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# **Factors influencing decisions of value in health care: a review of the literature**

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## Executive summary

This report was commissioned by the NHS Confederation as part of the decisions of value work programme. The review aimed to understand:

- What factors influence decisions impacting on quality and costs (i.e. decisions of value) in both health care and non-health care contexts?
- What is the relationship between quality and cost considerations in health care decision making?
- How might these decisions and this relationship be improved?

The review involved searches of the peer reviewed and non-peer reviewed literature in the health and non-health arenas. Supplementary desk-based analysis was also conducted of NHS case study decisions.

The review found a growing evidence base with regards to the factors influencing coverage and commissioning decisions in health care systems across the world. The range and variety of decisions at the organisational level means that the evidence base is more disparate and patchy in these areas and overall gaps in the literature mean there are important caveats that should be placed on the conclusions and inferences that can be drawn.

Notwithstanding these limitations, the following factors can be seen as affecting both tiers of decision making:

- Decision characteristics (e.g. complexity, urgency etc)
- Decision maker characteristics (e.g. demographics, diversity, tenure)
- Information (e.g. availability of tacit and explicit knowledge)
- Economic factors (e.g. financial environment)
- Politics and regulation (e.g. extent of government involvement in decision making)

The review finds that there are some important differences in the nature of decisions taken at system and organisational levels. Additional factors impacting on organisational decisions include:

- Size and service mix
- Resource levels
- Location
- Governance structures
- Participation and connectedness
- Culture and strategic orientation
- Absorptive capacity

Some additional insights can be applied from the non-health literature relating to decision making under pressure, for example drawing on personality theories and the discipline of psychology.

There are contradictory findings in the wider literature on the precise relationship between quality and cost in health care. For example it is possible to argue, with some empirical support, that the influence of financial factors on quality is either negative or positive. In organisations there appears frequently to be a dislocation between quality-related decision making on the one hand and finance-related decision making on the other.

NHS case study decisions indicate that key factors shaping decision making include:

- Decision making antecedents: for example the importance in mergers of an established prior relationship between the organizations involved so that decision making is characterised by openness and trust
- Resources: large scale and wide reaching decisions need to be accompanied by commensurate levels of decision analysis and support, and ability to mobilise and learn from knowledge in the system/organisation
- Culture: the nature of the decision making process as well as the decisions themselves reflect the predominant cultures of the organisations in question

In terms of recommendations there is a clear research agenda related to the understanding of factors influencing decisions of value, as well as some messages for government and other national policy agencies. In terms of decision making practice, the review indicates the following:

- Those making decisions of value should consider a range of decision characteristics and contextual factors when designing decision functions and processes. Issues of scale and scope as well as likely impact and responses are important considerations.
- Investing in absorptive capacity is likely to assist with evidence-informed and context-appropriate decision making
- Attending to cultural and system dimensions of both decision making and decision implementation is important and leaders can play a critical role in this regard
- There are strong arguments for widening participation especially in substantive allocative and technical decisions and for generating peer-to-peer support networks

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# 1. Introduction

The focus for this report is on decisions which directly impact upon quality and finance in health care settings, hereafter referred to as 'decisions of value' (NHS Confederation, 2014). Effective decision making at multiple tiers is a prerequisite for high performance in health care and it is important therefore to understand the factors that shape such decisions. This review is designed to support the decisions of value work programme by distilling learning from the published and grey literature on the factors influencing decisions which affect quality and finance in health care. It therefore addresses the following questions:

- What factors influence decisions impacting on quality and costs (i.e. decisions of value) in both health care and non-health care contexts?
- What is the relationship between quality and cost considerations in health care decision making?
- How might these decisions and this relationship be improved?

The review has multiple strands including:

- Comprehensive searching of the peer reviewed health care literature
- Selected searching of the peer reviewed non-health care literature
- Additional hand searching of relevant published and grey sources
- Desk-based analysis of secondary source case studies from the English NHS

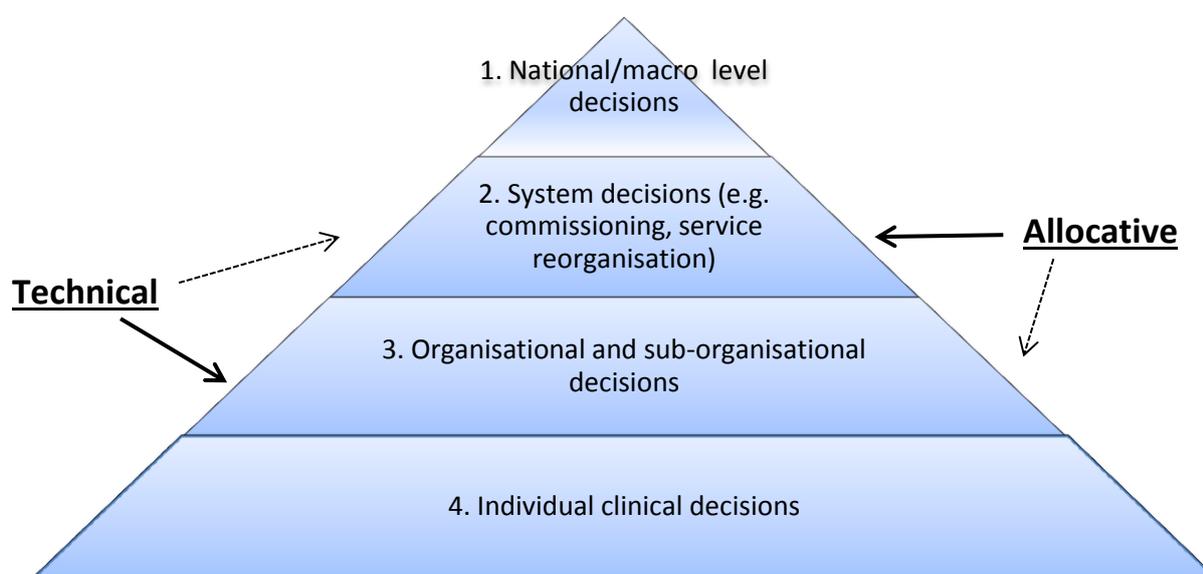
The following sections define key terms and provide a description of review aims and methods. Subsequent sections present a synthesis of findings from the published literature and an analysis of NHS decision making case studies. Finally a series of recommendations for future research and practice are put forward.

## 1.1. Terminology

**Decision making:** Figure One shows four decision making levels ordered according to scale and scope. This review focusses on tiers two and three, each of which contains a range of decision types. Tier two is dominated by decisions over the formal allocation of resources, for example through commissioning and/or technology coverage. However it also includes non-allocative decisions such as the reorganisation of services, closure of care homes, divestment of business units and so on.

Tier three refers to decision making at the organisational and sub-organisational level. Although this includes allocative decision making (for example through formulary management) it is more commonly associated with decisions relating to how best to maximise organisational capacity and functioning. This includes, for example, technology and innovation adoption, workforce changes, quality improvement initiatives, and investment in public and patient engagement programmes. In this respect, tier three decisions sit closer to the strategic rather than routine end of the organisational decision making spectrum (Shepherd and Rudd, 2013). Decisions at both levels imply resource allocation although the extent to which this is explicitly acknowledged varies (see below).

Figure one: decision making tiers



For the purposes of this review the term 'decision' is understood to include:

- Formal and explicit decisions
- Decisions where options/alternatives are available (e.g. 'next best course of action', or 'do nothing')
- Decisions that have demonstrable implications for both quality and finance
- Decisions based on allocative and/or technical investment/efficiency grounds

Examples of decisions which fall within this remit include decisions to:

- commission or re-commission a service
- adopt new technological or treatment innovations
- merge services/units
- replace, remove or reduce interventions/services/units
- undertake additional substantive internal audit, governance and review activities
- adopt new managerial practices and arrangements
- update infrastructure
- increase or decrease workforce levels
- embark on service improvement programmes
- undertake patient/public/stakeholder engagement programmes

Not included in this category of decision making are macro (i.e. governmental) and micro (i.e. clinician-patient) decisions.

