AN INQUIRY INTO THE EFFECTIVENESS OF INTERNATIONAL HEALTH SYSTEMS

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April 2014

Acknowledgements

The Chair and members would like to thank the following people and organisations for providing oral evidence to the Inquiry:

Barrie Brown, National Officer for Health, Unite the Union
Mike Farrar, former Chief Executive, NHS Confederation
Jon Ford, Head of Health Policy and Research Unit, British Medical Association
Philip King, Director of Regulatory Development, Care Quality Commission
Professor Sir Michael Marmot, Professor of Epidemiology, University College, London
Professor Kieran Walshe, Professor of Health Policy & Management, University of Manchester

and to the many individuals and organisations who also provided written evidence to the Inquiry.

The Chair and members would also like to thank the academic advisors to the Inquiry:

Professor Clare Bambra, Durham University
Dr Katharine Footman, London School of Hygiene & Tropical Medicine
Professor David Hunter, Durham University
Professor Martin McKee, London School of Hygiene & Tropical Medicine
Professor Gabriel Scally, University of West England
Dr Alex Scott-Samuel, University of Liverpool
Dr David Stuckler, University of Oxford

The Inquiry was conceived and designed by the PLP Health Committee Chair, Debbie Abrahams MP, who also authored the Inquiry report.

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Executive Summary

The Labour Party has a proud and historic link with the NHS; it reflects and represents our collective spirit, and the values we hold dear. It is fair to say that in most people's eyes the NHS remains a national treasure. But we know it is not perfect and although the Labour Party has committed to no further top-down structural reorganisation should we be elected into Government in 2015, service change will be needed.

To this end, and to inform the Party's internal policy review process, members of the Parliamentary Labour Party undertook an inquiry into the effectiveness of international health systems in improving health care quality and equity. The scope of the inquiry focussed on three broad areas: system funding, how this funding is allocated and how in particular health care providers are paid; the organisation of the system; and on how health and social care services in particular are integrated. The scope of the Inquiry is defined more fully in section 2.

The Inquiry involved commissioning independent 'reviews of reviews' of the international academic literature to assimilate the strongest evidence possible, as well as oral hearings with academics and key stakeholders. We also had an invited call to submit written evidence to the Inquiry.

The Inquiry has shown quite conclusively that where there is competition, privatisation or marketisation in a health system, health equity worsens. There is also evidence of a negative impact on staff morale, where there may be conflicts in the values and ethos of a health system founded for social good and, for example, some workers are financially rewarded for quality improvements and others are not. As such the parameters within which private healthcare providers could be used in the NHS needs to be clearly defined.

It also revealed that there is no compelling evidence that competition, privatisation or marketisation improves healthcare quality; in fact there is some evidence that it actually impedes quality, including increasing hospitalisation rates and mortality. After 25 years of an internal market, it is striking that there is no strong evidence that it has contributed to improvements in the quality of healthcare in the NHS. However, there is strong evidence that the additional transaction costs associated with a 'purchaser/provider' split, exceed savings made elsewhere in the system.

The Inquiry found that there is also inconclusive evidence that increasing the autonomy of health care providers results in an enhanced quality of care; this includes GPs as Fundholders and NHS hospitals as NHS Foundation Trusts. Although it is recognised that there are examples where this has happened, there is considerable inconsistency. For this reason autonomy of healthcare providers within the NHS needs to be examined in more detail.

Evidence to the Inquiry showed that 'patient choice' was less likely to be exercised by people on low incomes, so affecting equitable access to care. In addition, in relation to direct purchasing or 'out of pocket' spending on healthcare by patients, there is strong evidence that this reduces access to healthcare for those that need it most, so reducing health equity. Similarly, there is increasing evidence showing issues with the implementation of personal health budgets (PHBs). The Inquiry was concerned that personalised healthcare, which is strongly supported, is too often conflated to mean PHBs.

The Inquiry believes that in view of the investment of public money in health systems, it is staggering that so little is understood about the optimal level of system funding, its distribution to different areas and parts of the system and how this impacts on quality treatment and care. Similarly, there is little known about how provider payment models/methods contribute to quality improvements. There is even less known about how NHS funding levels or provider payment models could promote

health equity; however, there is emerging evidence of the association of reductions in mortality in deprived areas with NHS resource allocation formulae weighted for health inequalities.

Evidence to the Inquiry on the effects of different forms of integration in health systems on quality outcomes was quite sparse, but is generally positive. For example, the integration of health and social care management showed a reduction in hospital admissions. Similarly, integrated management, joint commissioning and pooled budgets showed improvements in patient empowerment, choice and dignity. There was also strong evidence that integrated, interdisciplinary teams improve the quality of care, with improvements to patients' psychological status, clinical outcomes, quality of life and satisfaction with care. However, there was very little evidence of the effects of integration on equity and this was less conclusive regarding positive effects.

Based on this evidence, the Inquiry's PLP members have defined a number of recommendations to address the issues identified, but also to identify action to take forward Labour principles of equity and fairness into health policy for the future. These are as follows:

Recommendations to the Labour Party

i. NHS funding, allocating resources and payment models

a. Restore the key principle of NHS resources allocated based on health need (and health inequalities)
b. Develop a 'Healthcare For All' funding model: Undertake a review of NHS resource allocation formulae and budgets in order to simplify and develop a new resource allocation model reflecting NHS principles and values
c. Analyse and develop alternative healthcare provider payment models based on quality, equity and capitation rather than activity/utilisation and 'choice'
d. Review the evolution needed by Health & Well Being Boards (HWBs) and Clinical Commissioning Groups (CCGs) to enable them to integrate budgets and jointly direct spending plans for the NHS and social care

ii. Organisation of the NHS

a. Undertake a prospective assessment of the costs and benefits associated with an integrated, collaborative and planned approach to commissioning and providing healthcare in improving quality and equity in healthcare and social care
b. Ensure that privatisation of the NHS is prevented by exempting the NHS from EU/US Transatlantic Trade and Investment Partnership and ensuring corporate healthcare providers' investment is not protected beyond current contracts
c. Ensure that a duty to 'co-operate and collaborate' is placed on CCGs and local authorities, and on NHS Trusts with local authorities including social care providers
d. Define the terms for private healthcare providers' involvement in the NHS, in particular in the provision of clinical services
e. Review how to strengthen the democratic accountability of the NHS, including, for example, through locally accountable HWBs

iii. Integration in the NHS

a. Build on and supplement the evidence-base on integration within and between the NHS and social care with particular emphasis on quality and equity, for example through action-research pilots including single budgets for health and social care
b. Develop national standards for integrating the NHS and social care focusing on quality and equity, with local approaches for implementation
c. Develop holistic, 'whole person care' approaches to support people with long term conditions, and explore opportunities for NHS and Department for Work and Pensions (DWP) collaboration in this

iv. Research and surveillance

a. Restore data collected to monitor health inequalities including the former 'dicennial supplement' inequalities data
b. Within existing research budgets, increase the proportion of research into the health system wide effects of interventions such as organisation and resourcing on quality and equity in health and care
c. Implement Health Equity Impact Assessment: assess the effects on health systems, of local and national policies including all sectors of government as part of the Impact Assessment process

1. Introduction

1.1 We know how important being in good health is to each and every one of us. Study after study has shown that at an individual level, being in good physical and mental health is fundamental to our personal well being. The determinants of health act at several levels, from our genes to our lifestyle, but especially our socio-economic conditions: the work we do, the income we have, where we live and how we live (Marmot Review, 2010). And our health and care services are also important health determinants. Having a healthy population is not only important to us individually, it is essential for a productive and vibrant economy. From a social justice perspective, Labour's commitment to improve health and reduce health inequalities, so that we **all** live in good health for as long as possible, should rightly continue to be our priority and central to a One Nation health policy (Abrahams, 2013).

1.2 As the next General Election approaches, it is important that we develop health policies that are evidence-based, recognise the economic and social context we face (and that affects health), and reflect our values. The Government's enactment of the 2012 Health and Social Care Act (HSC Act), together with their economic and social policies, is already having a detrimental effect on the health of the population (Bambra, 2013) and on the services provided by the NHS (Hunter, 2013). A central tenet to the Government's argument for the changes to the NHS that they are making under the HSC Act is that competition from the corporate and voluntary health sectors is a pre-requisite for improving quality in healthcare and reducing health inequalities (Burns, 22 March 2011).

1.3 There is a lot to unpick from this, not least that the HSC Act is increasing the level of predominantly corporate private sector involvement at all levels of the NHS, providers and commissioners (NHS Support Federation, 2014). There is also a real concern that the determination to press on with Personal Health Budgets (PHBs), even when they are being scaled back in other countries because of substantial problems, is that they will be a fore-runner to a personal health insurance vouchers (Reynolds & McKee, 2012). Similarly there is concern that personalised healthcare, which is strongly supported, is too often conflated to mean PHBs. It is surmised that this is also the reason why the Government are so keen to weight NHS resource allocations according to age rather than the deprivation of an area (Bambra, 2012; Bambra and Copeland, 2013).

1.4 In order to contribute to the Labour Party's policy review process, members of the Parliamentary Labour Party (PLP) decided to undertake an inquiry into the effectiveness of health systems in delivering high quality and equitable healthcare. This involved a comparative analysis of international health systems and an independent synthesis of international evidence on the effects on healthcare quality and equity of reforms similar to those in the HSC Act (e.g. privatisation, marketisation).

1.5 This report describes the process and findings from this Inquiry, and it makes specific recommendations for the development of future Labour health policy in England. The Inquiry supports and complements the work undertaken as part of the health and social care and public health policy reviews.

2. About the Inquiry

2.1 The Inquiry was launched in autumn 2012 with the aim to undertake a comparative analysis of international health systems, and sub-systems where appropriate, and their effectiveness in delivering high quality and equitable health care. For clarity, health systems were taken to include the entire range of primary (General Practice and community services), secondary and tertiary care (hospital services) including dentistry, ophthalmic and Allied Health Professional services.

2.2 Although this Inquiry was undertaken by members of the PLP, the members were determined that the methods and process should reflect best research practice, and that the findings and recommendations should reflect the evidence. To ensure this, we appointed an independent advisory group of academic experts and commissioned two evidence reviews (Footman et al, in press and Bambra et al, in press in Appendices 1 and 2).

2.3 The Committee agreed on the following definition of 'quality' adapted from the World Health Organisation (WHO, 2006) and encompassing:

- Professional performance – delivering clinical services that meet or exceed technical competence standards and achieves positive health outcomes;
- Efficient treatment and care – delivering clinically timely services, making effective use of resources;
- Managing risk – assessing, mitigating and managing risk associated with clinical services;
- Person-centred care – involving patients as equal partners in decision-making about their healthcare increasing the patient's locus of health control;
- Holistic care – identifying health needs and delivering care for the whole person (physical, mental, social health dimensions);
- Patient satisfaction – monitoring and learning from patient experience.

2.4 It was agreed that 'health equity' should be defined as the absence of socioeconomic inequalities in health care utilisation and health outcomes (Bambra et al, in press, Appendix 2). Additional dimensions of health equity (geographical, gender, race/ethnicity, mental/physical ability, sexual orientation) were not considered in this review.

2.5 The scope of the Inquiry was limited to the health systems of the 15-high income countries in the Commonwealth Fund's comparative assessments: Australia, Canada, Denmark, France, Germany, Iceland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom and the United States.

2.6 Evidence was assembled in 'umbrella' literature reviews (reviews of systematic reviews)[1], written submissions from stakeholders and key informants, and oral hearings with academic experts or representatives from stakeholder organisations or associations.

2.7 Two independent 'umbrella' literature reviews were commissioned by the Inquiry: one focused on 'quality' (Footman et al, in press) (appendix 1) and the other focused on 'health equity' (Bambra et al, in press) (appendix 2). Systematic review-level evidence was searched for on the effects of the following interventions on quality and health equity:

[1] Systematic reviews look at the findings from many studies to identify evidence of effects of interventions. Reviews of reviews look at evidence from many systematic reviews. Systematic reviews are considered to be the 'gold standard' in health care research.

- Health system financing, e.g., general taxation, social insurance;
- Health funding allocation, e.g., centralisation/localisation, budget formulae/weighting;
- Direct purchasing, e.g., private insurance, co-payments, top-ups, personal health budgets;
- Health system organisation, e.g., market system, internal market, planned health care;
- Integration of health and care social services, e.g., integrated care pathways (vertical), integration of sub-systems (horizontal).

2.8 Following a stakeholder mapping process, a call for written evidence was issued to academics, professional associations and other organisations with expertise in the areas under investigation. The two oral hearings involved panels selected from these submissions.

3. Evidence from the literature

Quality

3.1 The 'umbrella' review on quality looked at the effects of different health system interventions on various quality measures (as set out in para 2.3). In particular, systematic reviews (appendix 1) on the effects of payment of providers, organisation of service provision and integration of services on quality were collected and analysed. The following summarises the findings from these reviews.

Payment of providers

3.2 Evidence that financial incentives improve quality by increasing practitioner compliance with practice guidelines was variable: one weak review indicated there was some effect, another found incentives were ineffective. In relation to salaried payments, one review found that they may reduce referrals; another suggested there was inconclusive evidence about the benefits of salaried employment as opposed to 'fee for service' payments in managed care[2] in the USA. However, one high quality review found that 'fee for service', as opposed to salary and capitation payment, did improve continuity of care and compliance with guidelines.

