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Best research – For what? Best health – For whom? A critical exploration of primary care research using discourse analysis

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Abstract

Health research is fundamental to the development of improved health and healthcare. Despite its importance, and the role of policy in guiding the kind of research that gets addressed, there are very few empirical studies of health research policy. This paper redresses this, exploring the means by which one area of health research policy is shaped, enabled and constrained. We ask: what are the historical, social and political origins of research policy in primary care in England? What are the key discourses that have dominated debate; and what are the tensions between discourses and the implications this raises for practitioners and policymakers? To answer these questions we employed a Foucauldian approach to discourse analysis to explicitly recognise the historical, social and ideological origins of policy texts; and the role of power and knowledge in policy development. We adapted Parker's framework for distinguishing discourses as a means of selecting and analysing 29 key policy documents; 16 narrative interviews with historical and contemporary policy stakeholders; and additional contextual documents. Our analysis involved detailed deconstruction and linking across texts to reveal prevailing storylines, ideologies, power relations, and tensions. Findings show how powerful policy discourses shaped by historical and social forces influence the type of research undertaken, by whom and how. For instance, recent policy has been shaped by discourse associated with the knowledge-based economy that emphasises microscopic 'discovery', exploitation of information and the contribution of highly technological activities to 'UK plc' and has re-positioned primary care research as a strategic resource and 'population laboratory' for clinical research. Such insights challenge apolitical accounts of health research and reveal how health research serves particular interests.

Keywords: Health research policy; Primary care; Knowledge-based economy; UK; Discourse analysis

Introduction

Policy can be broadly conceived as the translation of political values into changes in society, with the policymaking process involving dialogue, argument and influence (Bacchi, 2000; Fischer, 2003; Majone, 1989; Russell, Greenhalgh, Byrne, & McDonnell, 2008). Writers such as Fischer (2003) and Sanderson (2006) argue for greater attention to the emergent

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nature of policy and fundamentally moral nature of the choices involved; in other words, recognising that what might be regarded as the 'best' course of action also involves some kind of value judgement. We align with this view, arguing that policy is a complex intervention – as opposed to, for instance, a simple clinical intervention such as a drug therapy – and must be analysed in its social, political and historical context.

In this light, health research policy must be considered in relation to social, technical and political developments. For instance, it is important to consider how, as countries have become defined less in terms of geographical borders and more as 'corporate states' in competition with one another, health research (as part of the science base) has been reoriented as a national strategic resource to secure competitive advantage (Stein, 2002; Stoneman, 1999).

To understand how health, research and policy interact, our paper explores the means by which one area of health research policy is constructed: that of primary care research. We ask three questions: What are the historical, social and political origins of research policy in primary care in England? What are the key discourses that have dominated debate about primary care research policy; and which have been suppressed or excluded? And what are the tensions between discourses and the implications this raises for practitioners and policymakers? To answer these questions we frame 'primary care research' in the wider context of health, research and science policy in England.

We begin by describing the context in which primary care research has developed. We then describe our approach to studying policy; before presenting our findings and considering implications in subsequent discussion.

The context of primary care research policy in England

The field of primary care ranges from first point of contact to everything outside of hospital, encompassing a range of disciplines and professional groups. In this sense, it provides a valuable exemplar to explore how and why health research is shaped and moulded. However, there is also much that makes primary care research distinctive. In particular, the complex, applied and context-bound nature of primary care research generally requires highly diverse, interdisciplinary research teams and addresses fundamentally different types of research questions from those relevant to (say) hospital medicine. Hence it is important to appreciate the context in which primary care research has developed.

However, there is a distinct lack of empirical work on which to draw: although considerable energy goes into developing health research policy, very little is written that is capable of describing (through empirical observation) the forces shaping policy with studies only recently emerging on the development of national health research programmes (May, 2006; May, Mort, Williams, Mair, & Gask, 2003; Williams, May, Mair, Mort, & Gask, 2003). This is surprising given the increasing attention paid to health research by governments that view health research as integral to their national 'system of innovation' (Elzinga & Jamison, 1995), offering the potential to deliver scientific and technological advances and economic growth through the exploitation of ideas (Stein, 2002) and link this with practical concerns to improve health.

Take the recent publication of a revised NHS R&D Strategy (DH, 2006), re-badged as a Government (as opposed to what was formerly a government department) health research strategy. This re-badging suggests a substantial ideological shift in delivering NHS support for wider government commitments, enhanced political intimacy between science and government, and allocation of an explicit role to health research in the government's strategy for building a knowledge-based economy. However, limited empirical work has been undertaken exploring such shifts. Unravelling the trail of policy-related documents reveals that the revised strategy emerged out of high-profile recommendations at ministerial level on the future of UK health research (DH, 2004), Government consultation on future investment in science and innovation (HM Treasury, 2004), substantial increases to NHS R&D funding, and the creation of a UK Clinical Research Collaboration (UKCRC) with a vision of establishing the UK as a world leader in clinical research and developing close partnership between government, the voluntary sector, patients and industry (DH, 2004, 2006). The dominant view presented in such documents is of policy as value-free (Shaw, 2006, 2007).

So how and why have such changes occurred? The field of science studies has much to reveal about the social and political context of changes in science and technology. The financial crisis of the 1970s is described as an important starting point for considering recent transformations. This is because the broad policy response facilitated economic liberalisation and the orchestration of contemporary science policy (Elzinga & Jamison, 1995; Stein, 2002), as well as linking of science and technology to industrial innovation and academic research to commercialisation (Barben, 2007; Demeritt, 2000). Whilst primary

care research received little government attention during this time, from the late 1980s successive governments' strategies for a primary care-led NHS, combined with the perceived need to 'procure evidence', meant that it became more visible as part of the policy agenda (Shaw, 2006). Political impetus (including a national report on the state of primary care research (Mant, 1997)) helped to secure increased funding from 1997 for a period of 5 years.