**Quality and cost:** There are multiple definitions of the terms quality and cost and this multiplicity presents challenges for literature synthesis. In this review, quality is understood as having six dimensions: effectiveness, safety, efficiency, timeliness, patient experience and access (IOM, 2001). The term cost is employed as an umbrella term for considerations of cost-effectiveness (or efficiency), affordability and the financial characteristics of organisations (including viability and sustainability). Clearly, there is some overlap between quality and cost as defined here inasmuch as both incorporate considerations of efficiency, albeit this is more prominent on the cost side of the equation. Overall,

quality and cost are clearly integral to health care performance at both organisational and system levels.

## 2. Methods

Further detail on review methods is appended to this report. In summary, the review involved the following activities:

Initial scoping searches of online search engines such as Google Scholar and NHS Evidence. Literature identified at this stage was used to develop a list of search terms and inclusion criteria for subsequent searches.

Searches of health-related databases including HMIC, Medline, Embase, Cinahl, NHS Evidence, Cochrane and non-health databases including Web of Knowledge and ABI Inform/Proquest. Follow-up searches focussing on journals and mesh terms identified as most relevant from these initial searches were conducted along with hand-searching of identified bibliographies and reference lists.

Application of exclusion criteria and development of a list of included literature. Structured data extraction was performed and key descriptive data tabulated for each literature item, along with an assessment of relevance. Data synthesis was performed comparatively and was tailored to match the varying data forms uncovered in the review.

A further exploratory synthesis of the wider relationship between economic and cost elements in health care. This drew on literature identified in the above searches as well as additional iterative searches of academic databases. A further scoping review was also undertaken to précis the literature relating to decision making under pressure.

Supplementary desk-based analysis of NHS case study decisions. These were selected to meet diversity criteria on dimensions of performance in relation to finance and quality. The case study decisions were analysed drawing on publicly available documentation such as trust board minutes and media reports.

Each of these activities is presented in the report. The structured literature review (tabulated in Appendix Two) is supplemented by a wider literature base in some of the discussions presented. The full list of a references is included at the end of this report.

## 3. Findings

### 3.1. *Reflections on the literature*

There is a growing international evidence base on the factors influencing coverage and commissioning decisions in health care systems (Vuorenkoski et al. 2008; Williams et al. 2008; Bovaird et al. 2012). These have traced the importance of information and expertise levels, and more recently have begun to explore the influence of political and institutional factors (Williams 2013; Landwehr and Böhm 2011). The greater range and variety of decisions that fall within tier three mean that the evidence base is more disparate and patchy, albeit the overall volume of literature is a little greater. Systematic reviews have been carried out on sub-categories of tier three decisions (for example Fraser and Estabrooks 2008), and tier three decisions have also been briefly analysed as part of wider reviews (e.g. Greenhalgh et al., 2005).

Based on the included literature we can identify some key distinctive elements of tier three decisions:

- Decision making is typically less clearly separated from implementation considerations
- Decision-makers are more clearly located in the organisational context affected by the decision. This means that they will act more explicitly in accordance with prevailing structures of incentives, penalties and rewards as well as the dominant organisational culture and relationships
- Decisions are often less explicitly understood as primarily resource decisions
- Responsibility for decision making is at times more opaque. However, there are clear differences in terms of who is usually involved and how decision making responsibilities are discharged

Overall a number of important caveats should be placed on the conclusions and inferences that can be drawn from the published empirical literature. First of all the relative lack of replication – especially in studies of tier three decision making – makes it impossible to issue definitive statements regarding causal factors. Secondly, there is a significant reliance on proxy measures and indicators (for example for phenomena such as ‘leadership’, ‘culture’ and ‘resources’) such that findings are subject to considerable uncertainty and doubt. Finally, the literature presented here is drawn from a range of settings – both in terms of sector and geography – and this will inevitably reduce relevance and transferability of findings to a contemporary English health care setting and sub-settings.

### **3.2. Theoretical accounts**

In normative terms the debate is largely conducted between advocates of ‘rational’ decision making – i.e. based on a formal comparison of costs and measurable outcomes – and those who foreground ‘irrational’ factors such as cognitive biases, environmental pressures, politics and engagement, and so on (Shepherd and Rudd, 2013). Elwyn et al. (2011) helpfully summarised the contribution of a number of decision theorists, which is drawn on below.

Von Neumann and Morgenstem’s (1944) rational expected utility theory, works on the basis that outcomes are given numerical values and decisions are ranked in order of highest outcome value. Janis and Mann’s (1977) five-stage Conflict Model suggests a structured, logical approach with appraisal of the problem and alternative solutions but allows for ‘irrational’ factors’ when assessing the advantages and disadvantages of alternatives, building resistance to negative feedback on the option chosen; and denial of alternatives. Similarly, Kahneman and Tversky’s (1979) Prospect theory divides decision making into stages - the early ‘editing’ phase – analysis, framing and perception of options; and the ‘evaluation’ phase – the option with the highest perceived value is chosen. However, here Kahneman and Tversky suggest, ‘Decision making is ...influenced by framing of information (gains versus losses), and by the certainty effect, that individuals are generally more risk averse when facing losses versus gains’ (p. 568), again allowing for a less ‘rational’ approach in the final assessment of options.

Svenson’s Differentiation and consolidation theory (1992) offers another perspective on the balance between the rational and irrational. Decisions are made by gradually differentiating and consolidating competing options which could be accomplished using different kinds of strategies. For example, Svenson suggests that a conjunctive strategy would involve the identification of the option that has all, or most, of the attributes considered important; a disjunctive option means ranking of options on the basis of prioritising only one or two important attributes; while the lexicographic strategy means making choices based on the presence or absence of the most highly rated attribute. Whichever strategy is used, Svenson argues that an individuals’ cognitive effort is motivated by three different types of involvement: Value-relevant – the individual is motivated to act in accordance with their own values; impression-relevant – the individual is concerned with how ‘significant’ others will view their decisions; and outcome-relevant involvement – focusing on future outcomes. This suggests that depending on the individual’s locus of motivation, a level of irrationality may come into play.

The Ecological rationality model (Gigerenzer, 1996) acknowledges that people make decisions under constraints, whether these are time constraints, knowledge constraints, or constraints imposed by analytical ability. Decision making is therefore based on heuristics – experience-based techniques for problem solving, or ‘knowing by trying’. The recognition heuristic means that people will make a decision based on only one piece of information i.e. recognition – the knowledge that many others have chosen the same option for example.

Reyna and Brainerd (1990) take irrationality for granted with their Fuzzy trace theory which suggests that people reason at an imprecise level of information because memory limitations mean they cannot retrieve all the information stored in their memory and bring only a ‘gist’ of the information to bear on their decisions. This may be a more relevant theory for decision making in a crisis or under pressure, as most value-based decisions are unlikely to be so reliant on the memory recall of information by one individual.

Two other theories are helpful here to explain the emotional factors that might play into irrational decision making – Anderson’s Rational-emotional model of decision avoidance (2003) and Wilson and Gilbert’s (2005) Attend, React, Explain, Adapt model of affective forecasting. The first is more properly to do with non-decision making, or decision avoidance. Anderson suggests that people avoid decisions because of anticipatory negative emotions at the result of their decisions. Where the best option is clear there is no concern but where there are trade-offs to make, people feel compromised and delay decisions in the hope that a ‘better’ solution will appear.

Wilson and Gilbert’s theory (2005) is based on the notion that people over-estimate the emotional impact of future events, leading to a biased deliberation process. The authors suggest that less bias in decision making can be encouraged, when people are able to recognise compensating factors, for example – people may be anxious about changes to their jobs, but most adapt to change given time.

These models have their corollaries and counterparts in fields such as organisational studies where the strategic choice perspective examines the role of powerful organisational actors in setting the conditions for decision making (Child, 1972), and in the public policy literature which contains longstanding theoretical debates about rationality in decision making and the extent and nature of real-world departures from the ‘rational’ model (Parsons, 2003). It seems most likely that multi-theoretical approaches which incorporate insights relating to psychology, organisations and politics are likely to be most useful in generating explanations for decisions of value and influences upon them.