3.3 A review into the effects of the introduction of the new General Medical Services (GMS) contract and of related bonuses found they had a positive effect on the co-ordination of care. However other results of studies of the effects of 'payment for performance' effects on quality were mixed. It was suggested that further work needs to be done to evaluate different payment methods before conclusions can be drawn.

Organisation of health services

3.4 Low quality reviews of GP fundholding in the UK showed mixed results. One review showed an initial reduction in the rate of growth of prescribing costs and some cost savings, but an increase in transaction costs outweighed these gains; there was also little effect on referrals. Another review also found several studies showing an increase in transaction costs associated with commissioning. In one primary care group, primary care-led commissioning under GP fundholding was reported to have improved responsiveness through an improved provision of information; reduced waiting times were also reported. However, another review concluded that fundholding had no effects quality in primary care and little change in secondary care quality.

3.5 The same review also analysed studies examining the effects of the internal market: health authority purchasing, locality and GP commissioning, and provider autonomy (NHS Trust status) on quality, but the evidence was inconclusive. For example, '...the effects of health authority purchasing could not be separated from those of concurrent programmes...' and there is little evidence to suggest that hospital autonomy had a positive impact on quality. There were some isolated cases where locality and GP commissioning appeared to improve care but this was highly variable.

3.6 A review of the effects of privatisation on quality, e.g., staff-patient ratios, patient satisfaction, mortality and hospitalisation rates, showed that, in 32 out of the 46 studies examined, the for-profit sector was associated with worse quality. Staff ratios were consistently found to be better in non-profit institutions, and were highest in government-run facilities. Another review looking at competition and increased marketisation in health systems revealed mixed results. Competition appeared to improve outcomes in one US study post-1990, but results were very mixed in several later studies. Research in the UK measuring death rates in hospitals exposed to greater market competition purports to show faster improvement in outcomes but this has been subject to extensive criticism of its methodology and the absence of any plausible mechanism to explain the findings observed, raising the possibility of statistical artefact.

[2] Managed care refers to different interventions aiming to increase the efficiency and quality of healthcare

Integration

3.7 One review examined methods of financial integration of health and social care bodies including joint commissioning, pooled budgets, aligned budgets, integrated management and structural integration. The evidence was fairly limited but two before and after studies of integrating health and social care management showed a decline in hospital admissions. In addition, one randomised trial of integrated management, joint commissioning and pooled funding reported improved patient empowerment, choice and dignity. In contrast to this, another study indicated there was a lack of evidence that joint commissioning affected health outcomes.

3.8 Two reviews looking at greater integration of emergency departments (EDs) and primary care services show mixed results. The first found that primary care doctors in EDs helped improve efficiency with reduced use of diagnostic tests, referrals and ED utilisation. The second more recent review was less emphatic that GPs do increase efficiency in EDs and admit fewer patients. Two studies showed no difference in patient satisfaction or self-reported health outcomes and no difference in re-attendance rates.

3.9 Three high quality reviews on service integration in the form of case management and interdisciplinary teams all showed positive impacts on the quality of care: improvements were found in patients' psychological status, clinical outcomes, quality of life and satisfaction with care.

Analysis of quality 'umbrella' review findings

3.10 Although there has been an increase in the synthesis of research into the effects of clinical interventions in the recent past, there have been many fewer reviews of system-wide interventions. This is partly down to technical difficulties of that arise with multicausal analysis, but also because of cost and the lack of political will. As a result, although there is a good steer from the evidence available to date, there are significant gaps in this evidence-base notably in relation to system-level financing and resource allocations. Although there was some evidence suggesting a link between financial incentives for providers and improvements in quality this was quite variable and has often resulted in 'gaming' in the system. It is also more problematic in a complex system like health care, where the costs and benefits from quality improvement activities are often misaligned and where there is a conflict in values and ethos driving the different parts of the system and its workers.

3.11 In relation to the organisation of health systems, after 25 years of the internal market in the UK, it is striking that it cannot be determined whether it has improved the quality of healthcare. There is, however, much more certainty that the additional transaction costs associated with a purchaser/ commissioner/provider split outweighs any cost savings. Although the research studies examining this are mainly from the UK, largely because the models adopted here have attracted little if any support elsewhere, there are still lessons we need to learn from this; similarly we need to understand what specific changes that may have produced short term benefits to patients. There is limited evidence indicating that increasing the autonomy of NHS Trusts improves healthcare quality. This review was not able to incorporate evidence from the Mid-Staffordshire scandal but the managerial pressure associated with the pursuit of NHS Trust status is another area that needs re-examining. Finally the most conclusive evidence was the negative effects of privatisation, competition and marketisation in health systems on quality. This reaffirms the importance of a national health system, and of the NHS as the 'preferred healthcare provider' in the UK. Although the UK has embraced multiple sectors in our health system, the evidence from this review also indicates the need for a much clearer understanding of which circumstances under which private providers might be used within the NHS. At the present time, this raises profound concerns regarding the government's support for the EU/US Free Trade Agreement without seeking NHS exemption and removal of investment protection for private health care companies (Koivusalo & Tritter, 2014).

3.12 The evidence on the effect of integration on quality was positive. However this varied with the form of integration. In developing our policy on integration and whole person care, it will be important to examine in more detail how we can maximise the positive effects on a wide range of quality measures.

Equity

3.13 Another 'umbrella' review examined the effects of different health system interventions on equity (utilisation of health care and health outcomes by socioeconomic or income group) (appendix 2). In particular, it looked at systematic reviews related to system financing, direct purchasing, the organisation of providers, and integration. The following is a summary of these reviews' findings.

General system financing

3.14 Four reviews included studies of general system financing interventions. There was evidence from one review that between 1980-1993 as the public share of health care expenditure decreased and private health insurance increased, social and spatial inequalities in accessing healthcare increased. This was particularly so for preventative, perinatal and sexual health services. Another review found that the increased use of private insurance had negative heath equity impacts in terms of access, whereas free care programmes (such as Medicaid) had positive health equity outcomes.

3.15 Two reviews of fee for service compared to managed care payment plans in the USA found inconclusive results in relation to health equity: the first review found that managed care provided better access to preventative screening services for women on low incomes compared to 'fee for service' based care, but were poorer for accessing maternity care. The second review found that managed care was associated with decreased service provision by physicians or did not produce better outcomes. In addition, poor or elderly patients were found to have better outcomes when treated in 'fee for service' as opposed to managed care organisations. This review also showed that in 'fee for service' versus capitation allowance comparisons, capitation significantly decreased the number of physicians' visits and hospitalisation, whereas service provision increased when the fee was increased (potentially due to increased supply as a result of the incentive that 'fee for service' payments offer to clinicians). Finally, the review reported that access to or quality of care did not differ between prepaid (private insurance) and 'fee for service' (pay as you go health care) physician groups. However the relevance of this US evidence to the NHS is very limited as the US system involves quite different types of private payment systems and because the 50 million poorest Americans have no access to health insurance.

Direct purchasing (Out of pocket spending)

3.16 Only one review looked at the effects of direct purchasing reforms that increase out pocket spending. It included two studies; both examined the effects on equity and found that purchasing had a negative impact. The Swedish study found that increases in user fees in the 1960s led to an increase in low income groups that had 'needed but not sought medical care', and was accompanied by an increased utilisation of emergency care by low income groups. The Italian study showed that following an increase in out of pocket payments for health services in the 2000s led to an impoverishment of 1.3% of Italian households. The negative impact on income distribution was largely as a result of costs of pharmaceutical, specialist and dental services.

Organisation of health services

3.17 Three reviews examined the effects of the privatisation of health services or marketisation (increased competition within a publicly funded system) on equity. Of these, two found that such reforms were universally negative for health equity, the other review was inconclusive. Most notably, the high quality review found that both privatisation and marketisation of healthcare services in the USA and Sweden were associated with increased inequalities in access and utilisation. In particular after market-based reforms in Sweden in the 1990s, manual workers were less likely to

access healthcare services relative to their need and lower income groups were also less likely to report not seeking care for which they perceived a need.

3.18 A review which focused on increased 'patient choice' in England was inconclusive. Negative impacts on equity of access were reported with GP fundholding and under the 'London Patient Choice project' patients on low income or with fewer qualifications were less likely to exercise patient choice. But another 'Choice' study found that there were no impacts on inequalities in access.

Integration

3.19 Two reviews examining public health partnerships allow the effects of integration of health and social care systems on equity to be considered. One showed slightly positive results or no effects for public health partnerships in England which reflected results in the Netherlands and the USA.

3.20 In the first review there was no evidence of an effect of the New Deal for Communities (NDC) partnerships on improving the relative position of their areas with regard to mortality or hospital admissions. There were also no consistent differences between NDC areas and their comparator areas in the pattern of health-related outcomes with different demographic groups. Health Action Zones were also found to have made no greater improvements in population health than comparison areas. However, Healthy Living Centre attendees' mental and physical health was less likely to deteriorate compared with non-users; this was attributed to behavioural changes rather than integrated services.

3.21 The second review showed that multisectoral, community-based interventions in deprived areas in the Netherlands that sought to improve health-related behaviours, had very marginal effects. In the US study, preventative care networks of health and education professionals worked together in deprived communities targeting kindergarten children with asthma. However no health benefits were reported for patients or carers.

Analysis of equity 'umbrella' review findings

3.22 Once again there is a gap in strong evidence of the effects of healthcare reforms at system level, this time on health equity. It was noted that equity was seldom the focus of these reviews. Another key issue was the reliance and applicability of reviews that were dominated by US studies.

3.23 Applying the precautionary principle though, there is clearly enough evidence in the reviews to know what to avoid (direct purchasing, out of pocket payments, privatisation and marketisation) but if we want a health system that delivers health equity, we need to be developing a more detailed evidence base to inform policy. As with the reviews on quality, evidence on system financing is US-centric with no reviews on resource allocation reforms; this needs to be addressed. There is also a need to explore why some interventions produced the results they did; for example, some integration interventions, NDC and Health Action Zones, had little impact on health outcomes and we need to understand why this was.

4. Evidence from key informants and stakeholders

Quality

4.1 Evidence from stakeholders and key informants to the Inquiry indicated **concerns that in both health and social care there was too much variation in the quality of care that is delivered.** A common view in both the written and oral evidence submissions from key informants and stakeholders is that quality in healthcare cannot be attributed to any one specific driver.

4.2 Instead, evidence from stakeholders at the oral hearings suggested a number of important determinants influence quality healthcare, including resource levels, commissioning and delivering evidence-based practice, and the integration of services.

> '....What we hear from people who use services is that they don't want to experience services in a silo or vacuum...'

4.3 There was less agreement about the most important driver of quality. An adequate level of resourcing and use of evidence-based commissioning were both argued for. Similarly quality issues in different part of the health system were mentioned:

> '...finite resources mean you can't achieve everything you want to...'

> '...if you compare the stroke pathway and other areas of geographically variable healthcare...may be due to resourcing or commissioning... there is an absence of cogency of what the best possible services are...'

> '...we need to be demanding higher standards from our hospitals...but variations in primary care are a bigger problem. In the North West there is a four-fold variation between when cancer is picked up in primary care...'

4.4 The importance of piloting and evaluating healthcare interventions as well as different approaches to how services are organised was recognised. However, political timetables have often driven the introduction of new services before the effects of these changes have been understood or evaluated.

4.5 Regarding how health and social care are integrated, concerns were expressed that there may **not** be a 'one size fits all' approach. This referred not only to how health and social care services are organised but also how they are resourced. Health is funded through general taxation via Clinical Commissioning Groups (CCGs) and social care through funding to local authorities as well as means-tested contributions from individuals; it was noted that integrating an already complex resourcing process with different allocation formulae would be difficult.

4.6 The current role of Health and Well being Boards (HWBs) in providing a strategic focus to commissioning health services was felt to have unrealised potential. In practice they have very little direct power over budgets and as such their impact is likely to be variable. It was also suggested that as a number of local authorities are not co-located with CCGs this also makes implementing commissioning plans more complex and variable. Their pivotal role in engaging communities was mentioned:

> '...there is an opportunity in [HWBs] being hosts in a community to engage people about health in a different way...'

However, there were concerns that the former Local Strategic Partnerships had a similar role but had varied in their effectiveness in engaging and empowering communities. It was noted that currently HWBs have no direct power over CCGs' and local authorities' budgets and spending.

4.7 Concerns were raised regarding how public health and the agenda for health improvement were being sidelined. The public health budget was described as:

> '...at a modest level of £5bn compared with approximately £60bn for CCGs and even this is not fixed...'

With the cuts to local authorities there were real concerns expressed by key informants and stakeholders of the potential impacts on public health spending. The importance of Health Impact Assessments in informing decision-makers about the health effects of specific policy interventions was also mentioned.

4.8 A discussion at the oral evidence hearings on how healthcare resources should be allocated put forward the merits of prioritising both utilisation and unmet need. There were also arguments for a more flexible, less siloed approach to local funding which prioritises prevention. The importance of high quality primary care in reducing unmet need was emphasised.