Health research was subsequently reoriented around a series of managed research networks focused on predefined clinical areas and providing NHS infrastructure to deliver high quality clinical trials (DH, 2004). Whilst primary care was initially omitted, a new National School for Primary Care Research and a Primary Care Research Network for England have since been established.

Methods

The analysis of policy in its social context

Traditionally, policy analysis has adopted rationalistic approaches, been strongly influenced by conventional scientific method, and placed importance on the search for generalisable findings devoid of the social context from which they have been drawn (Fischer, 2003; Sanderson, 2006). The tendency has been to consider social problems as somehow existing 'out there', waiting to be 'discovered' and 'solved'. This led to a focus on delivery of pre-defined programme goals, with assumptions underlying policies rarely challenged. We argue that policymaking deserves attention as a social phenomenon (Fuller, 2000) involving dialogue and argumentation (Majone, 1989), reflecting political and ideological assumptions (Elzinga & Jamison, 1995), and recognising that social problems are context-bound (Edelman, 1988). For instance, Bacchi (1999) shows how the issue of 'women's inequality' has largely been framed within policy as a labour market problem and facilitating changes on these terms.

In this light, policymaking is not just a means for finding acceptable solutions for preconceived problems but a key way in which problems are constructed (Bacchi, 1999) and social conflicts are managed (Russell et al., 2008). From this perspective primary care research represents a surprising collection of claims and concerns brought together by a wide variety of actors with differing, often conflicting, agendas. Questions, therefore, need to be asked about how such a complex set of claims and concerns becomes seemingly rational and coherent. For instance: how do problems become defined and accepted on the policy agenda? How and why do others get lost? Which institutions gain and lose from addressing a particular set of problems? And, in our case, what is the impact on research in primary care?

Discourse analysis

We employ discourse analysis as an approach to the study of policy that recognises knowledge as situated, that language and discourse (and access to it) have an underlying role in the development of policy, and that social problems become identified and addressed through the varied activities and values of different interest groups. Discursive approaches are increasingly being applied to studying policy (see for instance a recent analysis of UK mental health legislation (Harper, 2004)). Whereas a more traditional approach might involve problem identification, collection of data on alternative solutions and selection of the alternative that best resolves the problem (Sanderson, 2000), such an approach is concerned with how social problems and solutions get created in discourse.

Our approach is grounded in poststructuralism and is influenced by the work of Foucault and Parker. From this perspective discourse comprises sets of statements that bring social objects into being (Parker, 2002). Applied to the policy field, an interest in discourse becomes an interest in 'the ways in which arguments are structured and objects and subjects are constituted in discourse' (Bacchi, 1999: 41). Policy discourse is larger than language and is conveyed via a range of linguistic and non-linguistic resources (such as documents or historical events); and individuals and groups engage with discourse in numerous ways (such as direct contact or observation). Discourses (such as bioscience) are inextricably linked to institutions (such as the academy) and to disciplines that regulate the conduct of those who are brought within the scope of those institutions (such as researchers). The construction of policy problems tends to reflect existing social positions as discourses are invested with power and knowledge that makes it impossible to produce knowledge (i.e. undertake research) without recourse to power and vice versa (Foucault, 1986). Similarly social and economic benefits coming from access to mainstream discourses tend to be influenced by social categories such as gender.

Poststructuralism has generally concerned itself with societal discourse, rather than paying attention to the specifics of actual texts and the micro-analysis of conversations (Burman & Parker, 1993). Our focus

is, therefore, on macro socio-cultural relationships and the means by which societal discourses facilitate transmission of basic values at a broad cultural level. To facilitate careful analysis we adopted Parker's framework for distinguishing discourses (Parker, 2002). This provides a theoretically relevant starting point, encompassing a particular reading of a number of conceptual and methodological building blocks broadly associated with the work of Foucault. The framework comprises 10 criteria (see Box 1) allowing for consideration of the means by which policy develops over time, across different material resources, and how and why different people or objects are privileged or excluded. Consideration of how discourse supports institutions, reproduces power relations and has ideological effects make the framework particularly relevant to exploring policy.

Data collection and analysis

Guided by Parker's framework we began by reading widely, asking questions about the context of primary care research policy and the specifics of policy proposals. This led us to focus initially on three policy documents from different periods (DH, 1991, 2004; Mant, 1997), exploring what they represented in terms of policy problems and how they were situated within a more expansive web of documents. This shaped our final selection of 29 documents covering the period from 1971 to 2005 (see Appendix 1). These drew on the official nature of public policy (such as government White Papers), as well as a wider range of documents that captured the structural context in which documents were produced (such as House of Lords Select Committee reports). These documents led discursive work raising a number of questions (for instance about who discourses were addressing – see Box 1).