### ***3.3. Factors influencing decisions of value***

This section presents summary findings relating to the factors influencing decisions of value in health care and other settings. Details of included literature are tabulated in Appendix Two. These factors should not be treated as independent of each other, and indeed have been shown to be mutually reinforcing and/or conflicting. For example, contextual factors have been shown to affect levels of public engagement in decision making (Abelson, 2001), hospital pharmacist drug adoption decisions have been found to be influenced by: attributes of the medicine, professional opinion, resources and expertise, ethics and values, and patient opinion (Paudyal et al., 2012), and case manager resource allocation decisions have been found to be shaped by a combination of system-related, home care program-related, family-related, and client-related factors (Fraser et al., 2009).

#### **3.3.1. Decision characteristics**

Much of the evidence on decision characteristics is drawn from the non-health literature on strategic decision making in organisations (e.g. see Shepherd and Rudd, 2013). Overall this literature suggests that characteristics of the decision itself can affect the decision making process. These

characteristics include *complexity* of the decision and extent of decision *precedent*, which influence both speed of decision making and level of supporting information typically accessed in the decision making process. High levels of uncertainty have been shown to reduce adherence to a 'rational' decision making model and to open up decisions to greater levels of flexibility and judgement. The expected magnitude of decision impact and anticipated controversy and resistance also influence decision making although these are arguably contextual rather than decision characteristics (see below discussion). The relative importance of decision characteristics vis-à-vis contextual factors is not well studied although some have argued for the 'evident dominance of decision-specific characteristics over management and contextual factors' (Papadakis et al., 1998: 115).

The implications of these insights for decisions of value in health care are that important factors to consider include levels of complexity and uncertainty, as well as the expected controversy and impact of decisions. Calculation of these factors will determine the amount of time and information required to discharge decision making as well as the extent to which prior buy-in will need to be secured from affected parties.

### **3.3.2. Decision maker characteristics**

Studies in health care typically have not attempted to assess the role played by characteristics of decision makers in the decision making process and therefore insights have to be transferred from other settings (Goll and Rasheed 2005; Shepherd and Rudd 2013). This work has attempted to measure characteristics such as values, personality, cognitive style, group dynamics, loyalties and affiliations as well as demographic factors such as age, length of tenure and education. These characteristics have been found to affect aspects of decision making such as levels of risk-taking, levels and types of information sought, and the extent of rationality in the decision making process. However these relationships are often unpredictable, inter-connected and mediated by other factors.

These observations suggest that make-up of the decision making function will have a bearing on the nature of decisions. In a health care context there is a strong logic for involving patients and citizens in decisions relating to finance and quality. The logic of involving the public relates to their voice in relation to how public resources are spent and therefore has particular salience in relation to allocative decisions – for example priority setting, commissioning and disinvestment. The logic of involving patients derives primarily from their status as the intended beneficiaries of health care services and their expertise in relation to understanding quality. There is therefore a particularly strong case for involving patients in decisions relating to organisations and services (i.e. more technical decisions) and any subsequent evaluation of these. The wider literature on public engagement suggests that it can be achieved but needs to be well-resourced and carefully conceived, and should avoid tokenism (Abelson et al. 2001; Mitton et al. 2009). The wider literature on patient involvement suggests that significant professional, cultural and organisational impediments need to be removed before meaningful engagement can be achieved (Bate and Robert, 2006).

Whilst there is a considerable literature on the role played by values in *clinical* decision making there is far less on their influence in tiers two and three decision making. Studies have highlighted the gap between the ethical principles of cost-effectiveness analysis (e.g. as encapsulated in the Quality Adjusted Life Year) and the social values of wider communities and societies (e.g. Coast et al., 2004) and the importance of understanding the social values that might be used to guide allocative decision making. The non-health literature on public service motivation has some application to tier three decisions. For example this literature would suggest that altruistic professional and personal values are likely to be important in decision making, alongside other considerations such as professional identification and personal gain (Andersen and Serritzlew, 2012).

These insights suggest the importance of considering the benefits of diversity/collective wisdom in discharging substantive decisions of value, albeit this will need to be weighed against considerations of expedience and resource use especially in relation to decisions of modest scale and impact.

### 3.3.3. Information

Levels of information and analytical resources have been shown to be important in shaping decisions of value. For example, technology coverage decisions are influenced by clinical, ethical and cost considerations (Vuorenkoski 2008; Fischer 2012), and there is a growing evidence base on the role played by evidence and information in allocative decisions in health and social care, which typically confirms that information vies for primacy with other drivers and influences (Hensher and Fulop 1999; Bovaird et al. 2012; Miller et al. 2014). By contrast the role of information in technical, organisational decision making is less well understood. However such evidence as exists suggests that decision makers consult a range of information sources incorporating both explicit and tacit knowledge (Giesler et al. 2012; Miller et al. 2014). Information sources include professional journals, the media and the perspectives of other decision makers. The relative prevalence of each source varies according to the decision maker characteristics identified above such as age, occupation and education.

The implications of these insights for decisions of value in health care are that important factors to consider include whether sufficient investment is made in the resources required to generate and interpret information relevant to decisions, and whether both explicit and tacit knowledge channels are facilitated. Clearly levels of resource mobilised should be commensurate with the scale and likely impact of decisions

### 3.3.4. External environment

Overall the more distant the environmental factors the more difficult it is to establish relationships of influence. However a range of contextual factors have been shown to influence decisions of value in health care. This is illustrated in the literature through studies of, for example: the effects of reimbursement mechanisms on technology adoption (Castro et al., 2014); system characteristics and case managers' resource allocation decisions (Fraser and Estabrooks, 2008); culture and quality improvement (Konteh et al., 2008); organisational characteristics and hospital capacity management decisions (Li and Benton, 2003). In this section we concentrate on aspects of the external environment with a particular salience to health care decision making.

**Economic factors:** It is axiomatic to allocative decision making that economic considerations are explicitly taken into account although in practice efficiency is often secondary to other considerations (Eddama and Coast 2008; Williams et al. 2008). Economic factors in the form of resource pressures and constraint have been found to influence technical decision making at the organisation level. For example Bazzoli et al. (2007) found that financial constraints contributed to decisions to reduce health care investment, and economic factors were found to be influential in decisions to adopt a case management approach in US hospitals (Roggenkamp et al., 2005). In another example, Castro et al. (2014) found that reimbursement regimes affected patterns and levels of technology (i.e. equipment) diffusion in Italian health care organisations. Further analysis of the relationship between economic pressures and quality is provided in later sections of this report.

**Politics and regulation:** A variety of groups external to tiers two and three can and do exercise influence over decisions. These include members of the public, the media, legal bodies, professional representative bodies and, perhaps most importantly, government and regulatory bodies. The role that such parties play in allocative decision making processes is better understood than it is in technical decision making in health care contexts. In non-health studies of strategic decision making, environmental factors such as levels of hostility and/or munificence in the political environment have been found to be influential (Goll and Rasheed 2005; Shepherd and Rudd 2013). Clearly this overlaps with the earlier points about decision characteristics although to some extent the political context within which organisations sit exists independently from the nature of decisions. It has been found, for example, that degree of external control is inversely related to the degree of 'rationality' adopted in decision making (Shepherd and Rudd, 2013). In public health care systems the sheer volume of

external oversight and regulation mechanisms, not to mention legal opinion and precedent, might reasonably be expected to both reduce 'rationality' and increase risk aversion.

**Upheaval and change:** There is a body of literature relating to 'dynamic decision making' defined as having four characteristics (Brehmer, 1992). These are as follows: a series of decisions is needed; the decisions are not independent; the state of 'the world' changes during the decision process; the decisions are made in real-time. In these circumstances, the decision-maker cannot control when, or how often, they have to make decisions. This has some potential carry-over to a health context which is often marked by repeated and ongoing reform and reorganisation imposed from outside.

### **3.4. Organisational characteristics and tier three decision making**

Contributions from the organisational studies literature separate organisations into structure, operating mechanisms and decision mechanisms, arguing that alignment between these will facilitate effective decision making (Child, 1988). Subsequent analysis has been extended to less tangible organisational characteristics such as culture and power (Davies et al., 2007). Although the direct evidence on organisational factors shaping tier three decision making is patchy some qualified conclusions can be drawn regarding the following factors:

**Size and service mix:** the overall scale and breadth of remit of organisations can influence technical decision making. Li and Benton (2003: 609) conclude from a US survey that:

'Larger hospitals are more interested in expanding outpatient services, forging partnerships with physicians and managed care delivery systems, and seeking effective demand management decisions.'