4.9 Poor workforce planning was mentioned as contributing to issues regarding poor access to care/under-doctored areas. Key informants providing evidence saw salaried GPs as helpful in addressing this issue but there were concerns that this had not happened fast enough (it is acknowledged that this view may not be shared by some GPs or the Royal College of GPs). In addition medical education and training was seen as vital in improving and sustaining quality in clinical practice. Developing more GPs with special interests was also suggested.

> '...quality in care is dependent on quality staff...'

4.10 Key informants and stakeholders tended to agree that there was now sufficient evidence to indicate that competition in healthcare did not contribute to improved quality in the NHS or other health systems.

> '...there is very little evidence that free markets do anything more than polarise quality – very good care at one end and people who can't access it at the other...'

> '...we have major reservations about competition...'

> '...under competition [in the NHS] you get a complex public monopoly in someone else's hands...'

> '...the CQC have no official view [on competition in the NHS] but we do regulate 22,000 care homes. Care homes are a mature market and we don't necessarily see competition improving quality.'

4.11 Specific suggestions from key informants for improving quality included:

- The 'Advancing Quality' programme in the NW – 34 standards across 5 conditions
- Leadership, clinical and non-clinical
- Duty of candour
- Consensus on best practice
- Stability in the system
- Local approach to implementing national standards

Equity

4.12 Key informants and stakeholders were consistent in their message that inequalities in health have origins that go beyond health care: although inequalities in access to health care are important, the most important factors affecting health inequalities are socioeconomic.

4.13 Based on evidence from the Commonwealth Fund it was reported that the UK was the most equitable in accessing health care across all of the OECD countries.

> 'In comparison with the US, both white men and women were sicker
> than the English, but only 92% of this US cohort had [health] insurance...'

4.14 However it was suggested that the NHS did not perform uniformly well and that the understanding of these data needs to be more nuanced. For example, the NHS performs less well when we look at use of the acute sector.

4.15 One witness stated that, from his international experience, the increase in private sector involvement in health systems led to a worse health service when correlated to the health status of the population. He added:

> 'There are clearly different drivers motivating the private [healthcare] sector.
> There is both under and over treatment in the US system and huge disparities...'

Another added:

> 'It is shocking to see the move to wholesale competition and 'Any Qualified
> Provider' as a primary driver in the NHS Lansley reforms on the basis of
> observational studies by the London School of Economics and others...'

4.16 In relation to resource allocations there was agreement from key informants that health inequalities need to be considered in how resources were allocated. It was also commented upon that the market does not necessarily distribute services according to need.

> '...there is evidence of co-morbidities and worse health outcomes
> [in deprived areas]; the cost of treating people from deprived areas is greater.
> In relation to cancer although the prevalence is higher in richer groups,
> survival rates are worse in poorer groups...'

4.17 Key informants reported evidence that there are more GPs per head with shorter lists in richer as opposed to more deprived communities.

4.18 It was also noted that in addition to looking at how resource allocations are made more equitable, there is also evidence that general taxation is the most equitable and efficient way to raise funding for health systems. There are issues with redistributing employee-based health insurance monies in a more equitable way.

4.19 Key informants discussed recent evidence on the ineffectiveness of co-payments in changing people's behaviour. It was found that these did not influence patients' use of services and were an inefficient way of raising funding.

4.20 Payment by Results (PbR) was seen as allocating to providers rather than communities. Although PbR was adopted across the EU, 'few embraced it like the UK'. However the result has

been ‘micro-productivity’ without evidence of macro level health gains. The need for productivity was emphasised without the current perverse incentives.

4.21 Personal health budgets (PHBs) were **not** supported as a way forward. In addition to evidence of major issues in other countries where they have been adopted (most notably in the Netherlands), the real issue is reliability in predicting future health needs. Although there is a seductive argument that PHBs enable patients to focus on their needs rather than the health system, their PHB may ‘run out’, what then? There would be a contradiction with evidence-based healthcare if the use of PHBs was further developed. An analogous concept being promoted by some is the medical savings account. However, it has similar limitations and although its use in Singapore is frequently cited as evidence of its potential, a more detailed examination shows that these claims are highly misleading (McKee and Busse, 2013). It was felt that there is a contradiction between PHBs and of public funding of evidence-based health care.

4.22 Key informants recognised the potential for integration, for example, case studies of case management indicates better integration delivers better care, but they urged caution with a system-wide ‘big bang’ before more evidence was gathered. Better care but not less resources.

4.23 It was suggested that based on comparisons with other OECD countries the capacity to reduce acute care in the NHS may be limited. One key informant posed that it was appropriate to analyse what added value the internal market (the purchaser/provider split) provides. Without the purchaser/provider split, funding mechanisms for rewarding productivity, efficiency and high quality care would be needed.

4.24 Key informants were sceptical about the ability of CCGs to shift care to a more primary care focus or even influence acute care. However, the additional spending power of ‘local teams’ and NHS England may influence that dynamic.

4.25 It was noted that, of the £8bn spent in the UK on health research, less than 1% was spent on public health or health systems research. Similarly the National Institute for Health Research spends 93% of its budget on clinical areas. Although we spend over £114bn a year on the NHS, we don’t have evidence on how effectively the NHS is organised to deliver equitable, high quality care.

5. Discussion and Recommendations

5.1 There was considerable agreement in the evidence from the reviews of the academic literature and the evidence from key informants and stakeholders:

Quality

- There is insufficient system-level evidence on the relationship between the level of funding, how this is allocated to different parts of the health system and the quality of treatment and care;
- There is inconclusive evidence on the extent that payment levels or methods contribute to quality improvements – payment levels/methods may influence individual clinician behaviour but at an organisational level there was evidence of 'gaming' in the system;
- There is evidence that there may be conflicts in the values and ethos of a health system founded for social good and where some workers are financially rewarded for quality improvements and others are not;
- There is no conclusive evidence that the UK's internal market, including the establishment of Foundation Trusts, has resulted in improvements in the quality of healthcare;
- There is evidence that additional transaction costs in internal markets outweigh any cost savings in other parts of the system;
- There is no evidence that competition, marketisation or privatisation of a health system improves quality; there is some evidence that quality deteriorates in the for-profit sector;
- There is evidence that more integrated health systems can improve quality, but this varied with the form of integration.

Equity

- There is limited system-level evidence on the relationship between the level of funding, how this is allocated to different parts of the health system and improvements in equity in health care access or health outcomes[3];
- There is some evidence that general taxation is the most equitable and effective way of raising funding for health systems;
- There is some evidence that some payment models (PbR and PHBs) are inequitable and have perverse incentives;
- There is evidence that competition, privatisation and marketisation of health systems and out-of-pocket financing can worsen health equity;
- There was limited evidence on the effects of integrated health systems on equity.

5.2 Considering the annual expenditure on the NHS and other health systems, it is quite shocking that the evidence-base underpinning the level of funding, how this is allocated, how health systems are organised and ultimately their effect on health care quality and equity, is so weak. This needs to be addressed through research as a matter of urgency.

5.3 There has already been an explicit pledge by the Labour Party to repeal the 2012 Health and Social Care Act, and this inquiry provides the evidence-base to support this. In addition, applying the precautionary principle, it is possible to make further recommendations for consideration in the Labour Party's health policy review process as a result of this Inquiry.

[3] However recent analysis (Barr et al, forthcoming) indicates the health inequalities weighting in NHS resource allocation formulae from 2001 to 2010 was associated with a reduction in absolute health inequalities between deprived and affluent areas from causes amenable to healthcare

5.4 These recommendations are focused predominantly on how the NHS and social care system is organised and funded. They reflect the evidence from the Inquiry and the action that can be taken to improve quality and equity by addressing issues associated with NHS funding and organisation. It is recognised that particularly in relation to reducing health inequalities, a broader approach focusing on the socioeconomic determinants of health is also needed.

Recommendations

i. NHS funding, allocating resources and payment models

There is insufficient evidence of the relationship between NHS funding levels, how funding is allocated to different parts of the system and the effects on quality treatment and care. Similarly, there is inconclusive evidence on how provider payment models/methods contribute to quality improvements. There is no evidence of the NHS funding levels or provider payment models that would promote health equity; however, there is emerging evidence of the association of reductions in mortality in deprived areas with NHS resource allocation formulae weighted for health inequalities.

We recommend that the Labour Party should:

a. Restore the key principle of NHS resources allocated based on health need (and health inequalities)
b. Develop a 'Healthcare For All' funding model: Undertake a review of NHS resource allocation formulae and budgets in order to simplify and develop a new resource allocation model reflecting NHS principles and values
c. Analyse and develop alternative healthcare provider payment models based on quality, equity and capitation rather than activity/utilisation and 'choice'
d. Review the evolution needed by Health & Well Being Boards (HWBs) and Clinical Commissioning Groups (CCGs) to enable them to integrate budgets and jointly direct spending plans for the NHS and social care, including constitution, governance, leadership, management, performance monitoring and regulation

ii. Organisation of the NHS

After 25 years, there is no strong evidence that the internal market has contributed to improvements in the quality of healthcare in the NHS. There is also inconclusive evidence that increasing provider autonomy, including GP Fundholding and Foundation Trusts, results in an enhanced quality of care; although it is recognised that there are examples where this has happened, there is considerable inconsistency. However, there is strong evidence that the additional transaction costs associated with a 'purchaser/provider' split, exceeds savings made elsewhere in the process. In addition, there is evidence that privatisation has a detrimental effect on quality, for example, on staff-patient ratios, hospitalisation and mortality, and equity, reducing both access and utilisation. There was evidence that 'patient choice' was less likely to be exercised by people on low incomes, so affecting the equitable access of care. In relation to direct purchasing or 'out of pocket' spending on healthcare, there is strong evidence that this reduces access to healthcare for those that need it most, so reducing health equity.

We recommend that the Labour Party should:

a. Undertake a prospective assessment of the costs and benefits associated with an integrated, collaborative and planned approach to commissioning and providing healthcare in improving quality and equity in healthcare and social care
b. Ensure that privatisation of the NHS is prevented by exempting the NHS from EU/US Transatlantic Trade and Investment Partnership and ensuring corporate healthcare providers' investment is not protected beyond current contracts
c. Ensure that a duty to 'co-operate and collaborate' is placed on CCGs and local authorities, and on NHS Trusts with local authorities including social care providers
d. Define the terms for private healthcare providers' involvement in the NHS, in particular in the provision of clinical services
e. Review how to strengthen the democratic accountability of the NHS, including, for example, through locally accountable HWBs

iii. Integration in the NHS

Although the evidence of the effects of different forms of integration on quality outcomes is fairly limited, it is generally positive. For example, the integration of health and social care management showed a reduction in hospital admissions. Similarly, integrated management, joint commissioning and pooled budgets showed improvements in patient empowerment, choice and dignity. There was also strong evidence that integrated, interdisciplinary teams improve the quality of care, with improvements to patients' psychological status, clinical outcomes, quality of life and satisfaction with care. However, there was very little evidence of the effects of integration on equity and this was less conclusive regarding positive effects.

We recommend that the Labour Party should:

a. Build on and supplement the evidence-base on integration within and between the NHS and social care with particular emphasis on quality and equity, for example, through action-research pilots including single budgets for health and social care
b. Develop national standards for integrating the NHS and social care focusing on quality and equity, with local approaches for implementation
c. Develop holistic, 'whole person care' approaches to support people with long term conditions, and explore opportunities for NHS and Department for Work and Pensions (DWP) collaboration in this

iv. Research and surveillance

Less than 1% of health research in the UK is spent on health systems and public health; there is a dearth of evidence on the effects of many system-wide policies and programmes. However, many of these are introduced system-wide without any evidence of their effectiveness in improving quality or equity in healthcare. We must always strive for evidenced-base policy, but in these straightened times it is vital that public money is spent well. The ability to monitor and evaluate interventions is being exacerbated by reducing data collection which in some instances has been collected over hundreds of years.

We recommend that the Labour Party should:

a. Restore data collected to monitor health inequalities including the former 'dicennial supplement' inequalities data
b. Within existing research budgets, increase the proportion of research into health system wide effects of interventions such as organisation and resourcing on quality and equity in health and care
c. Implement Health Equity Impact Assessment: assessing the effects on health and health systems, of all local and national policies as part of the Impact Assessment process

6. Conclusion

6.1 This Inquiry into the effectiveness of health systems in improving quality and equity in healthcare has assimilated evidence of the highest order from the literature, and from key informants and stakeholders. This evidence has shown quite conclusively that where there is competition, privatisation or marketisation in a health system, health equity worsens. There is also evidence of a negative impact on staff morale; there may be conflicts in the values and ethos of a health system founded for social good where some workers are financially rewarded for quality improvements and others are not.

6.2 It also revealed that there is no compelling evidence that competition, privatisation or marketisation improves healthcare quality; in fact there is some evidence that it actually impedes quality, including increasing hospitalisation rates and mortality. After 25 years of an internal market, it is striking that there is no strong evidence that it has contributed to improvements in the quality of healthcare in the NHS. However, there is strong evidence that the additional transaction costs associated with a 'purchaser/provider' split, exceeds savings made elsewhere in the system.

6.3 There is also inconclusive evidence that increasing the autonomy of health care providers results in an enhanced quality of care; this includes GPs as Fundholders and NHS hospitals as NHS Foundation Trusts. Although it is recognised that there are examples where this has happened, there is considerable inconsistency.

