations had joined the SDO Network – an increase of 18% since April 2010. Growth rather stalled after this point, with a peak of 100 members being reached in March 2012. This fell short of the original contract target, which had aimed at a 150-strong membership.

The main types of organisations that signed up to the SDO Network were (in descending order):

- foundation trusts ($n = 25$) (including acute and mental health organisations)
- PCTs ($n = 22$)
- acute trusts ($n = 21$)
- mental health trusts ($n = 11$)
- ambulance trusts ($n = 6$)
- miscellaneous/other, for example PCT providers, academic partner, integrated trust (Wales), medical centre ($n = 15$).

An external outcome analysis report was commissioned by the NHSC in late 2011 to explore how the SDO Network was performing, and perceptions by NHS managers and researchers. This indicates a reflective moment in the network's evolution, as professional advice was sought about how the network could improve and better meet users' needs and expectations. The main findings of this piece of work are incorporated into this chapter and reviewed in detail at the end.

Policy and research influences on network development during phase

Developments at the NIHR

In 2010, the Director of KM/CB returned to his academic post full-time and his role at the SDO programme was not replaced. From June 2010, the oversight of the SDO Network had passed to the SDO programme Director. The NIHR SDO KM/CB EAG closed. To fill this gap, a more direct relationship between the NIHR SDO programme and the SDO Network was proposed to better integrate knowledge mobilisation with research commissioning. This went with the NIHR SDO programme's new emphasis on researchers dedicating more time and resources to knowledge mobilisation activities during their projects. In this way, knowledge mobilisation was to be written in to commissioned projects as an ongoing activity led by academics (in collaboration with other stakeholders, e.g. patient representatives, service managers) rather than being pursued as a stand-alone stream of activity independently sponsored by the NIHR. The ramification of this development for the SDO Network was the potential widening of its remit to include support of SDO-funded research projects to assist them in disseminating and promoting the knowledge they had produced.

Developments at the NHS Confederation

The Director of Policy left the NHSC in 2011. Coupled with the departure of the Director of KM/CB at the NIHR SDO programme, this left the SDO Network team without obvious internal and external project patrons. There were further staff changes at the NHSC. The first SDO Network manager left in August 2009, taking on a senior role at a NIHR CLAHRC, and the management of the SDO Network transferred to a new manager. There was a transition period of several months when the role remained unfilled.

Network strategy 2011–12

From 2011, the SDO Network team pursued the goal of strengthening engagement with other NHSC-based networks and delivering more joint publications and events. A broader objective was to have better internal and external co-ordination across the SDO Network, HSRN and regional CLAHRCs, to deliver a more integrated agenda. More emphasis was placed on producing targeted, policy-relevant communications to reinforce SDO Network presence and capitalise on the NHSC's own strengths in this area, for example by:

- further improvement of e-communication, including tailoring and using network newsletters/websites to publicise SDO Network activities
- research summaries being fed into the NHSC's existing Health Policy Digest (HPD) and other relevant products
- collaboration with the NIHR to produce short (500-word) research summaries based on the SDO Network's style sheet for research digest articles.

Programme activities, 2011–12

'Push' efforts

Conferences and events

The SDO Network team continued to deliver awareness-raising activities at the NHSC's annual conference – a central event for attracting senior-level attention and new members. The team explored ways to support NHS management trainees and stimulate their engagement with research in the hope of influencing a future cohort of NHS leaders and managers. The team had input into the programme and led themed strands such as on 'efficiency and effectiveness', 'quality and safety' and 'local government' (2011 themes). The team also hosted a well-attended networking reception supported by Managers in Partnership, which was an opportunity for more informal interaction.

Webinars

A free webinar series was launched in May 2011 to provide online lunchtime masterclasses for managers. The aim was to create an easily accessible virtual forum for presenting current SDO programme research and discussing its implications for the NHS. The distance-learning format was deemed useful given that time and financial pressures might make difficult for NHS staff to attend events in person. Webinars also had much lower operational costs than running physical events.

The set-up was as follows: delegates were required to preregister for sessions and connect their systems 15 minutes in advance. Provided users had good internet access and a telephone line, they could see and hear the presentations and submit online questions. Webinars lasted 1 hour.

Some webinars were produced in conjunction with other NHSC networks, such as the Ambulance Service Network and HSRN. A total of five webinars took place in 2011–12 (see *Appendix 1* for the full listing). The obvious downside of webinars is that they offer minimal opportunity for face-to-face interactions and networking.

Policy-focused events and skills development

An example of how the SDO Network sought to engage more directly with topical issues and the NHS policy context was the delivery of a public health event in February 2011. This was an opportunity for the SDO Network not only to disseminate new and emerging research, but to place it within the context of the government's future plans for public health. The title of the event was 'How can a liberated NHS promote health and prevent illness? Reflecting on the evidence'. As well as academic-led presentations, participants heard from experienced practitioners. In total, 71 people attended and a five-page summary of the event was made available afterwards to help reinforce the main messages.

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As earlier mentioned, the NIHR SDO (HSDR from January 2012) programme placed a growing emphasis on capacity building in the NHS; more specifically, on supporting the NHS workforce to acquire the skills necessary to access, use and critically appraise research knowledge. This required a tailored and applied focus to support the implementation and use of research within NHS settings. For this reason, the SDO Network developed a partnership with the Evidence Adoption Centre (EAC) in the East of England to deliver a series of critical appraisal workshops (*Box 7*).

BOX 7 East of England evidence: supporting critical appraisal skills development

Working with the East of England EAC, six critical appraisal workshops were held in Cambridge between February and December 2011. Three 'foundation' and three 'advanced' workshops took place, with each workshop supporting 20 participants. The workshops aimed to:

- introduce participants to evidence-based health care
- increase the level of research literacy among NHS health professionals, so that patient care and commissioning decisions would be more evidence based
- raise awareness of the EAC's role in co-ordinating and supporting the East of England's adoption of evidence-based health care.

Topics covered:

- the principles of EBM
- bibliographic database searching and retrieval
- appraising systematic reviews
- statistical concepts
- appraising RCT studies.