Policy documents represented aspirations to a possible future reality. Hence we also collected first-person narrative accounts of the policy process and its impact on primary care research to allow for exploration of audience reaction and implementation issues. Sixteen narrative accounts were drawn from face-to-face

Box 1. Overview of Parker's framework

Criteria for distinguishing discourses	Description
Discourse is realised in texts	As the world around us is textual, we need to treat objects of study (e.g. documents) as texts which are described and put into words
A discourse is historically located	Discourses are embedded in history and should be considered in relation to time. We need to explore how and where discourses emerge and describe how they change
A discourse is a coherent system of meanings	Discourse is made up of groups of statements that present a particular reality of the world. The task of the analyst is to map the world a discourse represents
A discourse is about objects	Using language means referring to objects and representing them in particular ways. Hence we unpick what objects are referred to and how they are talked about
A discourse contains subjects	As discourse addresses us in particular ways and allows us to perceive ourselves in certain roles, we need to identify the rights we have to speak in relation to any discourse
A discourse refers to other discourses	Describing discourses necessarily involves the use of other discourses. Contrasting different ways of speaking helps to disentangle this
A discourse reflects on its own way of speaking	Each discourse comments upon the terms it employs, referring to other texts to elaborate. Hence there is a need to reflect on the terminology used
Discourses support institutions	Discursive practices involve the reproduction of institutions. Analysis involves identifying institutions that are reinforced or subverted when a discourse is used
Discourses reproduce power relations	Discourse and power are intimately related so we need to look at which categories of person gain and lose from employment of a discourse
Discourses have ideological effects	Different versions of how things *should* proceed can coexist and compete within discourse. Hence there is a need to show a discourse connects with other discourses to sanction control

in-depth interviews with a broad sample of policy stakeholders. Interviewees were identified via policy documents and contextual material (such as implementation guides and details of committee membership). Whilst descriptions are necessarily sketchy to protect confidentiality, interviewees broadly represented the Department of Health (DH), pharmaceutical industry, the public and a range of stakeholders involved in primary care research (including general practice, nursing and non-clinicians), one of whom had no experience of research policy.

We asked broad questions to facilitate discussion around policy stakeholders' own roles, experiences and knowledge relating to primary care research, and the structural context/s in which this was situated. This allowed us to pick up on social and political messages about the nature or transmission of policy discourses. As we sought interviewees able to discuss a range of experiences from the middle of the 20th century to 2005, we were also able to explore how varied accounts of individual and organisational relationships, policy goals and implementation unfolded over time. Interviews, therefore, provided a vital source of data in which to more fully distinguish discourses and helped to reveal, for instance, how different discourses influenced policy development.

Guided by emerging questions and discourses, we also sought supplementary contemporary and historical information to facilitate appreciation of socio-political contexts. Additional analytic strategies included 'interrogating' texts by applying questions drawn from Parker's framework (for instance 'What positions are set up here?') and comparing and contrasting language to explore how things might be conceived and communicated differently. We continued to interact with discourse theory to aid interpretation, paying close attention to each of the elements of Parker's framework described in Box 1.

We were aware that our approach might face criticism in terms of the lack of a text-analytic dimension. Hence, although our analysis is not focused on the micro-analysis of texts, wherever possible we draw attention to concrete language use.

Results

Our findings indicate that health research policy shapes, and is shaped by, a 'knowledge-based economy' discourse. We first describe this discourse, how and why it has emerged and the meanings allied to it, before exploring the means by which it has transformed primary care research.

The knowledge-based economy

Following economic decline of the 1970s, the drive for economic wealth was reoriented in terms of the creation, production, distribution and consumption of knowledge and knowledge-based products. Whilst this emphasis was not 'new', the vision that knowledge was a major aspect of the economy as a whole was. The key message across the documents studied was that the potential of the UK economy to create wealth must be more firmly rooted in knowledge-intensive activity. 'New' knowledge resources (such as intellectual property) appeared more significant than traditional resources (such as manpower). The science system was positioned as an object to be manipulated in order to produce and transfer knowledge.

Science policy, therefore, began to be conceived differently, playing a key role in sustaining discourse on the knowledge-based economy and providing impetus for social, technical and political developments in the field of science and technology to be nurtured to improve wealth creation and quality of life. Successive UK Governments have sought to manipulate the science system through a series of policy reforms and a growing demand that the science budget should support research that will be of relevance to wealth creation in the UK economy (Stoneman, 1999). This was heightened with the election of the 1997 Labour Government whose revised political and economic agenda focused on science and technology as adding value to the UK economy (HM Treasury, 2004). However, whereas earlier conceptions of economy drew on ideas about *efficiency* and *effectiveness* of government agencies in order for research and information to inform decision-making, recent emphases have been about national levels of *productivity* and large-scale *consumption*. Comparison to other countries constructs a view of what is considered acceptable economic performance underpinned by national administrative data relating to, for instance; labour productivity and R&D investment. Part of the reason for this has been the shift to conceptualising economic activity in global, rather than purely national, terms. For instance, the following text from the Department of Trade and Industry situates the UK as a global competitor concerned with comparative productivity:

> ''The UK has stated objectives to increase economic productivity and global competitiveness. The bioscience industry can play a key role in helping to meet these objectives. The US has held the benchmark for a competitive economy and has

a clear strategy. It has moved low value-added manufacturing offshore and has focused on creating a knowledge-based economy, with high value-added jobs. This remains the UK's aspiration.'' (2003: 13).

The increased significance of globalisation has bolstered aspirations to develop the UK as a world-leading knowledge-based economy. This has guided policy, facilitating a greater emphasis on science and technology as an answer (or *the* answer) to modern national economic and competitive woes in global markets.