Service mix is also associated in particular with patterns in technology adoption decision making (Li and Benton, 2003). For example teaching hospitals will typically have more specialised and complex medical services which increases the resources and expertise available to them to support adoption decisions.

**Resource levels:** the availability of slack resources for decision support and implementation (which is itself often linked to organisational size) can affect decisions of value (Berta et al. 2010; Shepherd and Rudd 2013). However, as noted in Section 3.6 of this report, the relationship between financial conditions and decision making is complex and often unpredictable.

**Location:** Decisions taken by health care providers in, for example, rural areas are likely to be different to those taken in urban areas for reasons which include the skills requirements and capabilities of the workforce and the profile of patient populations. Li and Benton (2003; 2006) for example identify a greater emphasis on workforce development in rural areas, where recruitment is often more constrained.

**Governance structures:** the extent of centralisation and differentiation/specialisation is often held up as a predictor of organisational performance, although less is known specifically about the impact of these on decision making. In general there is a normative strain in the literature advocating decentralisation of decision making and flatter management structures with increased autonomy at the front line (Goll and Rasheed, 2005; Foot et al. 2012). This links to the notion of autonomy and discretion/ responsibility as important in generating 'rational' decision making.

**Participation and connectedness:** governance structures clearly impact on extent of participation in decision making (Shepherd and Rudd, 2013) as well as on levels of 'connectedness' between different groups and parts of a given organisation (Rye and Kimberly, 2007). In turn, connectedness and wider participation have been advocated as improving decision making although direct empirical support remains largely absent. This has implications for Foundation Trusts (FTs) where the elected

Council of Governors holds a theoretically powerful decision making role. Governors are neither 'experts' nor can be assumed to hold a relevant body of knowledge. More work is needed to understand the decision making processes of governors in this context and the literature does not yet demonstrate that governors are influential in FT decision making (Lewis and Hinton, 2008).

**Organizational culture and strategic orientation:** there has been extensive research into the values and norms that predominate in health care organisations (e.g. Davies et al. 2007; Stocka et al. 2007; Konteh et al. 2008). Although there is a growing literature on the relationship between culture and performance there is little that focusses on decision making either as an endpoint or an intervening variable. Indeed 'culture' has been described as the hardest organisational concept to define and this makes it difficult to measure its impact on decision making (Konteh et al., 2008). Clearly we might infer that culture shapes decision making but the evidence base on how this happens remains light.

**Absorptive capacity:** the extent to which an organisation is able to identify, assimilate, share, re-codify and act on new knowledge (Zahra and George, 2002) is likely to affect levels of 'rationality' in decision making. However, as noted above, this knowledge is not confined to formal evidence. The literature provides some support for claims regarding the importance of tacit knowledge located in organisational memory and therefore of decision making antecedents.

Overall these organisational influences on tier three decisions form a potentially valuable framework for analysing decisions of value. Later in this report we employ this broad typology of organisational factors to analyse influences on four case study decisions from the English NHS (see Section Four).

### **3.5. Decision making under pressure**

Some further insights might be gained from the non-health literature drawing on personality theories and the discipline of psychology including applied military psychology. Research suggests that stress affects memory, executive functioning and decision making with decision-makers reverting to more emotional feedback in order to make decisions, even when factual, objective information is available (Starcke et al., 2008) and that individuals do not systematically consider all relevant alternatives under stress (Keinan, 1987). There are many decision making theories that address non-systematic means of decision making but two of the most interesting and potentially relevant to decision making in the context of the NHS are:

Montgomery's (1983; 1989) *dominance structuring model*: this works on the basis that individuals will choose alternatives for which they can find good arguments. That is, arguments which they can retain even when new information is provided, or when a dissenter raises an objection. In reality, dominant alternatives i.e. one that is better than all other alternatives in all ways, rarely arise. Consequently, the decision maker must interpret the information available to them in order to ensure a dominant alternative arises.

Montgomery's model describes a four stage approach that the decision maker may go through to achieve a dominant alternative (cited in Brehmer, 1992a). These are: the pre-editing stage - the decision maker chooses alternatives and the attributes required, those of the latter that are seen as unimportant are rejected and those of the former that are judged too unattractive are eliminated. In the second stage – finding a promising alternative, the decision maker searches for an alternative that is likely to become dominant; the third stage – dominance testing, sees the decision maker test their option for defects or faults and against any form of necessary criterion. If a promising alternative is discovered during the process, the decision maker will attempt to restructure their original assessment by de-emphasising any disadvantages of the promising alternative, enhancing its advantages, or by making trade-offs with other aspects or attributes. Brehmer (1992) notes that while this could be

viewed as irrational decision making, the decision maker's knowledge will limit the excesses of irrationality - this assumes of course that the decision maker has a body of relevant knowledge. This model works on the principle that action, rather than inaction is more likely to occur, and is relevant to the NHS in that it recognises the political imperative in a crisis of 'being seen to do something'.

Klein et al's (1986) *recognition-primed decision making model*: this suggests that 'experts' do not normally consider and evaluate a number of alternative options. Instead, they recognise similarities from previous experiences, and through mental simulation, consider the successful action from that situation and evaluate whether the same course of action is appropriate to apply in the new situation and would deliver the desired outcomes. If it does not appear to deliver the desired outcomes, the successful action from previous experience would be modified and the likely outcomes re-evaluated. This model is potentially relevant to the NHS context as decision makers are appointed as 'experts' at the level of the Trust Board, with Executive Officers claiming expertise in finance, medicine or nursing for example, and Non-Executive Officers appointed to the role as external experts in fields complementary to the running of a large organisation i.e. accountancy, law, education etc.

### **3.6. Combining quality and cost**

As noted in the early sections of this report, enquiry into the relationship between quality and cost considerations in health care decision making has been hampered by definitional confusion and there has been relatively little systematic exploration based on explicitly defined concepts. This perhaps partially explains the contradictory and/or confusing messages contained in the literature on the relationship between quality and cost in health care. It is widely accepted that quality failures (e.g. clinical error) are cost increasing but the cost gains and losses of improvement are less understood (Dusheiko et al., 2011) and intended efficiency benefits are often not observed or demonstrated in practice (de Bruin et al., 2011). Similarly, whilst it is likely that some areas of quality (e.g. reducing error) can be improved in times of financial constraint others (e.g. introducing innovation) appear to be more dependent on slack resources (Williams, 2011). Indeed, quality improvement is at times considered a luxury that can be foregone when financial pressures are high (Bin Saeed, 1999).

Overall, evidence and theory on the extent to which financial factors impact upon service quality is under-developed and relatively unsophisticated. As a result it is possible to argue, with some empirical support, that the influence of financial factors on quality is a) negative b) positive or c) neutral. Whilst it is likely that a link exists, the nature of the link is complex and highly dependent on intervening variables. Therefore although there is a growing literature which tackles the question of how and to what extent cost and quality imperatives can be pursued simultaneously, the relationship between quality and finance remains disputed. This is partly a result of multiple usages of both terms and partly reflects the various factors that influence both domains.

The evidence on organisational characteristics that shape performance across efficiency and quality is frustratingly inconclusive with many opposing claims receiving some support. There is support for the claim that governance structures can influence risk management levels (Fenn and Egan, 2012). However the relationship between either of these and sound finances is uncertain and technical efficiency has been found not to correlate with overall performance (Nutti, 2011). Berta et al's (2010) qualitative investigation suggests that staff characteristics shape performance including: experience, skills, tacit knowledge, volume (increases quality but not efficiency), absenteeism, turnover, and number of volunteers.

There appears frequently to be a dislocation between quality-related decision making on the one hand and finance-related decision making on the other (see Section Four of this report). There is also some evidence to suggest that the level of tension between these imperatives can be a source of division within and between health care professions and roles and in particular between clinicians and managers (Brown et al., 2011). Research has suggested that the role of senior finance personnel is

subject to multiple interpretations ranging from a narrow accountancy role to a more strategic and proactive one (Moore 1991; Kisa et al. 2006). Clearly the role of finance officers can be central to decisions of value such as mergers, acquisitions, investment in new drugs and technologies, cost cutting and/or capital re-structuring programmes etc. Finance officers can also be instrumental in generating surpluses to invest in quality programmes.