6.4 There was evidence that 'patient choice' was less likely to be exercised by people on low incomes, so affecting equitable access to care. In addition, in relation to direct purchasing or 'out of pocket' spending on healthcare by patients, there is strong evidence that this reduces access to healthcare for those that need it most, so reducing health equity.

6.5 In view of the investment of public money in health systems it is staggering that so little is understood about the optimal level of system funding, its distribution to different areas and parts of the system and how this impacts on quality treatment and care. Similarly, there is little known about how provider payment models/methods contribute to quality improvements. There is even less known about how NHS funding levels or provider payment models could promote health equity; however, there is emerging evidence of the association of reductions in mortality in deprived areas with NHS resource allocation formulae weighted for health inequalities.

6.6 Although the evidence of the effects of different forms of integration in health systems on quality outcomes is quite sparse, it is generally positive. For example, the integration of health and social care management showed a reduction in hospital admissions. Similarly, integrated management, joint commissioning and pooled budgets showed improvements in patient empowerment, choice and dignity. There was also strong evidence that integrated, interdisciplinary teams improve the quality of care, with improvements to patients' psychological status, clinical outcomes, quality of life and satisfaction with care. However, there was very little evidence of the effects of integration on equity and this was less conclusive regarding positive effects.

6.7 The Inquiry's PLP members have made a number of evidence-based recommendations to address the issues identified, but also to identify action to take forward Labour principles of equity and fairness into health policy for the future.

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Appendix 1

Title: The effects of organisational and financial health system interventions on quality in health care: Evidence from systematic reviews

Short Title: Health system intervention effects on quality

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Abstract
Health systems in high-income countries have experienced significant organisational and financial reforms over the last 25 years. The implications of these changes for the effectiveness of health care systems need to be examined, particularly in relation to their effects on the quality of health services (a pertinent issue in the UK in light of the Francis Report). Systematic review methodology was used to locate and evaluate published systematic reviews of quantitative intervention studies (experimental and observational) on the effects of health system organisational and financial reforms (system financing, funding allocations, direct purchasing arrangements, organisation of service provision, and service integration) on quality of care in high-income countries. Nineteen systematic reviews were identified. The evidence on the payment of providers and purchaser-provider splits were inconclusive. In contrast, there is some evidence that greater integration of services can benefit patients. There were no relevant studies located relating to funding allocation reforms or direct purchasing arrangements. The systematic review-level evidence base suggests that the privatisation and marketisation of health care systems does not improve quality, with most financial and organisational reforms having either inconclusive or negative effects.

Introduction
Health systems in high-income countries are coming under unprecedented pressure from several directions. Firstly, they face upward pressure on costs, primarily as a consequence of the increasing cost of technology and, to a much lesser extent, an ageing population 1. Secondly, some systems face downward pressure on expenditure, particularly in those countries that have pursued austerity measures following the global financial crisis 2. Thirdly, some face ideological pressure from politicians that seek to scale back the welfare state 3. In some countries these pressures are being used to justify renewed calls to undertake major reforms to the financing and delivery of health care. This is part of a longer trend in high-income countries whereby the dismantling of the welfare state has included the marketisation and privatisation of health care provision since the mid-1980s (e.g. in the UK these date back to the internal market reform of the Thatcher era). The implications of these changes for the effectiveness of health care systems need to be examined, particularly in relation to their effects on quality of care (a pertinent issue in the UK in light of the Francis Report).

Though the way that health systems are organised is a political question, the debate should be informed by the highest-quality research evidence. Yet, in many cases, it is far from clear that this is the case 4. Evidence that does not support a particular ideology is often rejected or, as is increasingly

clear from a growing body of research on cognitive processes, misinterpreted as offering support even when it does not 5. Furthermore, although there is a wealth of material describing health systems, there is much less evidence from rigorous evaluations of what works. In this paper we address the latter problem, by conducting a review of reviews of evidence linking system level interventions to changes in the quality of care provided. A companion paper does the same with respect to equity.

Methods

The objective of this study was to review existing evidence on the effects of organisational and financial health system interventions on quality of health care. An 'umbrella review' of systematic reviews was carried out, using systematic review methodology to identify relevant reviews.

Inclusion Criteria

Inclusion criteria for the review were determined a priori in terms of population, intervention, context, outcomes and study design, and the review protocol was registered with PROSPERO (No. CRD42013003996). The population was defined as adults and children of all ages. The organisational and financial health system interventions were defined as (1) general system financing e.g. increases in insurance payments; (2) funding allocations e.g. decentralisation of budgets; (3) direct purchasing arrangements e.g. increases in cost-sharing; (4) organisation of service provision e.g. commissioning; (5) health service integration e.g. merging of primary and secondary care. Though any selection of countries would, to some extent, be arbitrary, for external consistency we limited the review to the health systems of 15 high income countries used by the Commonwealth Fund in their international work (Australia, Canada, Denmark, France, Germany, Iceland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom and the United States). This election covers all the main types of health systems in high-income countries. In this review, 'health systems' refer to primary and secondary care, outpatient, ophthalmic, physiotherapy and dental services.

The outcome under study is quality of care, defined in terms of (1) professional performance; (2) efficient treatment and care; (3) clinical outcomes; (4) person-centred care; (5) holistic care; (6) patient satisfaction.

As previously noted, we included only systematic reviews in our analysis. Reviews had to include intervention studies with quantitative outcomes, and meet two mandatory DARE (Database of Abstracts of Reviews of Effects) criteria: (1) address a clearly defined question, and (2) search at least one named database combined with either citation searching or contacting authors in the field. Reviews were defined as 'systematic' if at least two components of the review question were explicitly defined and the search criteria were fulfilled. Reviews were defined as 'partially systematic' if two or more components of the review question could be inferred from the title or text and the search criteria were fulfilled.

Search Strategy

Seven electronic databases were searched using a combination of inclusion criteria keywords (Appendix 1): Cochrane Database of Systematic Reviews (CDSR), Database of Abstracts of Reviews of Effects (DARE), Campbell Collaboration Database, PROSPERO, EPPI-Centre database of health promotion and public health studies, Applied Social Sciences Index and Abstracts (ASSIA) and Medline. All databases were searched from start date to March 2013, and only English language publications were included. Citation follow up was conducted on the reference lists of included studies.

Data Extraction and Quality Appraisal The identified titles and abstracts were screened for relevance. Full paper manuscripts of papers considered relevant were obtained and studies meeting all aspects of the inclusion criteria were data extracted and included in the synthesis. Data extraction and quality appraisal of included studies was carried out by two independent reviewers.

The methodological quality of each systematic review was appraised using adapted DARE criteria (http://www.crd.york.ac.uk/CRDWeb/AboutDare.asp) as previously used in umbrella reviews 6, 7. The criteria were as follows: (1) is there a well-defined question; (2) is there a defined search strategy; (3) are inclusion/exclusion criteria stated; (4) are study designs and number of studies clearly stated; (5) have the primary studies been quality assessed; (6) have the studies been appropriately synthesised; (7) has more than one author been involved in each stage of the review process. Reviews were categorised as low (met 0-3 criteria), medium (4-5) or high (6-7) quality.

Results

Overview

The literature search identified 1857 articles, 22 of which were removed as duplicates (Table 1). 1807 articles were excluded at title and abstract screening, and 28 full manuscripts were examined in detail. Sixteen articles were excluded because they did not fully meet inclusion criteria (Appendix 2) and twelve reviews met all criteria and were included in the synthesis. Seven reviews were identified from citation follow-up, three of which were grey literature reports not searchable on academic databases. Data from the reviews are presented in summary tables according to intervention category (Tables 2 - 4).

No systematic reviews examined the effects of funding allocation reforms or direct purchasing arrangements on quality of care. Eight reviewed data on payment of providers, five were on arrangements for purchasing and provision of services, and six were on service integration. The reviews were of variable quality; nine were high quality (mostly Cochrane) reviews, three were of moderate quality, and seven were low quality. Studies in the reviews were from the following countries: Australia, Canada, Denmark, France, Germany, Italy, Netherlands, New Zealand, Norway, Sweden, Switzerland, US, and the UK.

A wide range of quality measures were included in the reviews, most commonly patient satisfaction and factors relating to person-centred care such as continuity, responsiveness, and choice. Professional performance was also a common outcome, and measures included process of care and compliance with clinical guidelines. Measures of efficiency included resource use, staff-patient ratios and re-attendance rates. Clinical outcomes included avoidable mortality, hospital mortality and adverse events. Holistic care measures were least frequent, but included psychological measures and self-reported health. Low quality studies occasionally referred to ‘quality of care’ without explanation of its measurement.

Payment of providers

There were eight systematic reviews of provider payment (Table 2). The quality of evidence was mostly high, including five high quality, one moderate and two low quality reviews. However, the quality of included primary studies was reported as low to moderate. Results were generally inconclusive; half of the reviews concluded that financial incentives have little impact, while half reported mixed effects on quality.

One low quality review by Chaix-Couturier et al 8 studied the effects of all financial incentives for medical professionals on processes and outcomes of care. The evidence suggested that financial incentives can improve compliance with practice guidelines, while fundholding or salaried payment can reduce referrals. However the quality of the studies included was low and results were inconclusive. Chaix-Couturier et al found one randomised trial where fee for service improved continuity of care compared to salaried employment in a managed care organisation9. However a low quality systematic review of fee for service and managed care in the USA 10 reported no significant difference in quality in the majority of studies examined. A more recent high quality review of systematic reviews 11 examined the effect of payment methods on compliance with

clinical guidelines and found financial incentives to be ineffective, though mixed systems of financial incentives may be more effective than target payments or bonuses in isolation.

Two high quality reviews studied the effect of financial incentives on primary care physicians,12, 13 though covering different time periods and quality outcomes (Table 2). The findings of Gosden et al suggest that payment method can impact quality, with fee for service associated with improved continuity of care and compliance with guidelines over salary and capitation payment respectively. Scott et al examined a variety of financial mechanisms, including target payments and fixed fee per patient achieving an outcome, but found the evidence to be inconclusive due to substantial risk of bias in most studies.

Three reviews examined the effects of pay for performance (P4P) on quality of care domains including process of care, patient-centredness, clinical effectiveness, and various provider performance targets.14-16. These reviews found mixed results. Petersen et al separated physician-level and physician-group level financial incentives (mostly bonuses), and a slight majority of studies in each category showed a positive effect on process of care. Van Herck et al also found positive effects on process of care measures, with two before and after studies without control groups reporting improved coordination of care following the introduction of bonuses and the General Medical Services (GMS) contract for general practitioners in the UK 17, 18. However, Van Herck et al reported mixed evidence for the impact of P4P on clinical effectiveness and patient-centredness, and no effect on patient satisfaction. An earlier moderate quality review 14 recorded mixed results for P4P, and stated that existing research was too limited to draw conclusions.

Organisation of service provision

Five low quality systematic reviews examined changes to organisation of service provision; three reviewed commissioning, general practice fundholding and internal markets, one reviewed privatisation and one reviewed competition (Table 3).

Two reviews 19, 20 assessed the effects of GP fundholding in the UK. Smith and Wilton characterise the evidence as incomplete, though neither review systematically appraised the quality of primary studies. Both reviews concluded that the evidence on efficiency is mixed and inconclusive; there was an initial, unsustained reduction in the rate of growth of prescribing costs among fundholders, and some cost savings, but crude estimates suggest that increased transaction costs outweighed savings and fundholding appeared to have little effect on referrals 20. Smith and Wilton found little evidence to suggest that patients exercised greater choice, or that fundholders were more responsive to patient preferences. Mays et al found no evidence for the effect of general practice fundholding on quality of primary care, while one study reported little change in secondary care quality.

Mays et al also reviewed the effects of health authority purchasing, locality and general practitioner commissioning, and provider autonomy (NHS trust status) on quality, but the evidence was inconclusive. The effects of health authority purchasing could not be separated from those of concurrent programmes, and there was little evidence to suggest that hospital autonomy, defined as NHS trust status, impacted quality. In some cases, quality improvements appeared to result from locality and general practice commissioning, but this was highly variable.

One low quality review 21 concluded that primary care-led commissioning improved responsiveness under general practice fundholding in the UK, citing evidence of improved provision of information in one Primary Care Group 22, and reduced waiting times in one Health Authority 23. It was also stated that patients generally approved of the reforms, though this was not supported with data. In agreement with Mays et al, the review found several studies reporting an increase in transaction costs associated with commissioning, and little evidence to suggest greater patient choice.

The effects of privatisation on quality were examined by Heins et al, who compared non-profit, for-profit and public sector providers of care in terms of staff-patient ratios, user satisfaction, mortality and hospitalisation rates24. 32 out of 46 studies reported that the growth of the for-profit sector resulted in declining service quality, though the specific domains of quality were not identified and the studies reviewed suffered numerous methodological problems. Further detail was provided on the impact on staff ratios, which were consistently found to be better in non-profit than for-profit institutions, and were best in government run facilities.

One review 25 observed the effect of increased marketisation and competition between providers on avoidable mortality, mostly from studies of managed care in the US. Competition appeared to improve outcomes post-1990 in one US study 26, but results were more mixed in several later studies 27-29. The evidence outside the US was primarily from the UK internal market of 1991-97, and two studies suggested a resulting fall in quality due to an increase in deaths from patients admitted to hospital with myocardial infarction 30, 31.