The only entrance requirement was that participants were employed for the NHS in the eastern region. The workshops were offered for free and were consistently oversubscribed; an additional foundation workshop ran in July to respond to demand. Altogether, over 200 participants attended the workshops, including commissioning managers, public health consultants, pharmacists, nurses and health promotion officers. The workshops were accredited by the Royal College of Physicians and could contribute continuing professional development points.

Participant feedback was positive, prompting discussions about whether or not a similar programme could be scaled up and replicated in other regions.

Web technology and communications

There was a revitalisation of the research briefings function in 2011, with the aim of condensing complex HSR into useful findings and messages for NHS managers. A 'research digest' was piloted in June 2011, produced in collaboration with a scientific adviser at the NIHR SDO, to highlight evidence about specific areas of service delivery. This proved successful and further editions were developed throughout 2011–12 (a final publication was released at the end of the SDO Network in 2013). Each edition was constructed around a major theme and featured up to six completed SDO case studies. New areas of research and projects in progress were also summarised. The themes of the digests were the following:

- research on support workers (issue 1, June 2011)
- new services in mental health (issue 2, December 2011)
- birthplace in England: new evidence (issue 3, June 2012)
- reducing emergency admission: what works? (issue 4, March 2013).

The digests were made available on the NHSC website and over 3000 hard copies mailed out to the NHSC's core membership (equating to about five per organisation/unit).

The SDO Network also fed its research summaries into the NHSC's fortnightly HPD e-mail bulletin, which at that point had around 4500 subscribers.

A second jointly produced, and cobranded, publication was delivered by the HSRN and SDO Network in September 2011, entitled *The Influence of Health Services Research on the NHS*.[68] It addressed some of the difficulties faced by clinicians and managers – such as patient safety and cost cutting – and explored how HSR could help to address these.

The SDO Network's number of newsletter subscribers continued to rise and this fact was pointed out by the external reviewers conducting the outcome analysis. Overall, they observed that the trend in page views of the SDO Network website was positive, having increased by some 40% over 16 months (June 2010–October 2011). There was also a marked upward trend in the number of SDO Network followers on Twitter, so the SDO Network appeared to be successful at targeting its outputs across a number of communication channels:

- The average monthly number of web page visits to the SDO Network in 2011–12 was 1718.
- The top five most visited SDO Network web pages in 2011–12 were: home page, latest news, events, CEO Forum and academic placement fellowships.
- There were 579 e-mail newsletter subscribers as of November 2011.
- There were 1124 Twitter followers in November 2011, rising to 1259 by March 2012.

Twitter was viewed as an effective tool for alerting followers to activities and news quickly. Speed of promotion and the cost benefits of Twitter were seen as effective compared with traditional (and more expensive) media, such as advertising features. The growth in followers of the SDO Network was accompanied by an increase in retweets and mentions of the SDO Network, thus helping to raise its profile.

'Linkage and exchange'/'user-pull'

The joint HSRN and SDO annual conference continued to develop a more integrated programme, joining up the work of the two networks and incorporating the CLAHRC programme, which was generating its own regionally focused knowledge base.

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Co-ordination for fellows

The SDO Network sustained its support of both SDO management fellows and ESRC/SDO academic fellows through a variety of knowledge-sharing and networking events. Following a meeting in mid-2010, a second meeting for the SDO management fellows was organised for 19 February 2011 exploring models of knowledge mobilisation and toolkits. External speakers were invited.

In addition, the SDO Network provided tailored support to the fellows by helping to expand their professional networks and by providing useful research summaries. The usefulness of this support was noted in the evaluation of the fellowship programme conducted by Bullock *et al.*[69] For example, one fellow reflected:

> *And certainly through the SDO Network I've now got a whole list of people which is lovely, and they have kept me up to date with things that are going on, which is great and I've asked if I can continue that because it's a great resource.*
>
> *(p. 103)*[69]

Chief Executive Officer Forum

There were further modifications to the delivery of the CEO Forum to help address low turnouts at meetings. First, more effort was placed in responding to CEOs' needs and feedback (comments had been collected from participating CEOs and academics at the end of 2010). It was found that the format of the forum was well liked by attendees because it provided a good balance between formal presentations, and informal discussions and networking. However, the content needed to be more in line with the shifting policy landscape and CEO priorities. From 2010, the remit of the sessions broadened slightly beyond the SDO research portfolio to include discussion of current health policy. For example, reflections on the Future Forum were led by NHS CEOs in May 2011. There was also a presentation on patient safety comparing US and UK health systems, led by a professor from University of California, again broadening the field of discussion.

Delegate packs were circulated to registered delegates from 2011 onwards with additional information on speakers and their areas of research expertise. Later, in 2012, direct calls were made to CEOs' offices by the SDO Network team as an intervention to help secure attendance.

Altogether, 10 CEO forums were successfully delivered. (Full details of the research topics covered in each meeting and attendance figures can be found in *Appendix 2*.)

Attendance at the Southern Forum was consistently higher than at the Northern Forum, so participation overall was more weighted towards London and south-east-based CEOs. According to the outcomes analysis report, on average, the meetings attracted 18 attendees (including CEOs, NIHR SDO staff, academic presenters and SDO Network team members), receiving seven apologies, five cancellations and one or more no-shows. Indeed, between early 2010 and late 2011, the authors identified a downward trend in levels of attendance. The authors of the outcome analysis concluded that to achieve impact the CEO Forum should 'find better messages on the benefits of attendance (and the opportunity costs of not attending)' (C Jackson, C McGermott, SDO Network, 2012, personal communication).

The extent to which falling attendance was a by-product of external events and environmental pressures (e.g. NHS restructuring, financial climate) is of course difficult to ascertain conclusively, although it should be considered an influencing factor – as it was for other SDO Network events. The SDO Network team found that time pressures on CEOs resulted in their plans being changed at the last minute, and had come to expect last-minute cancellations among this senior-level cohort. There was awareness too that the NHS reform programme would result in the number of PCT CEOs decreasing rapidly during 2011–13 as PCTs moved to clusters and clinical commissioning groups. This would significantly decrease the size of the potential audience, raising questions about whether or not clinical directors or Clinical Commissioning Group leads should be invited in future.