Case studies offer perhaps the most helpful insights into how cost and quality considerations might be better aligned. For example the organisational turnaround literature offers examples of successful responses to financial threat that also protect service quality (Martin and Kimberly, 2008). The case of 'Strong Memorial Hospital is an example of this. In 1995, anticipating a substantially reduced Medicaid budget allocation, Strong Memorial Hospital set itself the aim of achieving a \$15 million annual cost reduction (Panzer et al., 1995). A range of strategies was employed, including a freeze on pay and recruitment and administrative savings, as well as 'program consolidation and elimination'. This included: reducing service capacity where this was deemed appropriate; reduction and elimination of some food and nutrition services, and; replacement of expensive drugs and treatments, including through introduction of practice guidelines.

Strong Memorial Hospital's cost reduction drive was successfully implemented and ultimately achieved the intended outcomes. As a result of careful planning, no lay-offs were required, and the additional cost savings generated (when the Medicaid budget shortfall proved less than initially feared) were distributed amongst staff. In their account of the process, the senior team identify the protection of both service quality standards and staff morale as having been critical to success. This was reflected in a measured, collaborative and well-resourced change process: following an initial senior team 'retreat' in which core principles were agreed, the process of identifying options for cost reduction was opened up to mid-high level managers and leaders from across the organization, and then to the wider workforce. Consultation with a hospital that had undertaken a similar program of change convinced Strong Memorial of the need for substantial management resource to be put into the process. As a result, leader training was undertaken by facilitators of 31 'Fast Track' teams, many of whom were chartered to work full time on achieving their delegated cost reduction targets, and the senior management team dedicated six hours a day to planning and oversight of the change process.

By naming the changes the 'Emergency Budget Reconciliation Program' the senior management team sought to create a sense of urgency. However the benefits of attending to employee morale were also underlined when the magnitude of the personal cost paid by those active in the change effort – in terms of emotional and actual labour - became apparent. Overcoming of resistance was not universally achieved. However where this was successful it owed much to the approach of piloting cost reduction interventions prior to their ratification, and taking a consensual, collective overall approach. The license given to introduce quality improvements alongside meeting of financial targets was also welcomed by an initially reluctant workforce. However, the authors report that they had not predicted how much communication would be required in order to 'avoid damaging rumours about the overall process or individual teams' work' 73 (p83).

Empowerment and the importance of management 'letting go' were also cited as crucial and this had a lasting impact on mid-management attitudes and levels of creativity. Finally, leadership was cited as being a critical determinant of success:

'Perhaps most important in this process is having a dedicated team leader who serves to keep the team on task, serves as a champion for the team's work as it goes to key stakeholder areas for support, and follows through to ensure that implementation occurs and that the gains remain over time.'

The case of strong memorial is one of several that implies that explicit pursuit of cost savings can be compatible with advancement or at least maintenance of quality standards. Key factors in the apparent success of Strong Memorial include the attention paid to the maintenance of service

standards and staff morale and commitment to a well-resourced change process, as shown by the formal releasing of staff time and investment in leadership training. The challenges faced during the decision making and implementation process underline the critical importance of creating support and buy-in, adopting a tone of urgency, and nurturing the 'soft skills' of communication, persuasion and consensus building. Overall the approach was marked by the accumulation of small-scale changes - with staff empowered to exercise judgment over both substantive and process elements - which aggregated into considerable savings over time. Clearly the strategies adopted here would need to be adapted to fit the landscape of the English NHS.

This literature underlines the critical importance of creating support and buy-in, adopting a tone of urgency, and nurturing the 'soft skills' of communication, persuasion and consensus building. For more ambitious decisions – for example replacement or removal of health care organisations – the challenges of satisfying both cost and quality demands are significantly greater and less by way of 'good practice' exists in the published literature (Robinson et al., 2011). However there are some grounds for believing that decision making is enhanced where investment in option appraisal, decision modelling, consultation and engagement are highest (Williams et al., 2014).

Much of the literature on networks in health care focusses on either clinical networks or networks of innovation and improvement. By contrast little is formally known about how the combined imperatives of cost and quality can be best supported through peer support and networking. However the broader literature suggests that new ways of working require more open networks, for example spanning previously divergent functions and professional roles (Ferlie et al., 2005). Institutional isomorphism (i.e. pressure to adopt commonly accepted practices employed elsewhere) might also be facilitated by networks (Roggenkamp et al., 2005). However the literature suggests that these 'cosmopolitan' networks are harder to create and sustain than traditional professional networks.

Finally, there are numerous frameworks put forward in the literature which aim to measure and/or model the relationship between cost and quality, or to identify low-risk candidates for generating financial savings (see for example Broyles and Al-Assaf 1999; Litvak and Long 2000; Cheung and Duan 2014). As yet, these remain speculative and require empirical testing.