Integration of services

Six systematic reviews examined the effect of changes to service integration on quality in health care; one studied financial integration of health and social care bodies, two studied organisation of services, and three studied integration of care (Table 4). The reviews were generally higher quality, but primary studies ranged from low to moderate quality.

One moderate quality review 25 examined methods of financial integration across health and social care bodies, including joint commissioning (combining health and social care purchasers), pooled funds, aligned budgets, integrated management and structural integration. The evidence was fairly limited; two before and after studies of integrated management interventions for care of elderly people in Italy recorded a decline in hospital admissions, while one randomised trial of integrated management, joint commissioning and pooled funding in Canada reported improved patient empowerment, choice and dignity 32, 33. A UK Audit Commission report revealed a lack of evidence that joint commissioning affected health outcomes, but the study was subject to several methodological weaknesses34.

Two reviews35, 36 assessed the effect of integrating or substituting emergency departments with primary care. Robert and Mays found that substituting primary care doctors for staff in traditional emergency departments improved efficiency, with reduced use of diagnostic tests, referrals and emergency department utilisation. More recently, Khangura et al assessed the effects of providing primary care services alongside emergency departments, and concluded that the evidence suggesting GPs make fewer hospital admissions and order fewer diagnostic tests was weak. Two studies reviewed found no difference in satisfaction or self-reported health outcomes between patients visiting a general physician or an emergency physician, and no different in re-attendance rates 37, 38.

Three high quality reviews assessed the effect of service integration in the form of interdisciplinary teams and case management39-41. Aubin et al found evidence to support the use of interdisciplinary teams; one randomised controlled trial reported improved psychological status and quality of life42, and two randomised controlled trials reported higher patient satisfaction 43, 44. Renders et al also observed positive impacts on patient satisfaction and clinical outcomes resulting from interdisciplinary teams in combination with case management and patient education. The third review, by Low et al, examined studies of integrated care, consumer-directed care and case management for older persons. Case management was found to improve clinical outcomes, while integrated and consumer-directed care did not. However case management and integrated care were found to have no effect or mixed effects on patient satisfaction, while low quality evidence suggested increased satisfaction under consumer-directed care.

Discussion

Recent years have seen a major growth in synthesis of research on clinical interventions, encouraged by the Cochrane Collaboration. However, there have been few systematic reviews of health system interventions in high-income countries for a number of reasons. First, modern health systems are complex and decisions about how to organise them are often highly contested. This creates both technical barriers to experimentation, as it may be difficult to change only one thing while all else remains the same, and political, as politicians must admit to uncertainty about what is best, something that they have often been reluctant to do. Second, studies on the scale necessary to identify significant differences are complex and very expensive; the RAND Health Insurance Experiment, which examined the impact of cost-sharing, took over a decade and cost almost $300 million in current prices 45, but was underpowered to detect differences in health outcomes. Third, as health systems are complex social systems, influenced by their broader environments and prevailing cultures, results may not be generalisable beyond the settings in which they were undertaken. Fourth, interventions may achieve short term results that are not sustained in the long run. Finally, funding for health services and systems research in high income countries is very limited and what exists is concentrated in a few countries such as the USA and UK.

Summary of findings

This umbrella review has identified only a small systematic review-level evidence base and substantial evidence gaps around certain interventions, most notably on changes to resource allocation systems (something also noted in our companion review of equity).

- Paying providers: The reviews of paying providers to promote quality are largely inconclusive. This needs to be set in a broader context. There is a strong theoretical and empirical case that individuals do respond to financial incentives in ways that are intended, such as increased undertaking remunerated tasks, but also in ways that are unintended, in the form of gaming the system. Where the goal is straightforward, for example to produce more of an easily defined object, then financial incentives may work, but they are more problematic when the product is much less easily defined, as in health care.
- Purchasing and provision: The lack of conclusive evidence on the outcomes of various forms of purchaser-provider split is particularly striking. This is an idea that successive governments in the UK have sought to implement for two decades in various forms, but seemingly with little learning from earlier attempts. The findings suggest that structural changes, such as the creation of new purchasing organisations, have very little impact on patients or frontline providers, and any changes that do occur are short-lived. Furthermore, such arrangements seem to give rise to increased transaction costs that are not compensated for by cost savings. However, research on this issue is dominated by the United Kingdom, where changes being evaluated have been implemented alongside multiple initiatives, and any real effect would be difficult to isolate from concurrent reforms.
- Integration of services: In contrast, there is some evidence that greater integration of services can benefit patients, although much seems to depend upon the approach taken.

Although there is currently a political drive to increase private provision of health care in some countries, claims that this might increase efficiency are not supported by the available evidence. However, it does seem that any cost savings are at the expense of reduced staff numbers. Given other evidence that, for example, low nurse-patient ratios are associated with worse outcomes, this is a matter for concern 46-48. Similarly, political enthusiasm for greater competition among providers receives little empirical support, for reasons that have been set out in detail 49.

Limitations

This paper is, by definition, limited to existing systematic reviews. The searches covered only seven databases, and it is possible that a broader search strategy would locate more relevant studies –

though there would be a trade off in terms of researcher time. It should be noted that the search strategy used here is comparable to other published umbrella reviews of health equity 6, 7.

There is clearly a need for more systematic reviews to be undertaken but, as noted above, the primary research that they can draw on may be quite limited. However, health systems face evolving challenges, and those systems must respond to them. It will often be necessary to make decisions on the balance of probabilities rather than waiting until the evidence is beyond reasonable doubt. As one writer has noted, “the alternative is paralysis”50.

Conclusion

The evidence base suggests that the privatisation and marketisation of health care systems does not improve quality, and that most financial and organisational system-level reforms have either inconclusive or negative effects.

Funding

The trade union Unison provided travel expenses for project meetings. The sponsor had no influence on the interpretation of findings, the content of the report, or the decision to publish.

Acknowledgements

This paper was prepared as part of the evidence gathering phase of the Parliamentary Labour Party Health Policy Inquiry into Health Systems (2013) at the request of the Chair, Debbie Abrahams MP.

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Table 1: Number of articles

Number of articles Database	Hits	Removed Duplicates	Excluded at title and abstract stage	Full papers examined	Included in final analysis
Cochrane	587	585	571	14	6
DARE	40	39	34	5	4
EPPI	20	20	19	1	0
Campbell	194	194	194	0	0
PROSPERO	30	27	27	0	0
Medline	511	496	494	2	0
ASSIA	475	474	468	6	2
Citations	0	0	0	0	7
Total	1857	1835	1807	28	19

Table 2: Reviews of payment of providers

Review details	Main findings	Quality appraisal*
Citation: Chaix-Couturier et al., 2000 *Intervention(s):* Financial incentives for medical professionals. *Quality Outcomes:* Process and outcomes of care. Study N: 89 *Study Designs:* randomized studies, same physician studies, same patient studies, same disease studies, observational studies, literature reviews. Database N: 6 *Time/language/country restrictions:* 1993-99, English & French language, no country restrictions. Synthesis method: Narrative	*Inconclusive* -Quality of care and patient satisfaction did not differ between prospectively paid and FFS physician groups in one randomised study. - Financial incentives can improve compliance with practice guidelines, but results are not conclusive. -A shift to fund-holding can reduce referrals, but the quality of evidence is weak. Salaried payment can reduce referrals, and result in lower activity and fewer home visits compared to fee for service (FFS). -FFS was associated with better continuity of care within a managed care organisation in one study.	Low 1, 6, 7
Citation: Robinson & Steiner, 1998 *Intervention(s):* Fee for service (FFS) vs managed	*Negative* -Majority of the observations indicate no significant difference in quality between	Low

Review details	Main findings	Quality appraisal*
care organisations (MCOs) *Quality Outcomes:* Mortality or survival times, clinical markers, functional status, access convenience, communications with clinicians, perceptions of professional competence. Relevant Study N(Total): 27 (70) Study Designs: Not stated Database N: 4 *Time/language/country restrictions:* 1990-96, English language, no country restrictions Synthesis method: Narrative	MCOs and FFS. -Of the studies showing a significant difference, the majority suggested better outcomes with MCOs in terms of mortality, survival times, clinical markers, and functional status. -Measures relating to access, convenience, communications with clinicians, and perceptions of professional competence show higher quality under FFS in 19 out of 37 studies (51%).	2,3
Citation: Flodgren et al., 2011 *Intervention(s):* Financial incentives for medical professionals *Quality Outcomes:* Compliance with clinical guidelines Study N: 4 *Study Designs:* Systematic reviews of RCTs, CBAs, ITS, CCTs Database N: 11 *Time/language/country restrictions:* 1990-2008, no language or country restrictions Synthesis method: Narrative	*Negative* -Financial incentives are not effective in improving compliance with guidelines. -Target payments and bonuses did not improve compliance with guidelines in any studies. Mixed systems of financial incentives improved compliance in a minority (5/13) of studies.	High 1, 2, 3, 4, 5, 6, 7
Citation: Gosden et al., 2000 *Intervention(s):* Capitation, salary, fee for service, mixed methods of payment *Quality Outcomes:* Compliance with clinical guidelines, patient satisfaction, continuity of care Study N: 4 Study Designs: RCTs, CBAs Database N: 11 *Time/language/country restrictions:* 1966-97, no language or country restrictions Synthesis method: Narrative	*Positive* - Compliance with guidelines was higher under FFS than capitation in one study. -Continuity of care was higher for FFS than salaried doctors in one study. - In one study, differences in patient satisfaction between salaried and FFS doctors were tested (along four dimensions of humanness, continuity, access to physicians, overall satisfaction), but only access to physicians was significantly higher for salaried physicians.	High 1, 2, 3, 4, 5, 6, 7
Citation: Scott et al., 2011 *Intervention(s):* Financial incentives for primary	*Inconclusive* -Evidence on the use of financial incentives	High

Review details	Main findings	Quality appraisal*
care physicians *Quality Outcomes:* patient reported outcome measures, clinical behaviours, intermediate clinical and psychological measures. Study N: 7 *Study Designs:* cluster RCTs, CBAs, ITS, controlled ITS Database N: 9 *Time/language/country restrictions:* 2000-09, no language or country restrictions Synthesis method: Narrative	to improve the quality of primary health care is inconclusive. - Six out of the seven studies found a statistically significant and positive effect on quality, but only for one quality measure out of a range used in each study.	1, 2, 4, 5, 6, 7
Citation: Petersen et al., 2006 *Intervention(s):* Pay for performance *Quality Outcomes:* Timely and appropriate care, patient experience, process of care Study N: 17 Study Designs: RCTS, CBAs Database N: 1 *Time/language/country restrictions:* 1980-2005, English language, no country restrictions Synthesis method: Narrative	*Positive* - 5 out of 6 studies on physician-level financial incentives and 7 out of 9 studies on provider group–level incentives found partial or positive effects on quality measures. -1 out of 2 studies on payment-system level incentives found a positive effect on access to care, while the other showed evidence of gaming behaviour or adverse selection, suggesting a negative effect on access to care.	High 1, 2, 3, 4, 5, 7
Citation: Van Herck et al., 2010 *Intervention(s):* Pay for performance *Quality Outcomes:* patient-centredness, clinical effectiveness, continuity of care Study N: 128 *Study Designs:* RCT, cluster RCT, ITS, observational cohort, cross-sectional, concurrent comparison, concurrent-historic comparison Database N: 6 *Time/language/country restrictions:* 1990-2009, no language or country restrictions Synthesis method: Narrative	*Inconclusive* - Evidence on the impact of P4P on clinical effectiveness is mixed, ranging from a negative or no effect to positive effect, depending on measure and programme. -P4P can have positive effects on coordination of care. -Mixed results from studies looking at the impact of P4P on patient-centeredness (one study found no effect, one found a positive effect), and no significant effect found on patient satisfaction.	High 1, 2, 3, 4, 5, 6, 7
Citation: Christianson et al., 2007 *Intervention(s):* Financial incentives to providers (P4P, direct payments or bonuses) *Quality Outcomes:* provider performance targets	*Inconclusive* - Financial incentives to reward providers for quality improvements have mixed results. Evidence is limited and few	Moderate 1, 2, 4, 6, 7

Review details	Main findings	Quality appraisal*
Study N: 36 *Study Designs:* RCTs, quasi-experimental study, controlled observational study, observational study without control group. Database N: 6 *Time/language/country restrictions:* 1988-2006, no language or country restrictions Synthesis method: Narrative	significant impacts are reported.	
Abbreviations: RCT = randomised controlled trial, CCT = controlled clinical trials, CBA = controlled before and after studies, ITS = interrupted time series analysis, P4P = pay for performance. * DARE quality guidelines met		