Another problem for the CEO programme in terms of its overall impact was whether or not the knowledge acquired by CEOs (and to some degree by academics) was being communicated with other people after events, especially senior and middle managers in NHS organisations. This raised the question of whether the CEO Forum was functioning simply as a convivial meeting, or it actually provoked broader engagement with research knowledge and the sharing of ideas in local contexts. Without a systematic programme of follow-up with participating CEOs, it was impossible for the SDO Network team to deduce the knock-on effects of the forum over time. From a more critical stance, it could be concluded that, by virtue of CEOs' attendance, the forums were presenting studies to the already converted: CEOs interested enough in research to attend an evening dedicated to its discussion. An alternative – and more favourable – interpretation is that CEOs' prior understanding of the HSR landscape improved by exposure to SDO-funded studies and through meeting academics and NIHR SDO programme directors. The meetings also created opportunities for CEOs to inform NIHR representatives and leading academics about the research *they* felt was needed in the NHS, and so potentially inform future funding strategies. Over time, had the forums been able to attract more CEOs and included other (non-SDO-funded) research findings closely related to the strategic priorities of CEOs, then the programme might have been able to develop further.

Formal evaluation: outcome analysis findings

An outcome analysis of the SDO Network was commissioned and conducted between December 2011 and March 2012. It was prompted by the absence of a formal evaluation of the project and the need to understand what elements had been more or less effective over time. The final report's main findings (network strengths and weaknesses, key lessons) are summarised briefly below.

The evaluation agency collated information from a variety of sources to inform its review:

- meetings and interviews with the SDO Network team ($n = 4$)
- rapid quantitative online survey sent to 2000 primary stakeholders in December 2011 (173 responses received, 54% of which were from NHS managers and 46% from health researchers)
- review of documents relating to the project
- interviews with key informants ($n = 12$)
- brief synthesis of findings from comparable initiatives.

Successes

The online survey revealed that respondents ranked the SDO Network's web material, briefing documents, face-to-face learning events and research digests as highly relevant. Of all the SDO Network offers, face-to-face learning events scored highest for being extremely relevant, followed by summary/synthesis products (digests and briefings). The reviewers suggested that, based on the event evaluation forms and other available materials, stakeholders had particularly gained from focused learning events rather than purely networking opportunities. A range of face-to-face interactions with a mix of speakers and themed sessions had proved popular, and collaborative events with other NHSC networks and organisations had also been successful.

A majority (87%) of respondents said that they were likely to recommend the SDO Network to other people; 56% of that majority said this was 'extremely' or 'very' likely, a positive overall finding.

A majority (58%) also said that they followed up on information they had been exposed to at a SDO Network event, by accessing other websites, making direct contact with researchers or getting hold of a hard copy of publications.

Interviews with stakeholders further suggested the SDO Network occupied a unique position for effectively bridging research, managerial and clinical communities. It offered a good starting point for time-pressed managers facing operational demands and was in touch with the latest research evidence – an advantage over other networks. In fact, some interviewees reflected that the SDO Network's moment of opportunity had arrived, given that challenges in the NHS created more necessity for service managers and leaders to have easy access to research findings that could inform their thinking and responses to change (e.g. how to deliver better-quality services during austerity, reconfigurations, etc.). There was also praise for the fact that the SDO research portfolio was strong on 'human factors' (C Jackson, C McGermott, SDO Network, 2012, personal communication) and contributing to a growing, non-medical repository of HSR relevant to managers. However, other interviewees recommended that the SDO Network draw on a wider knowledge base, including relevant non-SDO research and the grey literature, which would also help reinforce its independence as a knowledge broker.

The SDO Network's contribution to research translation efforts was widely acknowledged as important. An overwhelming majority (92%) of respondents stated that the NHSC should continue to have a role in increasing the adoption and diffusion of research evidence and innovations. Moreover, the NHSC provided the SDO Network with credibility as a trusted source of information.

Scope for improvement

The services viewed by survey respondents as having least relevance, or which prompted a range of views, were skills building for NHS managers, online seminars and the CEO Forum. This may be a reflection of the fact that these services were less applicable to health researchers (46% of survey respondents) and non-CEOs. Also, the webinars were a relatively recent development (only two webinars had gone ahead at the time of the survey). The authors concluded that dispersed rankings for 'skills building for NHS managers' might be attributable to the fact that this service had 'not really found a niche' or yet developed in a way to meet the demands of managers (C Jackson, C McGermott, SDO Network, 2012, personal communication).

More than a third of respondents (42%) said they did not follow up on SDO Network information, so, despite some positive findings around engagement, the outcome analysis reinforced the view that the SDO Network could do much more to support learning *after* events, such as following up webinars and forums with updates and key messages. There was also scope for tracking the linkages formed between managers and researchers at events and helping these individuals work collaboratively going forwards.

In a broader sense, these findings are unsurprising and represent the difficulty of (1) measuring interpersonal connections between network members over time and (2) capturing the knock-on effects of knowledge 'push' efforts on management behaviour and practice.

Future planning

Both the report authors and stakeholders made clear recommendations for how the SDO Network could build on its unique position as a knowledge broker and increase its influence more widely.

Interviewees suggested themes/areas where the SDO Network should focus going forwards, thus representing a 'user pull' perspective. These were:

1. workforce, e.g. better ways to measure workforce productivity, manage workforce sickness absence, turnover, burnout
2. impact of changes driven by reforms, e.g. increased demand and maintaining quality, raising academia's awareness of changes to inform new research questions
3. championing formal research implementation competencies and resilience for managers as part of continuous professional development
4. the role of continuous evaluation
5. clinical topics from a management perspective
6. more contemporary topics beyond the SDO research pipeline.

Furthermore, it was recommended that more could be done to reach out to primary care settings, particularly given the major reforms under way in that sector and the challenges faced by managers in PCTs who interfaced with general practitioners.