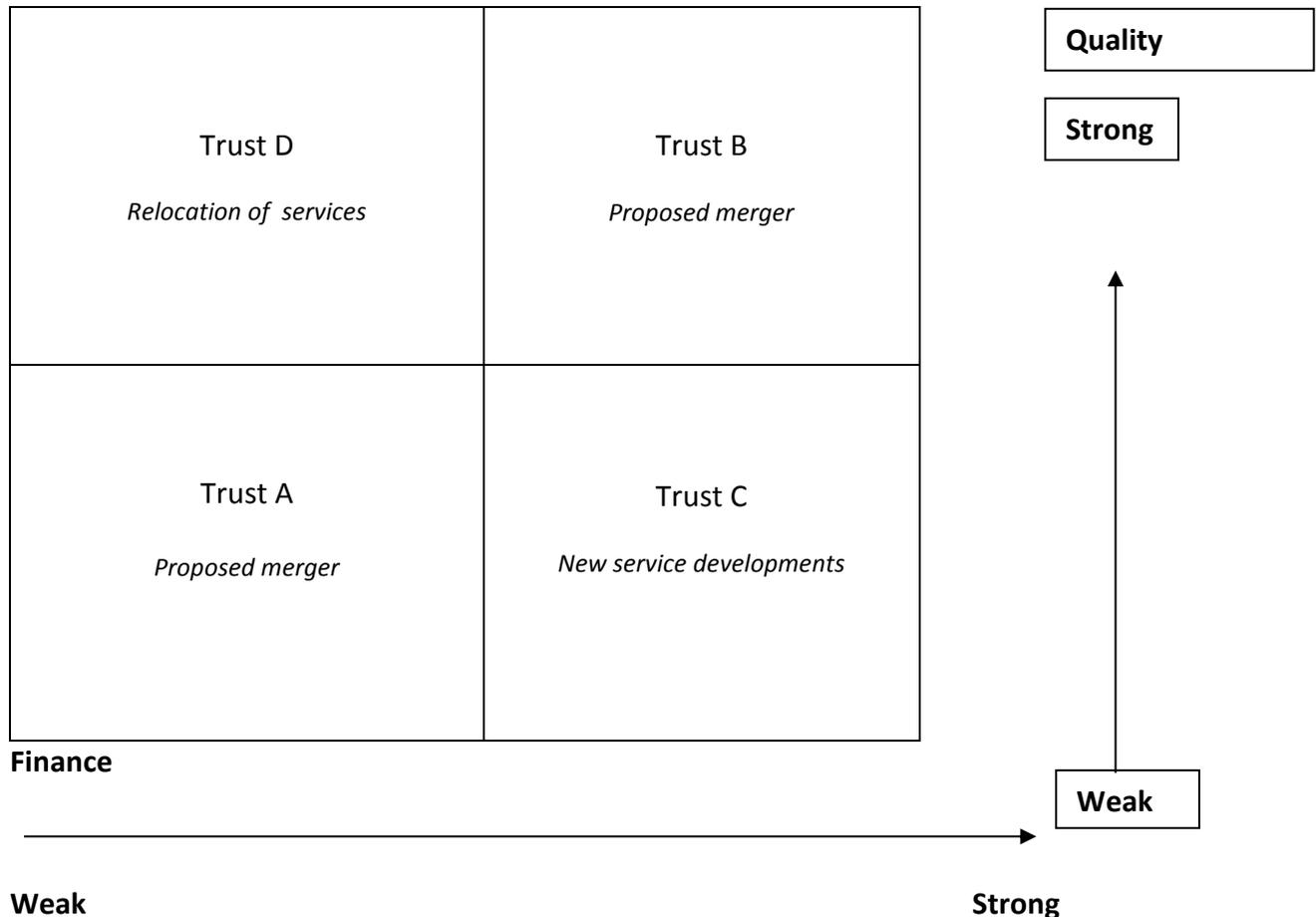
## **4. Decision making case studies**

In order to ground and develop the analysis presented here we have identified case study NHS decisions using a typology designed to enable exploration of influencing factors. Key points of our analysis are presented here and a full report of each case study is included as Appendix Three. The typology reflects the balance between quality and finance and organisations were selected as examples (rather than exemplars) of each quadrant. So, for example, 'Trust D' may demonstrate weaker financial performance, though it is certainly not the worst in this regard, and elements of a higher quality service, but with room for improvement.

The strength or weakness of each organisation's financial performance was determined from Monitor reports and ratings for Foundation Trusts (FTs) and the NHS Trust Development Authority's report for non-FTs (for the period ending 30<sup>th</sup> November 2013). The strength and weakness of an organisation's quality performance was determined from Care Quality Commission (CQC) reports and additional information such as Dr Foster's 2013 Hospital Guide. The authors recognize that this approach is limited by its adoption of definitions of quality and financial performance put forward by these organizations (as well as measures such as the hospital standardized mortality ratio). In addition, it does not distinguish between contradictory indicators, or organizations where some services may be considered to be performing well but others less so in terms of quality. Nor can it capture temporal

changes whereby organizations might move between quadrants, depending on circumstances at any given point in time.

Figure two: decision making typology



The decisions undertaken by these organisations vary in terms of scale and include mergers and acquisitions, staff recruitment, capital developments (buildings and/or high-tech equipment), and redesign of services. There are also two Foundation Trusts and two non-Foundation Trusts included as it was felt that this might have influenced the nature of decision making. Though there is some geographical variation it was not intended however that the case studies were geographically representative of the NHS in England. Two of the decisions were not implemented, both relating to mergers or acquisitions. These were also the two most ambitious in terms of scale.

The assessment provided in each case study suggests that the key decision making factors differ for each. For Trusts A the most important factors in the decision making process have been assessed as the decision making antecedents. For Trust C the key factors are assessed as resources and organizational culture. For Trust D, it is the culture of the organization and its absorptive capacity, while for Trust B it is a lack of decision making antecedents, the decision making structures and governance arrangements, and a lack of absorptive capacity.

What is also striking from this analysis, is the fact that these decisions either have deep roots and/or are interdependent on prior decisions or actions, in some cases taken years previously – for example the move of orthopaedic elective surgery at Trust D, and the merger partner of Hospital 1 for Trust A. It also important to note that while the decisions presented here suggest the existence of alternatives; the reality is that these choices or courses of action are often severely constrained by clinical, financial, legal, regulatory or political imperatives. It is also apparent that decisions are often made in

response mode or pre-emptively. So, for example, organisations responded to the publication of the Francis Report by developing action plans and respond similarly to CQC inspections and reports, with plans of remedial action.

Though it is acknowledged that the NHS is subject to political influence at a national level, it is increasingly subject to political influence at a local level and is also appears increasingly influenced by the media or public reaction – for example Trust B’s experience of negative media attention and the intervention of a local MP, and Trust D’s experience of the press attention given to cancelled operations.

The case studies also confirm the relative absence of what might be termed ‘blue sky’ decision making. This is perhaps not surprising given the weight of response mode decisions that need to be made and when one considers that both clinical and management activity is expected to be evidence or knowledge-based. This prevailing culture combined with a need to demonstrate the good husbandry of public funds, perhaps explains why NHS organizations are less likely to replicate the riskier and potentially more radical decisions made organizations in other sectors.

Although the case studies can all be classed as decisions of value, i.e. involving a clear and measurable impact on both finance (costs) and quality (care) they also suggest that these two sides of the coin are rarely conceptualized in this way at an organizational level. This is symbolically encapsulated in the standard practice of separating them out at Board level, so that there are separate agenda items and separate reports on quality and finance, and often a third distinct report on performance or activity. Board directors take responsibility for a single aspect – hence the Director of Quality (often wrapped into the role of Director of Nursing), the Director of Finance, and the Chief Operating Officer and it is rare that Board members make explicit connections between these two aspects in Board discussions. Where this has occurred, it has tended to be in relation to nurse recruitment in order to meet safe staffing levels.

## **5. Recommendations**

Overall it is clear that the variety and complexity that characterises decisions of value in health care confound simple prescriptions for improvements to practice. Instead, the literature supports some general good practice principles and these are outlined in this section. In keeping with the primary purpose and focus of the report, we deal with recommendations for research and policy very briefly before concentrating in more depth on recommendations at the practice level.

### **5.1. Research**

This is the first project that we are aware of that specifically reviews the evidence in relation to decisions of value – i.e. those with a direct effect on finance/efficiency and quality. Therefore we have been required in this review to cast the net widely and to draw lessons and learning from evidence of secondary relevance to the research questions. Areas of the evidence base requiring development include in-depth qualitative investigation of how the variety of potential influences on decision making interact and cohere within local health care contexts. Questions to be addressed include:

- How do the factors identified as impacting on decision making interact and cohere in local settings?
- How does the source of finance affect decision making?
- How does the distribution of decision making responsibility across domains of quality and cost affect decisions?
- What is the balance between planned and proactive decision making and reactive, crisis decision making?

This could then be reinforced through larger-scale analysis of the relationship between influencing factors and decision characteristics and outcomes in a health care setting.

## **5.2. Policy**

The review and case study analysis presented here indicate that contextual factors play an important role in shaping decisions of value and that national policy/government intervention form a key component of this context. Decision makers at tiers two and three do not operate in a vacuum and there are strong clinical, financial, legal and regulatory imperatives that constrain choices. The implications for policy of our analysis are that excessive reform, regulation and scrutiny runs the risk of crowding out innovative decision making in favour of response mode or risk-averse behaviour. Without freedom and responsibility to take decisions it is impossible to adopt a 'rational' approach beyond mere adherence to national requirements and demands.

Where there is an element of freedom and choice, and the decisions of value are of significant scale and scope, policymakers might be wise to take a more formal and active role in stewarding the progress of these decisions and their implementation. Large sums of public money may be spent in months, if not years, of preparatory work before the outcome of the decision is physically manifested. This is certainly the case in mergers of organisations or significant capital developments where it is not uncommon for millions of pounds to be spent on feasibility and planning activities, which in many cases end up redundant.

## **5.3. Practice**

The implications for practice of the analysis presented here come with caveats linked to the importance of mediating factors such as the nature of the decision (scale, levels of certainty, expected impact). The logic of the analysis presented here is that decision making – especially in relation to technical decisions – should take explicit account of important contextual factors such as size, service mix, location and so on. Allocation of resources to, for example, service expansion and contraction, staff training, recruitment, public engagement and so on, will only be effective where it is informed by a detailed understanding of local context. These considerations aside, we recommend the following:

**Structure:** despite the limits of structural solutions there is some support for the notion of flatter organisational structures with more porous boundaries between units and groupings to enable sharing of learning and expertise. Greater connectedness between finance and other functions would seem to be especially important in decisions of value.

There is also some support for a model of specialisation where decision making is made wherever possible with the involvement and leadership of those with the relevant specialist knowledge and experience. This should extend to a more formal commitment to learning from 'what has gone before'. There is wisdom to be gained from the experiences of those practitioners who have made and implemented decisions of value in the past, and indeed, those who have tried and failed, for whatever reason. A more explicit expectation that candid reflections on these experiences are shared could be productive.