Table 3: Reviews of arrangements for purchasing and provision of services

Review details	Main findings	Quality appraisal *
Citation: Smith et al. 2004 *Intervention(s):* Primary care-led commissioning *Quality Outcomes:* Patient satisfaction, responsiveness, efficient treatment and care, person-centred care Relevant Study N (total):37 Study Designs: Not stated Database N: 4 Time/language/country restrictions: Not stated Synthesis method: Narrative	*Mixed* - Primary care-led commissioning can improve responsiveness through shorter waiting times and increased information on patients' progress. Some evidence that patients approved of the service changes brought about by primary care-led commissioners. - But primary care led commissioning has not had a significant impact on secondary care, and resulted in increased transaction costs. Primary care-led commissioning did not lead to more effective patient choice of provider.	Low 1,2
Citation: Smith & Wilton 1998 Intervention(s): GP fundholding *Quality Outcomes:* Patient satisfaction and choice, efficient treatment and care *Study N:*Not stated Study Designs: Not stated Database N: 2	*Inconclusive* - Evidence is incomplete and mixed - Some evidence of shorter waiting times, and improved access to radiology and pathology services. - There is little evidence that patients exercised greater freedom of choice, or that fundholders were more likely to take account of patient preferences.	Low 1,3

Review details	Main findings	Quality appraisal *
Time/language/country restrictions: 1990-96, English, UK Synthesis method: Narrative	- Evidence on efficiency is inconclusive	
Citation: Mays et al. 2000 (Summary of Le Grand J, Mays N, Mulligan J-A. Learning from the NHS internal market. King's Fund, 1998) *Intervention(s):* 1991/2 British NHS quasi-market reforms *Quality Outcomes:* Patient satisfaction and choice, efficient treatment and care Study N:180 *Study Designs:* CBA, retrospective or historic control studies, routine monitoring, case studies, indirect research, opinion surveys, writer opinion and anecdote. *Database N:* Not stated *Time/language/country restrictions:* 1991-98, Language restrictions not stated, UK Synthesis method: Narrative	*Inconclusive* -Little measurable change that could be attributed to the quasi-market reforms with any certainty. - Some evidence that fundholders provide more accessible services and shorter waiting times. - GP Fundholding thought to have had mixed effect on efficiency. Little change in the quality of secondary care, and no evidence on quality of primary care. - Fundholders were more willing to offer patient choice, but patients indifferent to this. -Case studies showed some quality gains through Health Authority Purchasing. -Some quality improvements in primary and community health services with GP commissioning, but depended on local health authority. -NHS trust status had mixed effects on efficiency.	Low 1, 4, 6
Citation: Propper et al. 2006 *Intervention(s):* Purchaser-provider split, competition between providers *Quality Outcomes:* Clinical outcomes (avoidable mortality) *Study N:*Not stated Study Designs: Not stated Database N: 7 Time/language/country restrictions: Not stated Synthesis method: Narrative	*Mixed* - Competition can improve outcomes, dependent on institutional design. -US studies of managed care show improved outcomes with increased competition post 1990, but later studies show more mixed results. Impact on quality depends on who sets reimbursement rates for hospitals. - Studies evaluating the UK internal markets 1991-7 suggest that quality fell during the internal market. -Best US evidence suggests that quality is higher where markets are more competitive, but this was not the case in the English internal market.	Low 1,2
Citation: Heins et al. 2010	*Negative* -No consistent evidence that non-profits	Low 1,2

Review details	Main findings	Quality appraisal *
Intervention(s): Non-profit, for-profit, or government hospitals *Quality Outcomes:* User satisfaction, mortality and hospitalisation rates, staff-patient ratios. Relevant Study N (Total):43 (163) *Study Designs:* All study designs eligible Database N: 5 *Time/language/country restrictions:* 2001-06. No language or country restrictions stated. Synthesis method: Narrative	perform better than the private sector. - 32 of 43 studies stated that the growth of the for-profit sector led to declining service quality. -The skill level and staff-patient ratio were consistently better in non-profit than for-profit institutions, and were best in government-run facilities.	
* DARE quality guidelines met		

Table 4: Reviews of the integration of services

Review details	Main findings	Quality appraisal*
Citation: Weatherly et al. 2010 *Intervention(s):* Integrated Resource Mechanisms (financial integration across health and social care, mechanisms to allow resources to follow patients) *Quality Outcomes:* Health outcomes, patient satisfaction, professional performance (process measures). Study N:79 *Study Designs:* Case studies, examples, reports Database N: 8 *Time/language/country restrictions:* 1999-2010, English language, excludes developing countries/countries not relevant to Scottish health system. Synthesis method: Narrative	*Positive* - Improvements in carer burden, carer and patient satisfaction, and functional independence were reported, but most reviewed studies that assessed health outcomes found no effect. - Some evidence of improvements in process measures, such as hospital admissions and delayed discharges. -Other positive outcomes identified in the studies reviewed included patient empowerment and choice and respect for patient dignity.	Moderate 1,2,3,6,7
Citation: Aubin et al. 2012 *Intervention(s):* Integration of services (multidisciplinary teams) for cancer patients *Quality Outcomes:* Patient satisfaction, continuity of care, holistic care Relevant Study N (Total): 2(51) Study Designs: RCTs	*Positive* - 1 study found patients supported by a multidisciplinary team had improved psychological status and quality of life. -2 studies found interdisciplinary team model of care had significantly higher patient satisfaction.	High 1, 2, 3, 4, 5, 6, 7

Review details	Main findings	Quality appraisal*
Database N: 7 Time/language/country restrictions: No restrictions stated Synthesis method: Meta-Analysis		
Citation: Low et al. 2011 *Intervention(s):* Integrated care, case management, and consumer directed care for older persons. *Quality Outcomes:* Patient satisfaction and clinical outcomes. Study N:35 *Study Designs:* RCTs, non randomised trials, observational studies. Database N: 6 *Time/language/country restrictions:* 1994-2009, English language, no country restrictions. Synthesis method: Narrative	*Mixed* - Case management has no effect on patient satisfaction, there is mixed evidence for integrated care, and low quality evidence that patient satisfaction is higher with consumer directed care. -Evidence shows that case management improves clinical outcomes, but integrated care and consumer directed care do not.	High 1, 2, 3, 4, 5, 6, 7
Citation: Renders Carry et al. 2000 *Intervention(s):* Interdisciplinary teams for diabetes patients. *Quality Outcomes:* Professional performance, patient satisfaction. Study N:41 *Study Designs:* RCTs, CCTs, CBAs, ITS Database N: 6 *Time/language/country restrictions:*1966-99, no language or country restrictions. Synthesis method: Narrative	*Positive* - The combination of a multidisciplinary team with case management and patient education showed favourable effects on process and patient outcomes. - Organisational interventions that improve regular prompted recall and review of patients can improve diabetes management	High 1, 2, 3, 4, 5, 6, 7
Citation: Khangura Jaspreet et al. 2012 *Intervention(s):* Provision of primary care services within or alongside hospital emergency departments. *Quality Outcomes:* Resource use, re-attendance rates, patient satisfaction, self-reported health outcomes. Study N:3	*Positive* -Evidence suggests that physician type has no effect on re-attendance rates, patient satisfaction or patient self-reported health outcomes - Weak evidence to suggest that GPs prove more efficient treatment and care, making fewer admissions to hospital and ordering fewer blood or x-ray investigations than	High 1, 2, 3, 4, 5, 6, 7

Review details	Main findings	Quality appraisal*
Study Designs: non randomised trials Database N: 10 Time/language/country restrictions: no restrictions stated. Synthesis method: Narrative	regular emergency departments.	
Citation: Roberts & Mays 1997 *Intervention(s):* Substitution of primary care for traditional accident and emergency department *Quality Outcomes:* Patient satisfaction, resource consumption. Study N:33 *Study Designs:* RCTs, ITS, CBA, uncontrolled before-after studies, non-random group comparison and retrospective studies with comparative analysis Database N: 7 *Time/language/country restrictions:* 1970-1997, no language or country restrictions. Synthesis method: Narrative	*Positive* -Patient satisfaction was not lower with primary care organisational interventions such as primary care emergency centres, appointment systems, or single-handed practitioners. - All studies found integration of primary and hospital care resulted in lower general use of diagnostic investigations and fewer referrals to secondary services.	Moderate 1, 3, 4, 5, 6
Abbreviations: RCT = randomised controlled trial, CCT = controlled clinical trials, CBA = controlled before and after studies, ITS = interrupted time series analysis. * DARE quality guidelines met		

Appendix 1: Search Terms

Medline (electronic, title and abstract)

health care system OR social care

AND

funding OR financial OR pooling OR insurance OR insured OR provider OR provision OR tax OR taxation OR budget OR pay OR commission OR purchasing OR purchaser OR market OR marketisation OR privatisation OR marketization OR privatization

AND

quality OR outcome* OR mortality OR quality of life OR survival OR satisfaction OR perform* OR holistic OR competence OR risk OR efficien* OR person-centred OR patient-centred OR person centred OR patient centred

AND

metaanaly* OR meta-analy* OR meta study OR meta synthes* OR meta evaluat* OR literature review OR synthes* OR review* OR systematic review

AND

Commonwealth Fund OR Australia OR Canada OR Denmark OR England OR Wales or Scotland or UK or United Kingdom OR France OR Germany OR Iceland OR Italy OR Japan OR Netherlands OR New Zealand OR Norway OR Sweden OR Switzerland OR United States OR OECD OR EU OR European

ASSIA (electronic, full text)

health care system OR social care

AND

funding OR financial OR pooling OR insurance OR insured OR provider OR provision OR tax OR taxation OR budget OR pay OR commission OR purchasing OR purchaser OR market OR marketisation OR privatisation OR marketization OR privatization

AND

quality OR outcome* OR mortality OR quality of life OR survival OR satisfaction OR perform* OR holistic OR competence OR risk OR efficien* OR person-centred OR patient-centred OR person centred OR patient centred

AND

metaanaly* OR meta-analy* OR meta study OR meta synthes* OR meta evaluat* OR literature review OR synthes* OR review* OR systematic review

AND

Commonwealth Fund OR Australia OR Canada OR Denmark OR England OR Wales or Scotland or UK or United Kingdom OR France OR Germany OR Iceland OR Italy OR Japan OR Netherlands OR New Zealand OR Norway OR Sweden OR Switzerland OR United States OR OECD OR EU OR European

Campbell /DARE (electronic, all text)

health care system OR social care

AND

funding OR financial OR pooling OR insurance OR insured OR provider OR provision OR tax OR taxation OR budget OR pay OR commission OR purchasing OR purchaser OR market OR marketisation OR privatisation OR marketization OR privatization

AND

quality OR outcome* OR mortality OR quality of life OR survival OR satisfaction OR perform* OR holistic OR competence OR risk OR efficien* OR person-centred OR patient-centred OR person centred OR patient centred

AND

Commonwealth Fund OR Australia OR Canada OR Denmark OR England OR Wales or Scotland or UK or United Kingdom OR France OR Germany OR Iceland OR Italy OR Japan OR Netherlands OR New Zealand OR Norway OR Sweden OR Switzerland OR United States OR OECD OR EU OR European

Cochrane (electronic)

health care system OR social care OR health system **(title, abstracts, keywords)**

AND

funding OR financial OR pooling OR insurance OR insured OR provider OR provision OR tax OR taxation OR budget OR pay OR commission OR purchasing OR purchaser OR market OR marketisation OR privatisation OR marketization OR privatization **(full text)**

AND

quality OR outcome* OR mortality OR quality of life OR survival OR satisfaction OR perform* OR holistic OR competence OR risk OR efficien* OR person-centred OR patient-centred OR person centred OR patient centred **(full text)**

AND

Commonwealth Fund OR Australia OR Canada OR Denmark OR England OR Wales or Scotland or UK or United Kingdom OR France OR Germany OR Iceland OR Italy OR Japan OR Netherlands OR New Zealand OR Norway OR Sweden OR Switzerland OR United States OR OECD OR EU OR European **(full text)**

Prospero (electronic, all fields)

health care system OR social care

EPPI-Centre (manual, topic)

Health care, Health commissioning, Health inequalities, Health insurance, Health policy – evaluation, Incentive schemes, Integrated care and education

Appendix 2

Title: The Effects of Organisational and Financial Health Care System Reforms on Equity in Health: Evidence from systematic reviews

Short Title: Equity effects of health system reforms

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Abstract

Over the last 25 years, the health care systems of most high-income countries have experienced extensive - usually market-based – organisational and financial reforms. The impact of these system changes on health equity has been hotly debated. Examining evidence from systematic reviews of the effects of health care system organisational and financial reforms will add empirical information to this debate, identify any evidence gaps and help policy development. Systematic review methodology was used to locate and evaluate published systematic reviews of quantitative intervention studies (experimental and observational) of the effects on equity in health care access and/or health status of health care system organisational and financial reforms (system financing, funding allocations, direct purchasing arrangements, organisation of service provision, and health and social care system integration) in high-income countries. Nine systematic reviews were identified. Private insurance and out-of-pocket payments as well as the marketisation and privatisation of services have either negative or inconclusive equity effects. The evidence base on the health equity effects of managed care programmes or integrated partnerships between health and social services is inconclusive. There were no relevant studies located that related to resource allocation reforms. The systematic review-level evidence base suggests that financial and organisational health care system reforms have had either inconclusive or negative impacts on health equity both in terms of access relative to need and in terms of health outcomes.

Introduction

Over the last 25 years, the health care systems of most high-income countries have experienced extensive - usually market-based – organisational and financial reforms. These changes have been remarkably consistent in different countries and under successive governments regardless of their political affiliation. The emphasis has unswervingly been on promoting choice, competition and the role of markets in health care ostensibly to drive up quality, stimulate innovation and promote greater equity. England is a strong example of this process where successive “reforms”, from the internal market in 1989 through to the Health and Social Care Act of 2012, have been justified on these grounds. Critics of reform have consistently rejected these claims. Examining evidence of the

effects of previous health care system organisational and financial reforms will add empirical information to this heated debate, identify any evidence gaps and help policy development. This article therefore synthesises systematic reviews on the effects on health equity of health care reforms. A companion paper does the same with respect to quality of care.