The report authors made numerous tactical and strategic recommendations, including:

- ensuring communications (digests, etc.) are even more concise and have a 'stronger editorial direction' (C Jackson, C McGermott, SDO Network, 2012, personal communication)
- leading on the production of concise research summaries in partnership with other organisations/initiatives
- facilitating networking among CEOs between forum events to reinforce learning and strengthen participation
- expand membership of CEO Forum to NHS boards and primary care
- better integration of social media and the SDO Network website
- 'extend coverage beyond published research to include grey literature . . . to get ahead of the innovation curve. Go beyond the SDO programme to include any research produced internationally and beyond the health sector' (C Jackson, C McGermott, SDO Network, 2012, personal communication)
- clearly communicating the benefits of membership to members and individual managers using examples.

The full recommendations, findings and analysis of the report have been supplied to the NIHR HSDR programme.

Summary of this period

During 2011, the SDO Network refined, consolidated and extended its activities to support KM/CB in the NHS. There was an emphasis on improving research synthesis products and outputs, such as the research digest and e-mail newsletters, and on ensuring that messages had a closer match with current health policy and the concerns of NHS managers. These products appeared to fill a gap in the health research market since the SDO Network profiled up-to-date, robust research findings, but in a concise and accessible manner consistent with the NHSC's other communications which enjoyed a wide readership. Successes in this area were an outcome of continuing close working relations between the SDO Network team and the NIHR SDO, despite the departure of the Director of KM/CB. Indeed, in practice, the SDO programme Director included the SDO Network manager in the SDO programme Executive Group as an observer, signalling commitment to the network as a key knowledge intermediation function.

The expansion of the network's membership base began to plateau after a period of steady growth, although the number of online followers (on Twitter) and e-mail subscribers increased substantially. Member engagement was steady, perhaps reflecting the policy-oriented focus of activity, with the number of attendees at in-person and online learning events consistently on target.

However, questions were surfacing about the future of the SDO Network and the renewal of its contract. This reflected the high levels of uncertainty throughout the NHS system as it implemented far-reaching reforms and savings plans that would inevitably have a knock-on effect on NHSC Networks. For example, the demise of PCTs would result in a loss of over 20 organisational members for the SDO Network. There were also questions about whether or not the SDO Network should promote linkages to a wider research knowledge base beyond the SDO portfolio.

A further recalcitrant issue that resurfaced for the SDO Network team was the difficulty in formally capturing and measuring network impact, especially the cost-effectiveness of building awareness and strengthening connections between members across managerial, research and clinical communities of interest.

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Chapter 6 Phase 4 (2012–13): end of project and a new research and innovation landscape

Network developments

The SDO Network's 5-year term came to an end in March 2012. There was a period of transition until the end of the same year, during which the NHSC was awarded an extension to move its knowledge work onto a sustainable footing via the HSRN. The consolidated network took the form of a paid membership organisation bringing together all those interested in HSR to drive innovation and improvement.

The HSRN/SDO Network annual conference was revamped in its effort to attract service leaders to what was historically a researcher-focused event by shaping the second day to move away from traditional research presentations to focus instead on innovations for practice. This deliberate shift did not go unnoticed, as one delegate commented:

> *I think the structure, format and engagement with 'real' issues has been much better than in the previous 2 years. I think the quality of the plenary speakers and in some of the parallel sessions has really informed discussion. I think a lot of the debate feels grounded in reality.*

Another change was that for the first time the HSRN Symposium was followed by the NHSC's annual conference and exhibition in an unparalleled interface between researchers, practitioners, senior managers and policy-makers. The objective was to promote crossover between the two delegations and position the HSRN Symposium as the pre-eminent networking opportunity of the HSR communities with a live connection to communities of practice. The two conference programmes did not overlap or provide formal crossover, although HSRN Symposium delegates could visit the NHSC's exhibition.

Collaboration with the NIHR CLAHRC Support programme grew in 2012 with a number of shared initiatives for specialist communities of interest. For example, an 'implementation clinic' was piloted in September 2012 which sought to provide a forum for health service researchers, NHS leaders, managers and patients to unpick the learning from exemplars of getting research into practice. The inspiration for this approach was borrowed from Idépoliklinikken at Oslo City Hospital, which treats ideas rather than patients. Ideas walk in, are diagnosed and are treated or referred; some are sent home with a prescription for further development and an appointment for a follow-up visit. It proved popular with the Network's constituency, and delegates suggested it should be rolled out to other regions in 2013. A second important collaboration culminated in a 2-day event designed to bring together clinicians, managers and patients, with systems modelling and simulation researchers and companies. This event explored how modelling and simulation could help senior managers to make difficult decisions about funding, service planning and delivery. Managers and clinical leaders met with senior operational researchers to understand more about new techniques and approaches, and ideas were developed for how these approaches could tackle future challenges.

Collaboration with the NHSC's core team also produced a number of timely outputs; three examples are detailed here to illustrate how the SDO Network sought to embed research into the mainstream engagement work of the Confederation. First off, a seminar on integrated working in late 2011 titled 'Integration or fragmentation? Looking at the evidence and making sense of the reforms' not only helped delegates make sense of the reforms and understand what effective integrated working looks like, but equally benefited the host organisation. Specifically, the event was used to strengthen the confederation's policy lines on integrated working and communicate the organisation's view to the NHS Future Forum. A second collaboration was on an engagement event in January with the Commission on Improving Dignity

and Care. Through this event, the SDO Network provided support to both feedback participant perspectives on the research evidence and empirical learning from effective practice that underpin 'what works', and to draw out and capture feedback from participants to inform the commission's pre-consultation report (*Box 8*). Finally, the SDO Network co-ordinated a contribution from the research community to enhance the confederation's programme of regional meetings. This helped bring the evidence base to member priorities.

Policy and research influences on network development during phase

Developments at the NIHR

In January 2012, the SDO programme merged with the NIHR Health Service Research programme as a result of the two streams' overlapping remits. This produced the NIHR HSDR programme. The research-commissioning goal remained consistent, however: to fund a diverse portfolio of health service research that would inform decision-makers in the NHS in increasingly challenging times. The merged funding programme adopted the term 'knowledge and innovation transfer' to capture its funded research, which aims to help organisations spread innovation and translate knowledge into practice.