At tier three in particular it is important to clarify and strengthen decision functions so that genuine discretion and responsibility is conferred. It is also important to establish where responsibility for decision implementation lies as this will influence the decision making process. There are important temporal considerations for decision taken at tier three. For example, how are decisions intended to be reviewed and revised over time? Who has responsibility for enduring this happens? Tier three decision makers will typically be less insulated from this revision and review process than those at tier two.

**Process:** there are a number of prescriptive frameworks that can be applied to decisions of value to strengthen the process dimensions. Examples of these include 'programme budgeting and marginal analysis' and 'accountability for reasonableness' (Dionne et al. 2009; Donaldson et al. 2010; Daniels and Sabin 1997). These seek to increase the transparency, rationality and defensibility of decision making especially where significant resources are at stake. However they are typically confined to allocative decisions and less prescription is available for decisions to organise and reorganise services. Furthermore, such models do not offer a panacea for decision making, nor do they remove unwanted pressures and influences from within and outside of health care organisations.

Other recommendations include paying attention to a considered and well-resource change process where decisions have far-reaching implications for services and workforce.

A more conscious and thorough application of standard 'Programme management' processes could also be helpful. Though many change programmes now follow accepted project management techniques, Programme Management is the superstructure that allows practitioners to manage the end-to-end process of change. Given the findings presented here, one aspect of Programme Management in particular resonates, and that is benefits management. This should be viewed as a core and continuous activity, providing the means by which achievement can be monitored. Too often, the value of the expected outcomes is subsumed by the costs of delivering them and the costs of mitigating for dis-benefits, or unintended consequences.

In general, change processes that are organic and involve early, small changes appear more likely to be successful than large-scale change plans with little or no decision antecedents.

**Evidence and information:** There are grounds for believing that decision making is enhanced where investment in option appraisal, decision modelling, and other forms of information and analysis is greatest. However this should be offset against opportunity cost of investing resources in this area. A good example of this is formal cost-effectiveness analysis which has been applied with some success to allocative decision making at tier two but which remains something of an expensive luxury a sub-tiers.

#### ***Involvement:***

Research indicates that the composition of senior management and the relationship of this to the units of delivery can be important for decision making and elsewhere there is a vast literature on the benefits of peer support networks. A variety of prescriptions have been put forward to optimise the decision making functions and to facilitate engagement and involvement both within and beyond organisational boundaries. These insights suggest the importance of considering the benefits of diversity/collective wisdom in discharging substantive decisions of value, albeit this will need to be weighed against considerations of expedience and resource use, especially in relation to decisions of modest scale and impact. What is clear is that staff support for decision making and implementation is a crucial ingredient.

Where decisions of value are of significant scale and scope and will consume large sums of public money, there is arguably an ethical imperative to consult with the public in a meaningful way. Too often consultation exercises are tick box exercises to satisfy observers that due process has been undertaken, rather than a proper exploration of the acceptability of committing resources in the manner proposed.

#### ***Leadership and followership***

The evidence presented here attests to the importance not just of structures, resources and formal processes but also of 'soft' skills of leadership and change management so that decisions are accepted and implemented. Creating support and buy-in is especially important – and challenging – in decisions between contentious options and which are perceived as either unfair or damaging. For

example, the literature on decisions to limit or reduce service provision emphasises the need to attend to staff, creating support and buy-in, whilst also adopting a tone of urgency. This requires people in leadership roles to display skills of communication, persuasion and consensus building. Similarly, the literature on mergers and reorganisations suggests a disproportionate preoccupation with structural and procedural aspects. Recent assessment of the mergers and acquisitions data suggests that most fail in practice, and do so because they fail to attend sufficiently to the softer human dimensions of change (Peck et al., 2006). To make and implement decisions of value therefore requires investment in leadership training and development and for this to reflect a facilitative and consensus-based model of leadership style.

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## Appendix One: review details

### Inclusion criteria

Included documents:	Research; unpublished evaluations; literature reviews (structured and unstructured); selected theoretical contributions
Included domains:	Health care nationally and internationally; non-health care (literature review only); business and management (literature review only)
Date range:	1990 – 2014
Content:	Formal and explicit decisions, where options/alternatives are available, with demonstrable implications for quality and finance. Excluding macro (i.e. governmental) and micro (i.e. clinician-patient) decisions.

### Search strategy a: influences on decision making (health)

Databases:	NHS Evidence/Medline/HMIC/CINAHL
Search terms:	'Decision making' or 'Investment' or 'Management' or 'Governance' or 'Adoption' or 'Choice' or 'Selection'
	And
	'Quality' or 'Service improvement' or 'Improvement' or 'Innovation' or 'Finance' or 'Cost' or 'Cost effectiveness' or 'Cutbacks' or 'Causes' or 'Drivers' or 'Influences'

### Search strategy b: influences on decision making (no-health)

Databases:	Web of Science/ABI Inform-Proquest
Search terms:	'Decision making' and 'literature review'
	And
	'Quality' or 'Service improvement' or 'Improvement' or 'Finance' or 'Cost' or 'Cost effectiveness' or 'Cutbacks' or 'Causes' or 'Drivers' or 'Influences'

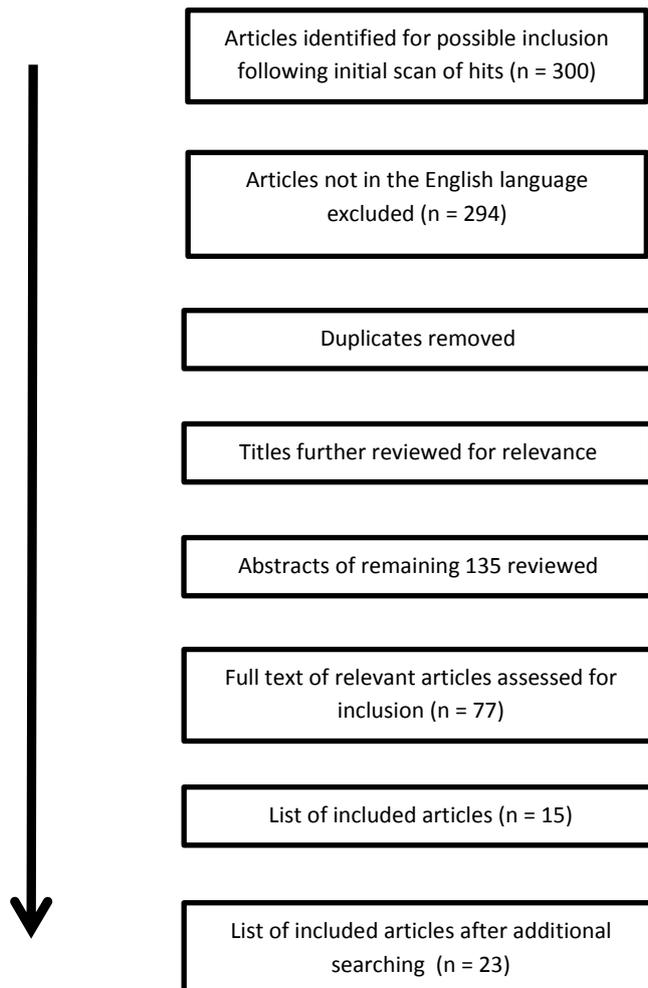
### Data extraction

General:	Authors/date/country of origin/document type/quality/relevance
Thematic:	What types of decisions are covered?
	What factors are identified as impacting on these decisions?
	What recommendations are made for improving practice?
	Other key relevant findings

## Database hits

Databases searched	Number of results
HMIC – words in title only	844
Medline –words in title only	6676
Cinahl**	2351
Total	10,371
Total without duplicates	8245
SSCI – decision= title, Rest=topic Refined by “review”	441
ASSIA/Socal care abstracts and IBSS – limited to reviews	94
Total	535
Total without duplicates	532
Overall total	8777