Scientific colonisation of health research

The significance of the 'knowledge-based economy' signalled a shift away from earlier scientific models of industrial technology associated with large-scale production and onto microscopic 'discovery' and the effective development and exploitation of information. This vision of science has come to frame 21st century health research policy with the principal emphasis being on, for instance, biotechnological, pharmacological and pharmacogenetic development and discoveries relating to nano-technology, molecular biology and biomaterials. This vision dominated the policy documents studied and was frequently portrayed as 'common-sense' and the 'natural' course of events. However, in constructing science in this way and presenting it as an homogenous space health research policy has effectively supported particular approaches, institutions and individuals to the exclusion of others. Examples of dramatic discovery, new knowledge and modernity were frequently entwined and summoned to reinforce this. These referred to stem cell research and genomics, in particular, though less dramatic examples were also evident. For instance science was described as: '*…already central to modern healthcare, generating dramatic improvements in childhood cancer, new key-hole surgery techniques, and providing a step change in research into genetic causes of major diseases.*' (Secretary of State for Trade and Industry, 2000: 2).

Whilst this carries seemingly innocent messages about scientific research, it has a deeper significance in contributing to what might be perceived as worthwhile knowledge relevant to healthcare. This is evident in the following description of an accelerated vaccines programme:

> ''One area in which the Department of Health plays a very particular role in technology development and transfer is in vaccines development. For example in 1994 the Department identified the possibility that there would be an increase in Group C meningococcal disease, as had been seen elsewhere. Working with a consortium of agencies…an accelerated vaccine development programme was supported. As a direct consequence of this research a full national immunisation campaign started in November 1999, and within a year all children and young people under 18 years had been offered the vaccine. There has already been a fall of more than 80% of cases, compared with the previous year and the UK is the first country in the world to use the new vaccine. To support longer term research on vaccines the Department, together with Biotechnology and Biological Sciences Research Council, Medical Research Council and Glaxo Smith Kline, provides support for the Edward Jenner Institute for Vaccine Research. The main focus of the Institute's programme is on fundamental immunology, formulation science and on developing models for vaccine assessment.'' (DH, 2001a: 11).

We selected this particular example as vaccines development is a wide-ranging programme. However, it is largely framed in terms of a scientific and technical world with the focus on some elements of vaccines development and not others. Whilst the effective transfer, delivery and take-up of immunisation programmes are essential to successful transfer of vaccine development, the focus is on biotechnology and microbiological sciences. This is significant as those areas committed to considering delivery and take-up include primary care (see for instance McMurray et al.'s (2004) study exploring parents' accounts of decision-making in relation to the MMR vaccination). This framing shapes what is and isn't conceived as possible within policy (in this case microscopic intervention over the social context of immunisation). This positions primary care as having a limited role: the dominant model of scientific discovery being associated with medical, pharmacological or biotechnical worlds and contrasting with the everyday work of primary care research that studies psychological, emotional, behavioural, sociological, experiential and organisational aspects of health, illness and disease in primary care settings by drawing on, for instance, patient experiences.

This vision of contemporary science was evident in recent restructuring of national health research. Two documents explicitly informed recent government policy and the reorganisation of research infrastructure from 2004 onwards; one concerned with academic medical careers (Academy of Medical Sciences, 2003) and the other with the bioscience industry

(DTI, 2003). Very little was made of primary care within these and subsequent documents. This indicated the significance of delimited scientific discourse colonising health research more broadly. The significance of this was, in turn, recognised by those broadly representing government and general practice. It was summarised by one academic general practitioner reflecting that the development of primary care research has been made '*…more difficult [with] the enormously exciting growth of biomedicine: the gene laboratory-based science, huge technology, and wonderful advances that are world study*.' This was seen to encourage particular routes to change with the diversion of '*…an ever-increasing amount of attention, emotion and resource to that kind of research*'.

Discourse on the knowledge-based economy perpetuated this vision of science through the use of data such as bibliometrics to substantiate cross-national comparisons and inform UK policy relating to competitiveness and productivity. For instance, one White Paper referred to the UK as having 1% of the world's population, 4.5% of the world's science and 8% of the world's scientific papers (Secretary of State for Trade and Industry, 2000). Such use of journal citations facilitated measurement of productivity at a national level whilst hiding meso- or micro-level practices and thereby the heterogeneity of scientific endeavour. Such analyses indicated the UK's position in relation to other countries but presented a decontextualised version of scientific activity that, for instance, hid particularly strong areas of medical or social science research, the context in which they were undertaken, by whom and their impact on changing practice.

Shifting the balance between health and wealth

Health research was situated within policy as a solution to two problems of *health* and *wealth*. However, our findings suggest that discourse on the knowledge-based economy largely shapes both. For instance, one DH policymaker described the 'best indicator' for people's health as one where '*they are almost fully employed in businesses that they find engaging and satisfying to contribute to…*', thereby reframing health benefits in terms of labour.

Since the early 1990s a series of policy statements and reforms have sought to overhaul government support for science and technology. One consequence has been to bring health research (traditionally situated in the UK Governments' Department of Health) closer to economic and trade interests (largely situated in the Department of Trade and Industry). Of particular, significance was the 1996 relocation of the Office of Science and Technology as an integral part of the DTI. This not only situated 'trade and industry' as responsible for science and technology policy generally, but also aligned research more closely with concerns of national wealth creation. This cross-departmental influence has been subsequently reinforced through a series of White Papers and other policy documents emanating from the DTI and Treasury.

An important event that reinforced this was the requirement for all government departments to produce science and innovation strategies under ministerial guidance and '*…focusing on how they can maximise the potential of science and technology activities and how they can drive innovation*' (Secretary of State for Trade and Industry, 2000: 41). Deriving from the DTI this shaped emergent policy across government departments in line with requirements for the knowledge-based economy. Whilst recognising the different departmental programmes of work, key elements required within such strategies included information relevant to research priorities, programmes and procurement strategies as a means of facilitating knowledge production and transfer. The inclusion of these 'key elements' shaped the construction of particular policy problems. For instance, the DH *Science and Innovation Strategy* that emerged as a result informed policy development for areas such as the strategic development of genetics, biotechnology and vaccine development; and support for the pharmaceutical industry to ensure the UK remains an attractive base for industry.