BOX 8 Improving Dignity in Care for Older People in Hospital: Evidence from Research and Practice

This event took place on 18 January 2012 at the Royal Over-Seas League in London. Preliminary findings from the NHSC's Commission on Improving Dignity in Care were presented.

Presentations from both the research and practice communities included:

- 'Understanding and improving the transitions of older people: drawing on the research evidence' – Director, Health Services Management Centre, University of Birmingham.
- 'Dignity in the care of older people with dementia in hospital' – Professor of the Medicine of Older People and Honorary Consultant in Health Care of Older People, School of Community Health Sciences, University of Nottingham.
- 'Supporting high quality care: listening to patients and staff' – Consultant Psychiatrist and Honorary Senior Lecturer in Liaison Old Age Psychiatry, Northumbria Healthcare NHS Trust.
- 'Dignity in hospital care for older people in Birmingham' – Lead Nurse for Older Adults, University Hospitals Birmingham NHS Foundation Trust.

The afternoon session provided the opportunity for small group discussions to explore the commission's emerging findings and themes.

A noted contribution from the SDO Network on this collaborative piece was its capacity to connect with managers at all levels of the service, allowing the commission to engage with people outside the NHSC's natural constituents in the NHS senior leadership cadre.

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Developments at the NHS Confederation

There were further staff changes at the NHSC during this final project phase. The second SDO Network manager left at the end of project in March 2012, leaving a gap that was filled by existing leadership on the team coupled with the recruitment of two part-time advisers to deliver specific projects.

In order to secure long-term sustainability of the network, the SDO Network undertook a membership drive in an effort to meet its required target to sustain staff and activity. A recurring comment from NHS managers was that they did not know if their trust had signed up to the network and as a result it was difficult to promote the benefits of the SDO Network within their organisation. A related challenge was that the network was set up as free to members of the NHSC but one did not have to work for a member organisation to attend or access the network's services. Membership was always encouraged but it was not a prerequisite for participation.

Network strategy 2012–13

Following an open call for evidence on innovation in the NHS in mid-2011, the DH published *Innovation, Health and Wealth*[47] in December of the same year. The report acknowledged that, although the NHS is good at research, discovery and invention, it is not so good at adopting and spreading new ideas. As mentioned in previous chapters of this report, the designation of AHSNs to align education, clinical research, informatics, innovation, training and education, and health-care delivery was of particular importance to the SDO Network's strategy.

The SDO Network positioned itself in relation to the government's new innovation agenda through early efforts to make sense of the proposals contained in IHW and provide a forum for emerging innovation structures. With regard to the emerging AHSNs, the SDO Network team organised several regional masterclasses for those setting up the networks to discuss guidelines and were involved in an early partnership between the NHS Confederation and the Young Foundation as well as with Universities UK, the Association of University Teaching Hospitals, the Association of the British Pharmaceutical Industry (ABPI) and the Association of British Healthcare Industries (ABHI) to develop an AHSN Forum.

In addition, three briefings were published in June 2012 to help NHS organisations take stock of what can be learned from early innovation infrastructure and understand new developments:

1. *Lessons from Health Innovation and Education Clusters*.
2. *Integrating Research into Practice: The CLAHRC Experience*.
3. *Academic Health Science Networks: Engaging with Innovation and Improvement* (summarised in *Appendix 3*).

The network team through its leadership on the AHSN Forum was also involved in coproducing a study visit, together with the NHS Confederation's European Office, for emerging AHSN leaders to visit southern Denmark to see at first hand the impressive work of the Welfare Tech Network.

Summary of this period

The final year of the SDO Network was a period of transition that marked the end of the project and its incorporation into the existing HSRN. There was a continued emphasis on the network's sense-making functions through briefings about the new innovation infrastructure and summarising key research from the SDO portfolio in the form of digests (see *Appendix 3*). The network developed closer collaborations with the NHSC's core work programme and the CLAHRC Support programme to embed SDO research into the wider policy and applied health research worlds. However, a failed membership drive to collect fees for the first time during its existence proved to be too difficult for the network and a scaled-down HSRN emerged at the end of the phase.

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Chapter 7 Conclusion

This report is a descriptive account of the SDO Network's strategy and activities in a period of significant upheaval in health and social care. This concluding chapter first explores a number of implications from this report for the field of knowledge mobilisation followed by more practical lessons for those pursuing similar initiatives.

The SDO Network should be viewed as one component of an approach to knowledge mobilisation pursued by a single programme of health research funding, the NIHR SDO programme, for a period of 5 years from 2007 to 2012. The characteristics of the network that appear to have aided knowledge mobilisation include its flexible and responsive approach, taking into account wider system changes (i.e. a focus on the operational concerns of managers), and its effort to use best practices to inform the activities and outputs of the network. For example, the range of activities the network pursued at its peak did respond to Lavis *et al.*'s[37] finding that a combination of approaches is needed.

However, there are a number of characteristics that appear to have impeded knowledge mobilisation efforts. These include the focus on one source of research knowledge (i.e. findings from the NIHR SDO programme) rather than drawing on the wider knowledge base and being more of an integrator of research knowledge. Another issue is that the network did not have any influence on how research knowledge was generated; rather it should be compared to other end-of-grant approaches which ultimately do not address the known barriers as referenced by others.[16–20]

Knowledge mobilisation lessons for those involved in or setting up similar initiatives

A number of themes emerged through this work which might offer lessons for future initiatives in similar health system contexts interested in supporting managers in accessing and engaging with research to inform practice:

- Leverage existing assets in the system. Embedding the SDO Network in an established membership body such as the NHSC had numerous benefits, including access to influential senior management figures to help shape the network strategy, links to the range of organisations that make up the health service, and support from cross-organisational departments to support the day-to-day running of a network. These assets provided the network with the necessary support to launch and grow its portfolio of activities in a relatively short time from inception.
- Find your allies. The SDO Network aligned itself early on with the HSRN to coproduce briefings and engagement events simultaneously meeting both networks' objectives. The Network's scope and reach was further expanded by working with a number of external partners such as the NIHR CLAHRCs and the East of England EAC. Being a vehicle for collaboration allowed the network to deliver far beyond its initial remit.
- Allow room for flexibility. The SDO Network demonstrated an ability to learn and adapt to the changing health and social care landscape, SDO requirements and the organisational context of the NHSC. For example, when the White Paper was published in 2010 signalling a restructuring of the NHS, the SDO Network pursued further core joint activities with the NHSC, its networks and other key players, as well as further opportunities to inject SDO Network/NIHR SDO content. This strategy recognised the limited amount of time its core constituency – NHS managers – would have to engage with SDO research, so joint working maximised the number of members the network could continue to reach during a time of uncertainty and upheaval.

- Build relationships with senior managers. Despite ongoing effort to build an engagement programme that met the needs of busy CEOs, the SDO Network's CEO Forum struggled with low attendance and had difficulty in tracking impact. A number of changes were implemented near the end of the SDO Network's existence that seemed to address many of the challenges in running the CEO Forum. These new ways of working included direct contact with senior leaders to secure their attendance and discuss their current priorities, pre-event dialogue with researchers to tailor presentation style and content to CEOs, and having topics driven by priorities of senior leaders rather than recently published research.
- Build in fit-for-purpose evaluation. Evaluating the impact of its activities proved to be a challenge that the network never fully reconciled. It did, however, track progress and member engagement through event feedback and ratings. The fact that network events continued to attract impressive numbers of engaged managers, with the majority showing up to day events and rating them highly, was seen as a big positive given the pressures on services.
- Work with members not membership. Learning from the SDO Network's outcome analysis pointed to the need to better engage individual members to find out how the network could meet their knowledge needs after their initial engagement at an event. The network was developed to focus on growing membership at the organisational level but this ultimately did not secure its long-term viability beyond a free service because individual members were not continually supported or engaged.

By recording the experience of the SDO Network, as an early experiment in addressing the challenge of making research more useful for decision-makers, we have endeavoured to contribute to the ongoing learning and evaluation that will ultimately improve how we support knowledge transfer and mobilisation in the health sector in the UK.

Limitations

There are a number of limitations to note, taking into account that this project was funded as a programme of work under the knowledge mobilisation aim of the NIHR SDO programme in the 2000s and was never funded as original research.

First, as there was not a formal evaluation of the SDO Network and the outcome analysis commissioned in 2011 did not consider longer-term impacts, this report is limited to a descriptive account of the programme activities, and policy and research developments. As a result, this report does not explore how the SDO Network and other national policy initiatives at the time interacted with each other (e.g. HIECs, HSRN, CLAHRCs), nor does it systematically address how wider system changes in health policy at the time influence the outcomes of the network and its activities.

Second, the report does not compare or contrast the experience of the SDO Network with studies of other networks in health (nationally or internationally), nor does it attempt to comprehensively address its contribution within the wider research literature in this field.

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Contribution of authors

John de Pury (Assistant Director of Policy, Health Policy) was responsible for the conceptualisation and methods used in completing the report. He was responsible for the preparation of the final report.

Jean Ledger (Research Associate, Management) was responsible for conducting the literature review, the interviews and document analysis. She was responsible for the preparation of the final report.

Jill Fairbank (Health Research Networks Lead, Health Policy) was responsible for the preparation of the final report.

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Appendix 1 Programme of events 2008–12

Type of event	Date	Attendance figures (if available)
Annual conference		
Management in Practice	November 2008	Unknown
The King's Fund	November 2008	Unknown
NHSC	June 2009	Unknown
	June 2010	
	June 2011	
Partnership		
SDO Network and Technology Adoption Centre	February 2009	90, plus 74 'virtual' viewers from 12 countries
SDO Network and Mental Health Network – Acute Mental Health Ward	December 2009	64
	March 2010	96
SDO Network and NHS Employers	November 2009	Unknown
	January 2011	65
HSRN and SDO Network joint annual conference 'Delivering better health services'	June 2009	> 300
	June 2010	
	June 2011	
Management in Practice masterclass	Unknown	Unknown
Nuffield Trust – breakfast seminars	November 2008	Maximum of 30 each
	February 2009	
	September 2009	
LSE Health	Unknown	Unknown
CLAHRC programme		
Learning Together: Implementation in CLAHRCs	April 2009	64
Learning Together: Patient and Public Involvement: Getting It Right and Delivering Results	October 2009	68
Learning Together: Evaluation	February 2010	57
Learning Together: The Spread and Sustainability of CLAHRC Ways of Working	May 2010	65
Stand-alone learning seminars		
Shifting Care	May 2008	40
Urgent Care	October 2008	Unknown
Creating Effective Clinical Networks in a Competitive Environment	May 2010	27
Taking Charge: Evidence for Self Care in the UK	September 2010	57
Public Health: How Can a Liberated NHS Promote Health and Prevent Illness?	February 2011	71
Moving Care Closer to Home for Children and Young People	July 2011	43

Type of event	Date	Attendance figures (if available)
Integration or Fragmentation? Looking at the Evidence and Making Sense of the Reforms	October 2011	55
Improving Dignity in Care for Older People in Hospital: Evidence from Research and Practice	January 2012	49
Webinars		
Delivering enhanced pre-hospital trauma and resuscitation care using critical care paramedics (ASN and SDO Network)	March 2011	Unknown
Re-evaluating the role of the health care assistant in dementia care	May 2011	24
Realist evaluation methods in health services research (joint HSRN and SDO Network)	October 2011	40
Mental health self care: responding to the evidence	November 2011	32
Technology adoption in urgent and emergency care	February 2012	19

LSE, London School of Economics.