Methods

The objective of this study was to review existing evidence on the effects of organisational and financial health system interventions on equity of health care. An 'umbrella review' of systematic reviews was carried out, using systematic review methodology to identify relevant reviews.

Inclusion Criteria

Inclusion criteria for the review were determined a priori in terms of population, intervention, context, outcomes and study design, and the review protocol was registered with PROSPERO (No. CRD42013004363). The population was defined as adults and children of all ages. Health equity is defined in terms of socio-economic inequalities (SES) in health care access and utilisation, health outcomes (e.g. self-rated health, mortality rates, disease prevalence etc) or income. In keeping with other equity focused reviews, SES inequalities are here defined in terms of differences in outcomes by SES (income, education, occupational class) or outcomes for the most vulnerable or deprived groups (e.g. unemployed, lone parents, deprived areas, etc)7,8. Though any selection of countries would, to some extent, be arbitrary, for external consistency we limited the review to the health systems of 15 high income countries used by the Commonwealth Fund in their international work (Australia, Canada, Denmark, France, Germany, Iceland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom and the United States). This election covers all the main types of health systems in high-income countries. In this review, 'health systems' refer to primary and secondary care, outpatient, ophthalmic, physiotherapy and dental services. Organisational and financial health care systems interventions were defined as: (1) system financing, (2) funding allocations, (3) direct purchasing arrangements, (4) organisation of service provision, and (5) health and social care system integration.

As previously noted, we included only systematic reviews in our analysis. Reviews had to include intervention studies with quantitative outcomes, and meet two mandatory DARE (Database of Abstracts of Reviews of Effects) criteria: (1) address a clearly defined question, and (2) search at least one named database combined with either citation searching or contacting authors in the field. Reviews were defined as 'systematic' if at least two components of the review question were explicitly defined and the search criteria were fulfilled. Reviews were defined as 'partially systematic' if two or more components of the review question could be inferred from the title or text and the search criteria were fulfilled.

Search Strategy

Five specialist systematic review electronic databases were searched: the Cochrane Database of Systematic Reviews (CDSR), the Database of Abstracts of Reviews of Effects (DARE), the Campbell Collaboration Database, PROSPERO and the EPPI-Centre database of health promotion and public health studies. In addition, two general databases were searched: the Applied Social Sciences Index and Abstracts (ASSIA) and Medline (which includes Web of Science and Medline). All databases were searched from start date to January 2013. The combination of intervention, outcome and study design terms provided the keywords for the search (as detailed by database in Appendix 1). Citation follow-up was conducted on the bibliographies of included studies. We included all publications in English that met the inclusion criteria.

Data Extraction and Quality Appraisal

The identified titles and abstracts were screened for relevance. Full paper manuscripts of papers considered relevant were obtained and studies meeting all aspects of the inclusion criteria were data extracted and included in the synthesis. Data extraction and quality appraisal of included

studies was carried out by two independent reviewers. The methodological quality of each systematic review was appraised using adapted DARE criteria (http://www.crd.york.ac.uk/CRDWeb/AboutDare.asp) as previously used in umbrella reviews. The criteria were as follows: (1) is there a well-defined question; (2) is there a defined search strategy; (3) are inclusion/exclusion criteria stated; (4) are study designs and number of studies clearly stated; (5) have the primary studies been quality assessed; (6) have the studies been appropriately synthesised; (7) has more than one author been involved in each stage of the review process. Reviews were categorised as low (met 0-3 criteria), medium (4-5) or high (6-7) quality.

Results

Overview

The literature searches and citation follow ups identified a total of 1283 studies (Table 1). 1254 of these studies were excluded at the title and abstract screening stage (including duplicates) with 29 full manuscripts examined. Nine of these met all aspects of the inclusion criteria and were included in the synthesis. A list of the twenty excluded papers (with reasons for exclusion) is provided in Appendix 2. The included studies were selected, data extracted and quality appraised by two reviewers. The results are synthesised by intervention type below. The findings are also summarised in Tables 2-5. In terms of intervention type, no reviews examined the effects of funding allocation reforms on health equity outcomes for the 15 Commonwealth Fund countries (although Gelorimo et al. 20119 included this intervention type, the three studies they included related only to the non-Commonwealth Fund countries of Spain and Ireland). However, all of the other intervention types were covered with one of the reviews examining multiple types of intervention9. Four reviews contained data on general system financing, one covered direct purchasing arrangements, and there were three on the provision of services and two on health and social care system integration. The quality of the reviews was very variable with three high quality, one moderate quality and five low quality. Relevant studies in the reviews were from the following Commonwealth Fund countries: France, Italy, Netherlands, Sweden, UK, USA.

General system financing

Four reviews included studies of general system financing interventions. These interventions varied considerably and included: an increase in the use of private insurance (included in the Gelormino et al. 20119 review), an increase in free care programmes (in the review by Gepkens and Gunning-Schepers 1996)10, as well as rather USA-specific interventions comparing fee-for-service with managed care (Steiner and Robinson 199811; Chaix-Couturier et al. 2000)12. Increased use of private insurance had negative heath equity impacts in terms of access, whereas free care programmes had positive health equity outcomes. The two reviews comparing fee-for-service compared to managed care were inconclusive (detailed findings are summarised in Table 2). The low quality, only partially-systematic review (8) synthesised eleven studies of financial interventions from the USA. The authors found that structural interventions (e.g. managed care private insurance systems which provided free care once patients were enrolled versus managed care private insurance systems which still required co-payment; or public insurance managed care systems such as Medicare and Medicaid) which aim to increase the financial accessibility of health services were effective in reducing socio-economic health inequalities or improving the health of the poorest.

The moderate quality, fully-systematic, review by Gelormino et al. (2011)9 included one French study (Bellanger and Mosse, 2005)13 which examined increases in the role of private insurance. The results for health equity were negative as the study found that between 1980 and 2003, as the public share of health care expenditure decreased and private insurance increased, social and spatial inequalities in access increased particularly in relation to preventative, perinatal and sexual health services. The low quality, only partially-systematic, review of managed care organisation services compared to fee-for-service based provision in the USA (Steiner and Robinson 1998)11 included four relevant studies. Little detail was provided in the review and the results were mixed: for low income women, managed care seemed to offer comparable or better access to preventive screening

services, but poorer access to maternity care. The findings of the low quality - but fully-systematic - review by Chaix-Couturier et al (2000)12 were also mixed as the three relevant USA studies which it included found that managed care decreased service provision by physicians, or did not produce better outcomes. A randomized study by Davidson *et al.* (1992)14 of fee-for-service versus capitation for the children's Medicaid programme found capitation significantly decreased the number of physicians' visits and hospitalisations, whereas provision of services increased when the fee was increased. A study by Ware et al. (1996)15 found that poor or elderly patients treated in fee-for-services practice had better outcomes than those treated in managed care organisations. A randomised trial conducted by Lurie et al. (1994)16 reported that the access to or quality of care and patient satisfaction did not differ between prepaid and fee-for-service physicians groups.

Direct purchasing

Only one moderate quality, fully-systematic, review by Gelormino and colleagues (2011)9 examined direct purchasing reforms. It included two studies from Sweden and Italy which both examined the equity impacts of increased user fees and out of pocket payments. Both studies found a negative impact on health equity. The Swedish study (Burstrom et al., 2002)17 found that the increase in user fees as a result of the early 1990s health care reforms led to an increase in the proportion of lower income groups reporting that they had "needed but not sought medical care" after the reforms (1996-97) than before (1988-89). This was accompanied by an increased utilisation of emergency care by lower income groups. The Italian study (Donia Sofio, 2006)18 found that an increase in the role of out of pocket payments for health services in the 2000s led to the impoverishment of 1.3 percent of Italian households. This negative impact on income distribution was largely as a result of pharmaceutical, specialist and dental services.

Organisation of service provision

Three reviews included studies of organisation of service provision interventions. One examined the effects on equity of privatisation of services (private provision of services), with two examining the effects of marketisation (increased competition within a publicly funded system). Two reviews found that such reforms were universally negative for health equity, whilst the other review was inconclusive. The low quality, partially systematic, review by Braithwaite et al (2011)19 and the high quality, fully systematic, review by Hanratty et al (2007)20 of the privatisation and marketisation of health care services in the USA and Sweden respectively found increased inequalities in access and utilisation. In contrast, the low quality, partially systematic, review of marketisation in England via "patient choice" by Fotaki et al. (2008)21 was inconclusive (detailed in Table 4).

A low quality, only partially-systematic, review by Braithwaite et al (2011)19 examined the impacts on health care access of hospital privatisation. The review lacked detail but described one US study, by Schlesinger et al. (1987)22, which analysed the effects of the increased dominance of for-profit providers and large corporations on equity. They concluded that this dominance had been a primary cause of reduced access to health care for the poor and uninsured.

The low quality, partially-systematic, review by Fotaki et al. (2008)21 which focused on marketization in the form of increased "patient choice", included three relevant studies – all from England. Overall the findings were inconclusive. One study of the internal market in primary care in England (GP fund holding) found negative impacts on equity of access (Mannion et al. 2005)23. However, another study (of the London Patient Choice Project) found no impact on inequalities in access (Coulter et al. 200524; Dawson et al. 2004)25 with reductions in waiting times reported for all patients (Dawson et al. 2004)25. However, the Coulter et al. (2005)24 study also found that lower educated and low income groups were less likely to exercise choice and select an alternative hospital.

The high quality, fully-systematic, review by Hanratty and colleagues (2007)26 included two studies of the effects of marketization on health care utilisation and access in Sweden. A longitudinal study

by Whitehead et al. (1997)27 found very little difference in the use of health care services by socioeconomic status in 1984-85 and 1990-91, however, by 1993-94 (after a period of - unspecified - market-based reforms in the Swedish nationalised system), manual workers were less likely to access health care services relative to need. In a follow-up longitudinal study, Burstrom et al (2002)17 found that by 1996-97, the lowest income groups in Sweden were also more likely to report not seeking care for which they perceived a need. This had not been the case prior to the reforms in 1988–89 (Burstrom et al 2002)17. This Burstrom study17 is also detailed as it was included in the Gelormino and colleagues (2011)9 review in relation to direct purchasing reforms.

Health and social care system integration
Two high quality, fully-systematic reviews addressed the integration of health and social care systems in the form of public health partnerships 28, 29. Area based partnership interventions in deprived areas of England were found to have either no effect or a slightly positive effect by Smith et al. (2009)28. Similar results were noted by Hayes et al (2012)29 in relation to multi-agency partnerships in the USA and the Netherlands.

Four prospective studies were included in the high quality systematic review by Smith et al. (2009)28. These all examined partnership based local area interventions to improve health in the most deprived areas of England. These partnerships were typically between health services (in the form of public health and primary care) with local authorities (social services). Two studies evaluated the New Deal for Communities partnerships30, 31 and neither study found an intervention effect. There was no evidence that New Deal for Communities areas were improving their relative position with regard to mortality rates or hospital admissions (CRESR 2005)30. Similarly, the study by Stafford et al. (2008)31 found no consistent differences between New Deal for Communities and comparator areas in the pattern of health-related outcomes for different demographic groups. One study by Hills et al. (2007)32 suggested that regular attendance at Healthy Living Centres was associated with beneficial outcomes relating to smoking, activity, and fruit/vegetable consumption. Deterioration in physical and mental health experienced by non-regular users was not found among regular users. A study by Bauld et al. (2005)33 of Health Action Zones found that they made no greater improvements to population health than comparison areas (although there were some decreases in coronary heart disease related mortality).

A high quality Cochrane systematic review by Hayes et al. (2012)29 included two studies from the Netherlands and the USA. In the Netherlands, Kloek et al. (2006)34 aimed to improve health-related behaviours measured through self-reported diet, exercise, smoking and alcohol behaviours in a deprived community. They delivered a range of health-behaviour activities in schools, small community groups and public events. The intervention failed to show any health benefit arising from a wide ranging community intervention apart from a minimal increase in self-reported fruit consumption. The American study (Bruzzese et al. 2006)35 targeted kindergarten children with asthma in a deprived community in New York. They established Preventive Care Networks for each intervention school and delivered training for health and educational professionals. However, Bruzzese et al. (2006)35 found no health benefits for patients or their carers.

Discussion
This review has identified only a small and generally poor quality systematic review-level evidence base. Only three of the nine reviews were of a high quality and only four were considered to be fully systematic. Many of the reviews failed to adequately describe the results of their included primary studies, the interventions under evaluation or relied on very broad and vague descriptions such as "marketization" reforms. Equity was seldom the main focus of the reviews. In addition, the studies related to only a small range of countries and many of the studies related to interventions in the US system. Their applicability to the UK and wider European health care context is highly questionable (e.g. fee-for-service vs. managed care is not relevant to the UK situation where for any introduction

of managed care the comparator would be free care). There were also notable evidence gaps around some interventions, most notably on changes to resource allocation systems.