Discourse on the knowledge-based economy has been sustained by facilitating linkages between science systems and the private sector to speed knowledge transfer. Fostering commercial links is thereby crucial, with the contribution of the pharmaceutical industry emphasised as one of the key drivers for developing economic growth via health research:

> ''…the medical-pharmaceutical etc. industry is actually a major contributor to United Kingdom plc… it was experiencing more and more difficulties in working with the NHS which should be a really powerful deliverer of health research. And Government clearly wanted to support its industrial wealth component, it wanted to recognise that good health and wealth went together and that this might well be based on the delivery of high quality research'' (Senior DH policymaker, research capacity building).

This discussion initially draws on notions of industrial wealth and invokes a corporate image of the UK as a public limited company – a metaphor that instantly homogenises the UK and suggests a common willingness to accept such corporate emphases. This shift gave greater voice to private enterprise and was increasingly prominent in policy documents studied since 1997 (see Box 2 for similar examples).

The potential for securing patents for 'new' and 'innovative' technologies acted as a key driver in both commercial and government policy agendas and emphasised perceived economically valuable areas of health research (such as stem cell research) and tangible outcomes (such as drug therapies) with potential for commercial exploitation:

> "To be successful in delivering effective health and social care and improvements in health and quality of life, we need to be successful in generating and disseminating knowledge and exploiting it for the benefit of patients, users and the public. In particular we need to support and facilitate innovation to turn ideas and knowledge into new products, interventions and services. Industry, the universities, other research establishments and the NHS are all sources of new ideas and new technologies; partnership between these is critical to maximising benefits to patients and to realising wider commercial benefits for the nation." (DH, 2001b: 6).

This policy discourse framed 'primary care research' – traditionally on the edge of market activity – as a competitor within the health research market; and simultaneously framed 'success' as wealth creation through scientific discovery and technological endeavour. Although the emphasis on a primary care-led health service has been evident since the late 1980s, this reworking of economic and scientific agendas created tension between the requirements of the healthcare system (with a primary care ethos and where research is generally regarded as resulting in health benefit) and wider economic concerns (where research is generally regarded as facilitator of wealth creation and primary care research is not allied with dominant perceptions of 'worthwhile' scientific knowledge).

Primary care as a strategic resource for clinical research

From 2004 UK health research policy has undergone considerable reorientation in line with the vision to develop the UK as a world leader in clinical research:

> "And all of those reports have come up essentially with the same conclusions and that led essentially to UKCRC happening with government backing…their vision is that the UK is the most important place in the world to do clinical research…[and] from an industry point of view what we are saying is that it should be the place in the world where all companies will…want a significant UK arm in all their pivotal trials." (Senior representative, UK pharmaceutical industry).

The establishment of a UK Clinical Research Collaborative by government in 2004 was a means of facilitating this vision. The emphasis was on large-scale, multi-centre trials organised around 'managed' clinical research networks. Such emphases shaped the means by which (a) health research is undertaken

Box 2. Examples from documents giving voice to the pharmaceutical industry

The *Science and Innovation Strategy* (DH, 2001a) acknowledged the Department of Health's major strategic role in ensuring that the UK is an attractive place for industry as being achieved through the work of the Pharmaceutical Industry Competitiveness Task Force. The research-based pharmaceutical industry was situated as: "*the most important innovative high-tech industry in the UK, accounting for 23% of all expenditure on manufacturing R&D*" (p. 8).

Bioscience 2015 (DTI, 2003) reported from a dedicated Bioscience Innovation and Growth Team set up by the Department of Trade and Industry seeking to overcome threats to the UK bioscience industry and develop its vision that the UK will have secured its position as global leader in bioscience by 2015. This was discussed in the context of international competition with a view to "*developing large, profitable world class companies, second in size and achievement only to the US*" (p. 4).

The *Science and Innovation Investment Framework* (HM Treasury, 2004) referred to pharmaceutical R&D investment as significantly above international average and held the pharmaceutical industry up as a good example for UK industry as a whole.

(with randomised controlled trials remaining the perceived most effective means of investigating clinical and pharmaceutical concerns); and (b) who undertakes it (with quantitatively skilled, clinical scientists located in centres of excellence seen as most able to deliver this).

With regards to the means by which health research is undertaken, documents studied from 2000 onwards assumed a more flexible, coherent and accessible clinical trials infrastructure may lead to increased clinical trial activity, which in turn may lead to improved health and wealth. For instance *Bioscience 2015* states that:

> 'Increasing participation in clinical trials will also play a crucial part in modernising the delivery of healthcare, as protocol driven care improves both patient outcomes and the skills of healthcare professionals'. (DTI, 2003: 9).

Such proposals constructed clinical trials in light of wider policy concerns for evidence-based practice, the use of protocols, drug development and genetic profiling. This approach to knowledge production was conceived as enabling scientific and economic competitiveness on a global scale, with several documents framing clinical trials as the *only* means of ensuring knowledge-based decision-making and rapid access of patients to effective therapies. In contrast, there was little acknowledgement of the need for clinical judgement; for patient input to decision-making; of alternative models of healthcare delivery such as shared decision-making; or of the way in which the agenda for *which* trials get funded might be driven by predominantly commercial interests.