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Appendix 2 Chief Executive Officer Forum content, 2010–12

Programme	Region	Date
'Does improving quality save money? Recommendations for the NHS' – Senior Adviser, The Health Foundation 'Quantifying the relationship between quality and cost: opportunities for the NHS' – Fellow, NHS Institute for Innovation and Improvement 'Changing management cultures and organisational performance in the NHS' – Director, NIHR King's Patient Safety and Service Quality Research Centre 'The NIHR SDO research programme: discussion on priorities for future research' – Acting Director of the NIHR Evaluation, Trials and Studies Coordinating Centre SDO programme, Director, NIHR King's Patient Safety and Service Quality Research Centre	South (London)	February 2010
'Does improving quality save money? Recommendations for the NHS' – Senior Adviser, The Health Foundation 'The business case for quality' – Fellow, NHS Institute for Innovation and Improvement 'Changing cultures, relationships and performance in local health care economies' – Professor, Durham University 'The role of CLAHRCs in delivering change: from "what we know to what we do" through knowledge brokering' – Director, Nottinghamshire, Derbyshire and Lincolnshire Collaboration for Leadership in Applied Health Research and Care 'The NIHR SDO research programme: discussion on priorities for future research' – Director, NIHR SDO research programme 'The expected impact of the new government on the NHS' – Acting Chief Executive, NHSC	North (Leeds)	June 2010
'Leadership for better patient care' – Professor, Royal Holloway, University of London 'An evidence based view of the opportunities and challenges for healthcare providers in a GP commissioned NHS' – Director of Policy, The Nuffield Trust 'How managers use evidence in decision making' – Professor, King's College London 'The NIHR SDO research programme: discussion on priorities for future research' – Director, NIHR SDO	South (London)	September 2010
'An evidence based view of the opportunities and challenges for healthcare providers in a GP commissioned NHS' – Professor of Health Services Research, University of Cambridge, and Associate Director, National Primary Care Research and Development Centre 'Taking the lead: making more of leaders (and followers) in the NHS' – Professor, Royal Holloway, University of London 'Understanding the dynamics of clinical–managerial relationships' – Professor, Durham University 'NIHR SDO research programme priorities for future commissioning' – chairperson, NIHR SDO Priority Areas Panel	North (Leeds)	October 2010

Programme	Region	Date
'Dignity in practice: the experience of older people in acute NHS trusts' – Professor of Medical Sociology, University of Kent, and Reader in the School of Social Sciences, Cardiff University 'The use of projects as a change management technique: organisational facilitators and constraints' – Director of the Institute of Leadership and Management in Health 'The future NIHR SDO research programme and SDO Network – Director, NIHR SDO programme 'The organisational practices of knowledge mobilisation at top manager level in the NHS' – Associate Professor, Warwick Business School, and Research Assistant, Warwick Business School 'Dinner discussion on the NHS Future Forum' – Chief Executive, University Hospitals Birmingham NHS Foundation Trust	South (London)	May 2011
'Dignity in practice: the experience of older people in acute NHS trusts' – Professor of Medical Sociology, University of Kent, and Reader in the School of Social Sciences, Cardiff University 'Effects of choice and market reform on inequalities of access to healthcare' – Reader, Centre for Health Economics, University of York 'The future NIHR SDO research programme and SDO Network' – Chairperson, Priority Areas Panel, NIHR SDO programme 'Dinner and discussion on the NHS Future Forum' – Chief Executive, University Hospitals of Leicester NHS Trust	North (Nottingham)	May 2011
'Developing a high performance support workforce in acute care' – Reader in Employee Relations, University of Oxford 'Evaluation of the costs and benefits of Virtual Wards systems in Greater London and the South West' – Senior Fellow, Nuffield Trust 'The NIHR Health Services and Delivery Research programme' – Director, NIHR SDO programme 'Dinner and discussion on "the impact of practitioner engagement and the (de)centralisation of healthcare systems on patient safety: reflections from the USA and UK" ' – Associate Chairman, Department of Medicine, University of California, San Francisco	South (London)	October 2011
'The NIHR Health Services and Delivery Research programme' – Senior Scientific Advisor, NIHR Evaluation, Trials and Studies Coordinating Centre – SDO 'Developing a high performance support workforce in acute care' – Reader in Employee Relations, University of Oxford 'Talent management in the NHS managerial workforce' – Professor of Health and Social Policy, Health Services Management Centre, University of Birmingham 'Dinner and discussion: "What does it take to be reliably excellent at delivering a high quality patient-centred inpatient experience?" ' – Clinical Lead Consultant in Diabetes and Endocrinology, Taunton and Somerset NHS Foundation Trust	North (Leeds)	October 2011
'Identifying gaps in what works in getting evidence used by managers: what new research can we fund?' – Senior Scientific Advisor, NIHR HSDR programme 'New approaches to strategic management' – Professor of Public Services Management, King's College London	South (London)	January 2012

DOI: 10.3310/hsdr-08-1718-202

Programme	Region	Date
'The organisational practices of knowledge mobilisation' – Research Fellow, Innovation, Knowledge & Organisational Networks Research Unit, Warwick Business School, and Professor of Organisation Studies, Warwick Business School		
'Identifying gaps in what works in getting evidence used by managers: what new research can we fund?' – Associate Director, HSDR programme	North (Nottingham)	February 2012
'New approaches to strategic management' – SDO programme Researcher, King's College, London		
'The organisational practices of knowledge mobilisation' – Professor of Organisation Studies, Warwick Business School		