The results of the umbrella review are inconclusive or negative which ought to make governments even more wary and cautious about subjecting complex health care systems (such as the English NHS) to such far-reaching and untested changes whose consequences are both hard to identify and often unpredictable in their impact. Of course, evidence, will only ever be one factor in reaching decisions and not necessarily or always the most significant one. But unless driven purely by blind ideology or values that have no basis in social justice, then it is surely incumbent upon a government to proceed cautiously and on the basis of an equity impact assessment of risk36. This is perhaps even more essential when the financial squeeze on public services is exacerbating issues around equity and access to provision.

However, the existing evidence is not all weak or inconclusive. It is stronger and less equivocal in some areas than others and it is important to acknowledge this and to challenge governments for their selective and partial use of evidence in support of choice and competition to justify changes. The organisation of services component of the review bears out what is a strong conclusion emerging from the literature, namely, that the market-style reforms are bad for health equity. Furthermore, in other areas, just because the research base is inconclusive does not mean that the policy is working or should be defended. It could be because of problems in the research design which failed to pick up the changes. It is also the case that in a complex system when there is a lot happening in terms of policy initiatives and other changes, it becomes almost impossible to establish cause and effect or to attribute causation to a particular policy. Finally, researching the softer aspects of change, like culture, working practices and assumptive worlds, knowledge and the distribution of power and influence are often quite nebulous and difficult to research. But all of this is to emphasise the point made above that given these complexities and difficulties, governments need to exercise particular caution in making changes which may over time have unintended consequences – if indeed, they are unintended. The problem with health care reforms is that they are more faith-based than evidence-based.

Summary of findings

Overall, this umbrella review has identified only very small and generally poor quality systematic review-level evidence base on the health equity effects of financial and organisational health care system reforms in high-income countries.

- *General system financing*: The four systematic reviews identified suggest that increased use of private insurance has negative health equity impacts. In contrast, there is evidence from the USA that increased use of free-care programmes has positive health equity outcomes. The effects of US managed care programmes are inconclusive and of little applicability to European context.

- *Direct purchasing*: The single review of increased user fees and out of pocket payments found a negative impact on health equity.

- *Organisation of services*: In terms of the marketisation and privatisation of health care services, two of the three relevant reviews (including the better quality one) found that such reforms were negative for health equity, whilst the other review was inconclusive.

- *Health and social care integration*: The evidence on the equity effects of integrated partnerships between health and social services is inconclusive.

- *Resource allocation*: There were no relevant studies located that related to resource allocation reforms.

Overall, the evidence summarised here suggests that financial and organisational health care system reforms have had either inconclusive or negative impacts on health equity both in terms of access relative to need and in terms of health outcomes.

Limitations
The main limitation was simply that there were too few systematic reviews of interventions conducted. It was also a challenge to locate the relevant systematic reviews that had been conducted. Searching for studies on health inequalities is difficult and time-consuming, and the searches can often suffer from a lack of sensitivity and a lack of specificity7. This paper is, by definition, limited to existing systematic reviews. The searches covered only five databases, and it is possible that a broader search strategy would locate more relevant studies – though there would be a trade off in terms of researcher time. It should be noted that the search strategy used here is comparable to other published umbrella reviews of health equity7, 37.

Conclusion
There is only a very partial and poor quality systematic review-level evidence base on the health equity effects of financial and organisational health care system reforms in high-income countries. Overall though, the evidence summarised here suggests that financial and organisational health care system reforms have had either inconclusive or negative impacts on health equity both in terms of access relative to need and in terms of health outcomes. There is a clear need for a high quality systematic review of intervention-level evidence in this area, especially one that makes its findings relevant to the UK and European context.

Funding
The trade union *Unison* provided travel expenses for project meetings. The sponsor had no influence on the interpretation of findings, the content of the report, or the decision to publish.

Acknowledgements
We would like to thank Dr Alex Scott-Samuel for his advice as well as Julie McLoughlin for technical support. This paper was prepared as part of the evidence gathering phase of the Parliamentary Labour Party Health Policy Inquiry into Health Systems (2013) at the request of the Chair, Debbie Abrahams MP.

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Table 1: Results of the searches by database

Database	Hits	Excluded at title and abstract stage	Full papers examined	Included in final analysis
Cochrane	504	502	2	1
DARE	15	10	5	3
EPPI	17	16	1	0
Campbell	216	216	0	0
PROSPERO	27	27	0	0
Medline	168	165	3	0
ASSIA	335	319	16	4
Citations	-	-	2	1
Total	1283	1254	29	9

Table 2: Results table for reviews of general system financing

Review details	Main findings	Quality appraisal*
Citation: Gelormino et al (2011) *Intervention(s):* increased private insurance	Negative: ➢ French study found	Moderate: 1, 2, 3, 6.

Health Equity Outcomes: health, access *Relevant Study N (total):* 1 (29) *Study Designs:* interrupted time series, repeat cross-sections *Database N:* 5 *Time/language/country restrictions:* 1990-2007; English, Italian, French, Spanish; Europe only *Synthesis method:* Narrative	increases in social and spatial inequalities in access.	
Citation: Gepkens and Gunning-Schepers (1996) *Intervention(s):* free or public managed care *Health Equity Outcomes:* health by SES, health of deprived groups *Relevant Study N (total):* 11 (129) *Study Designs:* not stated *Database N:* 1 *Time/language/country restrictions:* database start date to 1993, high-income countries only *Synthesis method:* Narrative	Positive: ➢ Eleven USA studies found reductions in socio-economic inequalities in health	Low: 1.
Citation: Steiner and Robinson 1998 *Intervention(s):* Fee for service vs Managed Care *Health Equity Outcomes:* Access to care *Relevant Study N (total):* 4 (70) *Study Designs:* Not stated *Database N:* 4 *Time/language/country restrictions:* 1990-1996; English only *Synthesis method:* Narrative	Inconclusive: ➢ For low income US women, managed care seemed to offer comparable or better access to preventive screening services, but poorer access to maternity care.	Low: 2, 3
Citation: Chaix-Couturier et al. 2000 *Intervention(s):* Fee for service vs managed care (HMO) *Health Equity Outcomes:* Access to services, health outcomes *Relevant Study N (total):* 3 (89) *Study Designs:* Randomized study; RCT; prospective cohort study *Database N:* 6 *Time/language/country restrictions:* January 1993 to May 1999; English and French only *Synthesis method:* Narrative	Inconclusive: ➢ One US study found that managed care led to a decrease in service provision; ➢ One US study found that health outcomes for managed care were worse ➢ One US study found that there were no impact on equity in access	Low: 1,6,7

* DARE quality guidelines that are met: see Box 3

Table 3: Results table for reviews of direct purchasing

Review details	Main findings	Quality appraisal*
Citation: Gelormino et al. (2011) *Intervention(s):* increased user fees or out of pocket payments *Health Equity Outcomes:* access, income *Relevant Study N (total):* 2 (29) *Study Designs:* interrupted time series, repeat cross-sections *Database N:* 5 *Time/language/country restrictions:* 1990-2007; English, Italian, French, Spanish; Europe only *Synthesis method:* Narrative	Negative: ➢ Italian study, out of pocket payments led to more impoverishment. ➢ Swedish study, user fees decreased use of needed medical care and increased emergency care utilisation by lower income groups.	Moderate: 1, 2, 3, 6.

* DARE quality guidelines that are met see Box 3

Table 4: Results table for reviews of the organisation of service provision

Review details	Main findings	Quality appraisal*
Citation: Braithwaite et al. 2011 *Intervention(s):* Privatization *Health Equity Outcomes:* Access to healthcare *Relevant Study N (total):* Unclear *Study Designs:* Cross-sectional *Database N:* 5 *Time/language/country restrictions:* English only *Synthesis method:* Narrative	Negative: ➢ For-profit providers in the USA were a primary cause of reduced access to health care for the poor and uninsured	Low: 1, 2
Citation: Fotaki et al. 2008 *Intervention(s):* Marketisation *Health Equity Outcomes:* access to healthcare *Relevant Study N (total):* 3 (unclear) *Study Designs:* Cross section; interrupted time series *Database N:* 10 *Time/language/country restrictions:* 1985 – onwards; English only *Synthesis method:* Narrative	Inconclusive: ➢ One study found that the English internal market had negative access impacts ➢ One study found no equity impacts in terms of access ➢ One found no direct equity impact but lower SES groups less likely to exercise choice	Low: 1,2,6
Citation: Hanratty et al. 2007 *Intervention(s):* Marketisation	Negative: ➢ Marketisation reforms increased inequalities in	High: 1, 2, 3, 4, 5,

Health Equity Outcomes: Need for services; use of services *Relevant Study N (total):* 2 (26) *Study Designs:* Interrupted time series *Database N:* 11 *Time/language/country restrictions:* 1980-2006 *Synthesis method:* Narrative	utilisation and access in Sweden	6, 7

Table 5: Results table for reviews of health and social care integration (n=2)

Review details	Main findings	Quality appraisal*
Citation: Smith *et al.* 2009 *Intervention(s):* Partnerships, joint commissioning. *Health Equity Outcomes:* health in deprived areas, health by SES *Relevant Study N (total):* 4 (15) *Study Designs:* repeat cross-section, longitudinal cohort *Database N:* 18 *Time/language/country restrictions:* 1997-2008; England only *Synthesis method:* Narrative	Inconclusive: ➢ Area-based interventions in deprived areas of England had no effect or a slightly positive effect on health outcomes	High: 1, 2, 3, 4, 5, 6, 7
Citation: Hayes *et al.* 2012 *Intervention(s):* Partnerships, joint commissioning *Health Equity Outcomes:* Health in deprived areas, health care utilization, health behaviours *Relevant Study N (total):* 2 (16) *Study Designs:* Randomized controlled trials, controlled clinical trials, controlled before-and-after studies and interrupted time series *Database N:* 20 *Time/language/country restrictions:* 1966-2011 *Synthesis method:* Narrative; meta-analysis	Inconclusive: ➢ School partnership interventions in deprived areas of the US had no effect on health ➢ Community partnership interventions in the Netherlands had a slightly positive effect on health behaviours	High: 1, 2, 3, 4, 5, 6, 7

* DARE quality guidelines that are met see Box 3

APPENDIX 1: Searches by Database

Cochrane Database of Systematic Reviews Search (electronic, all text)

health care system OR "social care"
AND
funding OR financial OR "pooling" OR "insurance" OR "insured" OR "provider" OR "provision" OR "tax" OR "taxation" OR budget OR pay OR commission OR "purchasing" OR "purchaser" OR "market" OR "marketisation" OR “privatisation” OR “marketization” OR “privatization”
AND

"equity" OR "socioeconomic" OR "socio-economic" OR equality OR "ses" OR "SES" OR "deprivation" OR "deprived" OR "education" OR "income" OR "poverty" OR "poor" OR "unemployed" OR "social class" OR "occupation"
AND
"Commonwealth Fund" OR "Australia" OR "Canada" OR "Denmark" OR "England" OR "Wales" or "Scotland" or "UK" or "United Kingdom" OR "France" OR "Germany" OR "Iceland" OR "Italy" OR "Japan" OR "Netherlands" OR "New Zealand" OR "Norway" OR "Sweden" OR "Switzerland" OR "United States" OR "OECD" OR "EU" OR "European"

Database of Abstracts of Reviews of Effects (DARE) (electronic, all text)
health care system OR social care
AND
funding OR financial OR pooling OR insurance OR insured
OR provider OR provision OR tax OR taxation OR budget
OR pay OR commission OR purchasing OR purchaser OR market
OR marketisation OR privatisation OR marketization OR privatization
AND
equity OR socioeconomic OR socio-economic OR equality OR ses
OR SES OR deprivation OR deprived OR education OR income
OR poverty OR poor OR unemployed OR social class OR occupation

Campbell Collaboration Database (manual, title and abstract)
health care system OR social care

PROSPERO (electronic, all fields)
health care system
social care

EPPI-Centre database (manual, topic)
Health care, Health commissioning, Health inequalities, Health insurance, Health policy – evaluation, Incentive schemes, Integrated care and education

Medline (electronic, title and abstract)
health care system OR social care
AND
funding OR financial OR pooling OR insurance OR insured OR provider OR provision OR tax OR taxation OR budget OR pay OR commission OR purchasing OR purchaser OR market OR marketisation OR privatisation OR marketization OR privatization
AND
equity OR socioeconomic OR socio-economic OR equality OR ses OR SES OR deprivation OR deprived OR education OR income OR poverty OR poor OR unemployed OR social class OR occupation
AND
metaanaly* OR meta-analy* OR meta study OR meta synthes* OR meta evaluat* OR literature review OR synthes* OR review* OR systematic review

ASSIA (electronic, title and abstract)
health care system OR social care
AND
funding OR financial OR pooling OR insurance OR insured OR provider OR provision OR tax OR taxation OR budget OR pay OR commission OR purchasing OR purchaser OR market OR marketisation OR privatisation OR marketization OR privatization
AND

equity OR socioeconomic OR socio-economic OR equality OR ses OR SES OR deprivation OR deprived OR education OR income OR poverty OR poor OR unemployed OR social class OR occupation
AND
metaanaly* OR meta-analy* OR meta study OR meta synthes* OR meta evaluat* OR literature review OR synthes* OR review* OR systematic review