The construction of clinical trials as the most 'natural' infrastructure for research called into question the multi-method foundations of primary care research characterised, not only by randomised controlled trials, but also epidemiology, cohort studies, qualitative methods, and research synthesis. Increasingly, primary care research is seen not as an interdisciplinary speciality in its own right (considering primary care problems from clinical, behavioural, social and psychological perspectives) but as a sub-discipline within public health or epidemiology. This shift objectifies primary care research, with dominant discourse characterising research *on* primary care and involving recruitment of patients to clinical trials, rather than research *in* or *by* primary care involving multiple methods and approaches. This objectification was reflected by those representing government and industry. For instance, a senior representative from the UK pharmaceutical industry reported how:

> ''McKinsey's have just completed a report for the UKCRC on unique selling points for the United Kingdom, and one of the key USPs is the NHS. The NHS is essentially primary care, really I mean secondary care survives on the primary care system, and it's the ability to potentially…follow patients from cradle to grave.''

This discussion draws on the language of marketing to situate primary care as the unique selling point – or USP – of UK clinical research. It was the 'system' of primary care that was seen as a means of increasing the feasibility of UK clinical research, particularly alongside infrastructure investment in information technology and electronic patient records. In this way, primary care was positioned as an economic and marketing resource, facilitating the recruitment of patients to clinical trials within the new infrastructure. This was further reflected in recent proposals to incentivise research that placed financial rewards for primary care firmly in relation to numbers recruited to trials (DH, 2004).

This positioning was supported through distinctive use of language. Whereas policy relating to the development of UKCRC tended to emphasise the goal of reaching understanding between key players, policy relating to how the primary care system facilitated clinical research tended to orient to instrumental goals and getting results.

For instance, the pharmaceutical representative emphasised the importance of the *system* of primary care suggesting that ''*…the one thing that is almost a jewel in the crown as far as the industry is concerned for the United Kingdom is the primary care set-up*.''

Scientific discourse was also scientistic in that it supported particular approaches, institutions and individuals. This was evident in the prominence afforded to clinical research within policy that not only shaped the work undertaken but also who does it:

> ''But we're in that space now – and this is very important for primary care – we're in that space now where we are trying to create networks and support mechanisms in some relatively well understood areas but on the way towards trying to create generic structures which would support anybody who wanted to do an important clinical trial in anything.'' (Senior DH policymaker, research policy development).

Although this extract suggests a breadth in research infrastructure attained through developing generic networks, the final sentence reframes this to clinical

work. This reflected the problematisation of clinical research within policy generally with leading roles assigned to clinical scientists (including specialist and generalist academic doctors, as well as those such as physicists working in medical sciences) involved in the production and transfer of scientific and technological knowledge. However, other areas remained unproblematised with little to overtly recognise the full range of clinical and non-clinical researchers (such as economists or statisticians) required to deliver R&D strategy. This was reliant on ideologically based notions of what makes worthwhile knowledge and the production of an appropriate workforce in support of this.

Alignment versus resistance

For those with a vested interest in primary care research, the current configuration of discourses shaping health research policy presents a real dilemma: to align or resist. Talking at the time of major reorientation of health research policy in 2005, one senior academic general practitioner captured this by describing two possible scenarios:

> ''…one is that we will make real progress by…identify[ing] the big questions that can only be done in the primary care world and link up with basic science…and produce really major studies and I think that's possible, I think that's on and that's the plan. The disaster scenario…is that we are simply…relegated to be sort of community outposts for supporting and gathering data and backing up the real drivers of big teaching hospitals.''

'The plan' is portrayed simply as a means of surviving, involving compliance with dominant discourses and alluding to the colonisation of primary care research by particular 'scientific' approaches. Not 'complying' is seen as being taken over. This suggested that there were fewer opportunities for primary care research to contribute to and shape policy, but more opportunities to be positioned by and react to it.

Whereas most interviewees suggested primary care research should compete in terms of dominant scientific, technological, economic and clinical discourses and demonstrate value for money and productivity in terms of high impact publications in international journals and, where possible, scientific discoveries (including representatives from DH, pharmaceutical industry, and some GP academics), others supported a more resistant approach that acknowledged the breadth of primary care and challenged dominant discourses (including senior nursing academic, non-clinician, public representative, and some GP academics). Data suggested the latter approach would be far from straightforward. In particular, the use of language oriented to instrumental goals when discussing primary care research suggested that, as research policy has come under greater centralised control and influenced by the knowledge-based economy, so primary care is no longer included within the policy process (see Box 3 for an example of this).

Box 3. An example re-positioning primary care research

The Department of Health document *Research and Development for a First Class Service* signalled a major swing in the way research was conceptualised by government and within policy (DH, 2000). It brought together discourses of modernisation, science, innovation and technology and imported this into the research agenda, setting out a number of policy statements and principles including the use of expert advice to feed into the identification of priorities and needs for NHS research. This development of expert groups was to be based on three Topic Working Groups that had been established for an earlier strategic review:

> ''Three NHS R&D advisory groups will be formed in 2000 to advise on cancer, heart disease and stroke, and mental health. These groups will build on the recent Strategic Review of NHS R&D Funding and in particular the work of the review Topic Working Groups. They will take due account of the needs of the elderly and children and the commitment to primary care R&D.'' (p. 19).

Having previously been the concern of a dedicated Topic Working Group, primary care was no longer directly included but was to be considered by other clinical groups. There was no recognition that incorporation within the areas identified might skew or even exclude the primary care research narrative entirely.