DOI: 10.3310/hsdr-08-1718-202

Appendix 3 Publication outputs and summaries

Title	Publication date	Summary
Research digests		
The support workforce in the NHS	June 2011	This digest highlights recent research on support workers in health. This evidence can help managers understand the increasing importance of support staff and how they can best be used as part of a flexible modern workforce
New service models in mental health: emerging lessons	December 2011	This digest highlights recent research around the organisation and delivery of mental health services and new ways of working. It can help managers with evidence of what works and evaluations of service initiatives that could have wider benefits across the NHS
Birthplace in England: new evidence	June 2012	It provides authoritative findings from the Birthplace Research programme, commissioned in 2007 to address key gaps in the evidence, including a national prospective cohort study of low-risk women giving birth in different settings
Reducing emergency admissions: what works?	March 2013	This digest provides an overview of what works in reducing emergency admissions. It provides links for busy service leaders to more comprehensive reviews of evidence, and highlights interesting new research under way. As the evidence is dispersed and hard to interpret, this digest brings together the latest research and extracts key findings for those delivering and commissioning care
Briefings		
Being a good research partner: the virtues and rewards	October 2010	This briefing looks at the role and value of research, in particular HSR, and explores the virtues and rewards to NHS organisations of being a good research partner
The influence of HSR on the NHS	September 2011	This briefing covers some key issues that challenge NHS clinicians and managers daily, such as patient safety and cost cutting, and looks at where HSR had addressed them
Lessons from Health Innovation and Education Clusters	June 2012	Following research and interviews with all of the HIECs, this briefing looks at their work to date, what impact it has made and what lessons can be learned from their experience of trying to spread innovation through partnerships
Integrating research into practice: the CLAHRC experience	June 2012	The NHSC has been closely involved in the work of CLAHRCs and continues to host their national support function. This briefing describes the CLAHRC approach and their impact to date as well as the factors that continue to contribute to their successes
Academic Health Science Networks: engaging with innovation and improvement	June 2012	This briefing provides an update on the development of AHSNs: a new tier of organisations to improve the identification, adoption and spread of innovation in the NHS

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Appendix 4 Service Delivery and Organisation Network membership as of March 2012

Alder Hey Children's NHS Foundation Trust.

Avon and Wiltshire Mental Health Partnership NHS Trust.

Barts and the London NHS Trust.

Bedford Hospital NHS Trust.

Belfast Health and Social Care Trust.

Berkshire East Primary Care Trust.

Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust.

Bradford District Care Trust.

Cambridgeshire and Peterborough NHS Foundation Trust.

Cambridgeshire and Peterborough NHS Foundation Trust (EAC).

Cambridgeshire University Hospitals NHS Foundation Trust – Addenbrooke's.

Cardiff and Vale NHS Trust.

Central Manchester University Hospitals NHS Foundation Trust.

Central West London Community Services.

Chartered Society of Physiotherapy.

Chelsea and Westminster Hospital NHS Foundation Trust.

Cheshire and Wirral Partnership NHS Foundation Trust.

County Durham and Darlington NHS Foundation Trust.

Devon Partnership NHS Trust.

Doncaster and Bassetlaw Hospitals NHS Foundation Trust.

East Lancashire Hospitals NHS Trust.

Elective Orthopaedic Centre (EOC) – South West London.

Great Ormond Street Hospital for Children NHS Trust.

Guy's and St Thomas' NHS Foundation Trust.

Heart of England NHS Foundation Trust.

Heart of Birmingham Teaching Primary Care Trust.

Hereford Hospitals NHS Trust.

Ipswich Hospital NHS Trust.

King's College Hospital NHS Foundation Trust.

Lancashire Care NHS Foundation Trust.

Lincolnshire Partnership NHS Foundation Trust.

Liverpool Community Health.

London Specialised Commissioning Group (hosted by Croydon PCT).

Mersey Care NHS Trust.

Mid Cheshire Hospitals NHS Foundation Trust.

Moorfields Eye Hospital NHS Foundation Trust.

NHS Bassetlaw.

NHS Bradford and Airedale.

NHS Bristol.

NHS Camden (Camden PCT Provider Services).

NHS Central Lancashire.

NHS Devon.

NHS Ealing.

NHS East Lancashire.

NHS East of England.

NHS Innovations East.

NHS Leadership Centre.

NHS Leeds.

NHS North Lancashire.

NHS North West.

NHS Sefton.

NHS South Birmingham (South Birmingham Community Health).

NHS South East Coast.

NHS South of Tyne and Wear.

NHS South West Essex.

NHS Stoke on Trent.

NHS Warwickshire.

NHS Western Cheshire.

NHS West Essex.

North Bristol NHS Trust.

North East Ambulance Service NHS Trust.

North East London NHS Foundation Trust.

Northern Lincolnshire and Goole Hospitals NHS Foundation Trust.

North Staffordshire Combined Healthcare NHS Trust.

North West Ambulance Service NHS Trust.

Northumberland, Tyne and Wear NHS Foundation Trust.

Nottinghamshire Healthcare NHS Trust.

Nottingham University Hospitals NHS Trust.

Oxford Radcliffe Hospitals NHS Trust.

Papworth Hospital NHS Foundation Trust.

Range Medical Centre (part of Manchester PCT).

Rotherham NHS Foundation Trust.

Royal Brompton and Harefield NHS Foundation Trust.

Royal Free Hampstead NHS Trust.

Royal Liverpool and Broadgreen University Hospitals NHS Trust.

Royal National Orthopaedic Hospital NHS Trust.

Sandwell Mental Health and Social Care NHS Foundation Trust.

Sandwell Primary Care Trust.

Sheffield Children's NHS Foundation Trust.

Sheffield Health and Social Care NHS Foundation Trust.

Sheffield Teaching Hospitals NHS Foundation Trust.

Shropshire County PCT.

South Devon Healthcare NHS Foundation Trust.

South East Coast Ambulance Service NHS Trust.

South Tees Hospitals NHS Foundation Trust.

South Western Ambulance Service NHS Trust.

Southampton University Hospitals NHS Trust.

St George's Healthcare NHS Trust.

Stockport NHS Foundation Trust.

Surrey and Borders Partnership NHS Foundation Trust.

University College London Hospitals NHS Foundation Trust.

University Hospital Birmingham NHS Foundation Trust.

University Hospital of North Staffordshire NHS Trust.

University Hospitals Bristol NHS Foundation Trust.

University Hospitals of Leicester NHS Trust.

University of Cambridge (Institute of Public Health).

West Hertfordshire Hospitals NHS Trust.

West Midlands Ambulance Services NHS Trust.

West Suffolk Hospitals NHS Trust.

Yorkshire and Humber HIEC (hosted by Bradford Teaching Hospitals NHS Foundation Trust).