Discussion

Health research and associated policy are fundamental to the development of improved health and healthcare. However, there are very few empirical studies in the field. Our paper goes some way to addressing this gap. Our findings show that contemporary health research policy has its roots in the development of a knowledge-based economy that situates research as an object that governments can use to manipulate knowledge production, predominantly in support of economic growth and global competition.

By revealing the influence of the discourse of a knowledge-based economy (the predisposition to productivity and return on investment, and to the basic sciences) our findings challenge the perception of health research policy as a value-free endeavour. Instead, we show how primary care research policy is tied up with ideological views of what good research is, what knowledge society wants, and what government's role is in producing such knowledge. By situating primary care research in relation to discourse on the knowledge-based economy, health research policy has re-positioned primary care research less as an independent enterprise and more as a strategic resource and 'population laboratory' for large-scale clinical trials. Despite potential for health gain, primary care research offers little in terms of exploitable business opportunities. Corporate research, on the other hand, appears powerfully placed to shape the agenda for research, thereby adding to existing studies that identify economic value as a key force shaping research policy (Demeritt, 2000; Stoneman, 1999).

We found that health research policy largely reduced research involvement to numbers recruited into clinical trials. This is an important finding demonstrating how current research policy facilitates particular practices based on a high-turnover model where large numbers are recruited to research. The suggestion of epidemiological dominance as opposed to (or alongside) interpretive understanding resonates with existing studies of national research programmes that describe a long term trend of developing 'formal, standardised and synthetic quantitative methods' as '*the* mode of framing knowledge about social phenomena' (May, 2006; Shaw, 2007; Williams et al., 2003).

Our findings illustrate the success of population or molecular levels of analysis in contrast to the integrating disciplines that study people in context and have had to struggle to achieve recognition. However, other starting points are possible (for instance, different clinical settings) that may lead to differently conceptualised areas of research. Arguably, the diversity of methods and approaches embodied in primary care research – along with expertise in evaluating complex interventions – provides a greater insight into health, illness and disease-related issues than a focus on clinical issues assessed via clinical research and trial methodologies alone. However, the construction of perceived areas of worthwhile knowledge within contemporary policy has meant that the system within which primary care research is operating is predisposed to basic science and quantitative measures relating to productivity and return on investment. Hence primary care research is being forced to define itself in relation to such discourses, and is being reshaped in ways that negate this breadth.

The re-shaping of primary care research via policy raises questions about whether this equates to dissolution of power and influence (i.e. a share of power is transferred to others), or represents a sign of maturity and acceptance (i.e. that primary care research becomes incorporated within dominant power relations). For the time-being at least, our findings suggest the former, as evidenced by the objectification of primary care research and its apparent exclusion from recent aspects of health research policy. Although the typically second class status of the type of applied research associated with primary care has been acknowledged by the DH (2006) it is unclear if (and how) the dominant discourses that shape such a view are to be redressed. Indeed, findings suggest that no radical transformation is imminent given the long term focus within government policy on scientific and technological innovation. This is reinforced by recent policy developments. For instance, although a decision to create a single research fund (combining NHS R&D and MRC funding) was announced in the 2006 Budget, the subsequent review of institutional arrangements (Cooksey, 2006) considered such arrangements in the light of objectives framed in health, science and economic terms and recommended the establishment of a new 'partner' agency between DH and DTI that could be seen as aligning the problems of a knowledge-based economy with those of health research.

Uncovering the moral and political assumptions behind health research policy serves to remind us that change is always possible. Given the apparent 'acceptability' of GPs in the eyes of wider policy stakeholders, general practice may be well-positioned to achieve such change. However, our findings suggest they might also be inclined to align with dominant discourses. Whoever is able to pursue this, perhaps more participatory approaches to policy development

(Fischer, 2003) are first required to consider any basis for political challenge, the representation of primary care research and how best to cope with the (potentially productive) tensions that bubble under the surface. In addition, researchers might do well to more fully appreciate the wider contexts in which health research policy is situated (and which shapes their work) and employ active lobbying for policy development with a view to reaching understanding amongst key players.

Policy analysts who describe policy as discourse often have a particular agenda for change (Bacchi, 2000). As authors we bring a range of views to this work (medical, sociological and political and so on), placing particular value on the incorporation of diverse approaches and socially situated knowledge within research, healthcare and policy. The focus on a limited selection of documents and a small number of interviews in such a large field inevitably means that our own views may well have influenced potential considerations and possible explanations. Whilst we invite readers to make their own judgements in relation to the trustworthiness of our interpretations and their relevance to other health research and policy settings, we strongly encourage them to consider spaces for conceptualising and doing health research (both within and) outside of that constructed by dominant discourse.

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Appendix 1. Documents included within analysis

Document	Description
Lord Privy Seal. *Framework for Government Research and Development*. Cmnd 4814. 1971.	Reported on the organisation and management of government research and development.
Lord Privy Seal. *Framework for Government Research and Development*. Cmnd 5046. 1972.	Discussed changes to applied government R&D and new arrangements between government customers and their contractor/s.
House of Lords Select Committee on Science and Technology. *Priorities in Medical Research. Third Report of the House of Lords Select Committee on Science and Technology: Session 1987–88*. HL Paper 54. 1988.	Reported on medical research, with particular reference to the needs of the NHS and examining how priorities are set, and recommended that the NHS be brought into the mainstream of medical research via a new National Health Research Authority.
Department of Health. *Priorities in Medical Research: Government Response to the Third Report of the House of Lords Select Committee on Science and Technology: 1987–88 session*. Cmnd 902. 1989.	Led to the establishment of the NHS R&D Programme and creation of a Department of Health Directorate of Research and Development.
Department of Health. *Research for Health. A Research and Development strategy for the NHS*, 1991.	The first NHS R&D Strategy that set out long term plans to bring health planning and research closer together and recommended 1.5% of the total NHS budget be allocated to research and development.
Office of Science and Technology. *Realising our potential. A strategy for science, engineering and technology. Presented to Parliament by the Chancellor of the Duchy of Lancaster*. Cmnd 2250. 1993.	The first review of relevant policy and organisation of science since the early 1970s.
Professor Anthony Culyer. *Research and Development Task Force. Supporting research and development in the NHS. A report to the minister for health by a research and development taskforce*. 1994.	Recommended support for infrastructure costs for research, and recognised primary care research as a neglected area for research funding.
House of Lords Select Committee on Science and Technology. *Medical Research and the NHS Reforms. Report from the House of Lords Select Committee on Science and Technology*. HL Paper 12. 1995.	Reviewed the NHS R&D strategy, paying particular attention to the need to build capacity and infrastructure.

(*continued on next page*)

Appendix 1 (*continued*)

Document	Description
Department of Health. *Medical research and the NHS reforms: Government Response to the Third Report of the House of Lords Select Committee on Science and Technology: 1994–95 session*. Cmnd 2984. 1995.	Responded to each of the recommendations made by the House of Lords Select Committee (see above) and discussed the general development of the NHS R&D programme in England.
Department of Health. *Primary Care: Delivering the Future*. Cmnd 3512. 1996.	Set out the agenda for realising a primary care-led NHS, including proposals to give primary care professionals a more significant role in improving services.
Professor David Mant. *National Working Group on R&D in Primary Care: final report*. 1997.	Set out principles to guide the development of primary care research and development with the aim of increasing the evidence-base.
Department of Health. *The New NHS. Modern, Dependable*. Cmnd 3807. 1997.	Described the new Labour Government's 10-year programme to modernise the NHS.
Department of Health. *NHS R&D Strategic Review: Primary Care. Report of Topic Working Group of the NHS R&D Strategic Review Chaired by Professor Michael Clarke*. 1999.	Addressed changes in the structure of primary care, considered research relevant to the provision of NHS-led primary care services and reviewed progress on strategic objectives.
Department of Health. *Research and Development for a First Class Service: R&D funding in the new NHS*. 2000.	Set out proposed changes to harmonise the reform of research and development funding with the wider NHS modernisation programme.
Academy of Medical Sciences. *The Tenure-Track Clinician Scientist: A New Career Pathway to Promote Recruitment into Clinical Academic Medicine*. 2000.	Assessed barriers and disincentives to academic training associated with recent changes in clinical career structures.
Department of Trade and Industry. *Excellence and Opportunity: a Science and Innovation Policy for the 21st Century*. Cmnd 4814. 2000.	Explored the opportunities to be gained from generating and exploiting scientific discoveries and made recommendations aimed at maintaining the UK's position in the global economy.
Department of Health. *Science and Innovation Strategy*. 2001.	Described major science and innovation priorities of the Department of Health over a 5- to 10-year period.
Department of Health. *Shifting the Balance of Power: Securing Delivery*. 2001.	Set out the organisational changes needed to support delivery of the NHS Plan.
Department of Health. *Teaching Primary Care Trusts*. 2001.	Outlined the development of Teaching PCTs and considered the relationship between teaching, research and clinical care.
House of Lords Hansard. *National Health Service Reform and Health Care Professions Bill (Third Reading)* 16 May 2002.	Debate regarding the role of Primary Care Trusts in relation to both education and research.
Academy of Medical Sciences. *Strengthening Clinical Research. A Report from the Academy of Medical Sciences*. 2003.	Drew attention to the 'translational gap', the gulf between basic discoveries and converting such discoveries into innovations.
Department of Trade &Industry. *Bioscience 2015. Improving National Health, Increasing National Wealth. A Report to the Government by the Bioscience Innovation and Growth Team*. 2003.	Identified barriers and critical success factors for the future competitiveness of UK biosciences and described a vision that by 2015 the UK will have secured its position as a global leader in the field.
Department of Trade & Industry. *Innovation Report. Competing in the Global Economy: the Innovation Challenge*. 2003.	Explored UK innovation performance, why this is important, the UK economic position in global markets and the role of Government.
Department of Health; Department for Education & Skills. *Joint Ministerial Review of the role of Primary Care Trusts in relation to learning and research in the new NHS. Report of Phase I*. 2003.	Reviewed the role of Primary Care Trusts in relation to education and research, providing a breakdown of key research roles and responsibilities.
HM Treasury. *Science and Innovation: Working Towards a Ten-year Investment Framework*. 2004.	Set out the governments' thoughts on the economic and financial context for the proposed framework for public and private investment in UK science and innovation.
Department of Health. *Research for Patient Benefit Working Party – Final Report*. 2004.	Brought forward practical proposals for implementing earlier reports and discussed development of a new UK Clinical Research Collaboration and clinical research networks.
Department of Health; Department of Trade and Industry. *Government Response to ''Biosciences 2015'', the Report by the Bioscience Innovation and Growth Team*. 2004.	Provided an update of government action to the report from the Bioscience Innovation and Growth Team (see above).
HM Treasury. S*cience and Innovation Investment Framework 2004–2014*. 2004.	Set out government science and innovation strategy in the context of wider global and economic development.
Department of Health. *Best Research for Best Health: A New National Health Research Strategy – the NHS Contribution to Health Research in England: A Consultation*. 2005.	Outlined proposals for a new National Health Research Strategy including development of a National Institute for Health.

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