## Filtering flowchart



## Appendix Two: included literature

Author/year	source	Literature type	Setting	Decisions covered	Methods/respondent group	Research aims/question	Main messages	Relevance
Giesler et al 2012	Journal of Policy Practice 11: 236-254	Empirical	'other public' Wisconsin county policy making US	Allocative and technical Tier 2	Survey of all human service board members in Wisconsin Regression analysis	What factors influence decision making by social/human service policy makers?	Sources of information include agency reports, staff consultation, other members, media/internet, friends and family, journals and research	Not clear exactly what types of decisions covered  US focussed and social care related
Goll and Rasheed 2005	Organisation Studies Organization Studies 26(7): 999–1023	Empirical	'Non-health'	Technical Tier 3  'strategic' decisions	Company CEO survey measuring rational decision and other variables  regression analysis	'to identify the demographic predictors of rational decision making and to ..' (p.1001)	'upper echelon characteristics (both psychological and observable) ... influence strategic choices' (1002)  'Tenure and education level show a significant positive relationship to RDM.' (1014)	Some environmental variables (e.g. munificence) not directly transferable to public sector setting.
Kisa et al 2006	The Health Care Manager 25(1): 37-44	Empirical	Ankara, Turkey, health care in private and public settings	Technical Tier three	Survey of people in charge of financial decisions in 14 private hospitals and 66 outpatient clinics and imaging centres	How involved are finance officers in decision making in health care organisations?	The finance officers role in the complex, changing health care environment is 'equivocal'	Context of Ankara different to England
Castro et al 2014	Health Policy 115: 215–229	Empirical	Italy	Technical (adoption/diffusion)	Routine data  Regression analysis	investigate the relationship between the different reimbursement systems offered by Italian regions and the level of high technological medical equipment.	'cast some doubts that an effective regulation of reimbursement mechanisms cannot limit the excessive diffusion of medical equipment that is a relevant driver of the increase in expenditure'	transferability limited by finance models involved
Fischer 2012	Health Policy 107: 218– 230	Review/documentary analysis	International	Allocative Tier two	Systematic review	Factors influencing coverage decisions (amongst other things)	'the categories of clinical (i.e. health-related and non-health-related effectiveness), economic (i.e. cost-effectiveness and budget impact) and ethical (i.e. severity of the disease and equitable access to care) criteria could	exclusion of qualitative studies  Includes national (tier one) data

							be used'	
Miller et al 2014	Care Services Management (forthcoming)	Empirical	England Local government	Allocative	Local government commissioners	What information influences decisions on public health spending	Published evidence (esp from govt local bodies) and performance data. Alongside these 'rational' decision making processes were strong political, personal and relational dimensions.	Small scale
Paudyal et al 2012	Pharmaco-epidemiology and drug safety 21: 396–406	Empirical review	International	Technical? Or both	Systematic review pharmacists	factors associated with community pharmacists' adoption decision making	Patient safety key to pharmacists' decision making	Limits to evidence base
Vuorenkoski et al 2008	Health Policy 86: 1–9	Empirical review	Industrialised countries	Allocative	Systematic review Macro and meso decision making	analyse decision making process for including drugs in reimbursement lists and drug formularies	Clinical evidence on the benefit and the costs the main criteria used. decisions seemed to be partly value-based	
Hensher and Fulop 1999	Journal of Health Services Research and Policy 4: 90	Empirical	14 London health authorities	Both	Survey and interviews	Assess the influence needs assessment has had on decision making	consistent with a 'mixed scanning' model of decision making. Needs assessment is used to help select issues for detailed investigation and to direct analytical and decision making resources.	Limited range of decision types
Polisena et al 2013	Int J Tech Asst in Health Care, 29:2 174–184.	Empirical'	Systematic review	Both	'Systematic review	review application of frameworks and tools for disinvestment decision making in health care.	Data shortages prevented evidence base practice. Tools and frameworks (HTA, PBMA used)	Limited range of decision types
Fraser and Estabrooks 2008	<i>Med Decis Making</i> 28: 394	Empirical	Systematic review	Allocative	Systematic review	'What factors influence case managers' resource allocation decisions in home care?'	Absence of research	Little research identified
Fraser et al 2009	<i>Int J Nursing Studies</i> 46: 337–349	Empirical	Canada	Allocative	Ethnography home care programme	Explore factors that influence case managers' resource allocation decisions in pediatric home care	The factors were grouped into one of four main categories: system-related, home care program-related, family related, or client related	Limited range of decision type
Li and Benton 2003	European Journal of Operational Research 146 596–614	Empirical	US Hospitals	Technical 'capacity management' – e.g. expanding services,	questionnaire designed to collect data on hospital capacity management decisions and practices	Do hospital size, location, teaching involvement, and service mix influence hospital capacity resource management decisions? (2) What operations capabilities	Some correlations found	Under-theorized, lack of qualitative insight

				partnering, investing in technology, workforce management	structural equation modeling	are among the key indicators of capacity decisions in the current health care environment?		
Li and Benton 2006	Journal of Operations Management 24: 676–691	Empirical	US Hospitals	Technical	Questionnaire Structural equation modelling	How does hospital size and location influence technology and nurse management decisions?	Some correlations found	Under-theorized, methodologically very limited, lack of qualitative insight
Shepherd and Rudd 2013	International Journal of Management Reviews DOI: 10.1111/ijmr.12023	Review	Business-orientated databases	Primarily technical (business strategy)	Structured review	examining the direct effects of contextual variables on Strategic Decision making Process characteristics	Some correlations found	Strong in terms of theory and research  (categories of) Variables may not map to health
Street et al 1999	<i>Journal of Health Services Research and Policy</i> 1999 4: 16	Empirical	NHS	Technical	Econometric analysis Routine data	Investigate the relationship between the proportion of a hospital's income spent on management and the performance of the hospital: achievement of financial targets; waiting times and costs of service provision	'The evidence is not yet strong enough to draw a general conclusion that management costs in NHS acute hospitals are too high or that an indiscriminating reduction in management costs would have no detrimental effects on hospital performance.'	Relatively low relevance – relate to decisions to reduce management  Primarily normative rather than analytical
Papadakis et al, 1998	Strategic Management Journal, Vol. 19, 115–147	Empirical	Greece	Technical	Multi-method, in-depth field research study	Investigate relationship between the process of strategic decision making and management and contextual factors.	Supports the view that strategic decision processes are shaped by a multiplicity of factors. Decision specific characteristics appear to have the most important influence on the strategic decision making process	Dates  Greece/Non-health: limited transferability
Bazzoli et al 2007	Medical Care Research and Review 2007 64: 148	Empirical	US	Technical	Routine data analysis	Examine effects of financial problems on hospital investments in plant and equipment	Increasing financial pressures lead to cutbacks in these areas.	Context very different to UK health and social care
Abelson 2001	Social Science and Medicine 53 777–793	Empirical	Canada	Both	Case studies	Explores the role that context plays in shaping community decision making processes	'The heterogeneity of participation depicted in these study results underscores the importance of grounding efforts aimed at incorporating public and community	Limited scope in terms of brief

							views regarding local health services in the contextual fabric of local communities.'	
Roggenkamp et al 2005	Social Science and Medicine 60 2489-2500	Empirical	US	both	Routine data analysis	investigates the adoption of case management by US hospitals at three time periods:1994, 1997, and 2000.	institutional influences aimed at achieving or maintaining legitimacy may be as strong a motivator for hospitals to adopt case management as are economic incentives.	Limited scope and different context
Williams 2013	Policy and Politics 41 (2), 223-239	Empirical	UK	Allocative	Case studies	Role of cost effectiveness in decision making and the influence of context on this	Institutional variables shape decision making	
Williams et al 2008	HTA Monograph	Empirical	England	Allocative at tiers two and three	Lit review, case study, other	Investigates the role of EE in health care (allocative) decision making	Evidence on one of many factors driving decisions	
Eddama and Coast	<i>Health Policy</i> , 86 (2-3): 129-41.	Empirical	International	Allocative at tiers two and three	Lit review	Investigates the role of EE in health care (allocative) decision making	Evidence on one of many factors driving decisions	
Lewis and Hinton 2008	Journal of Health Services Research and Policy 13: 19-35	empirical	England NHS	Organisational – not specified	Case study – single FT	the extent to which governors shared power within the decision making structures of the hospital	Governors had little power and only a consultative role in relation to decision making	Decisions not specified. Small scale

## Appendix Three: case studies of NHS Decision making

### *'Trust A' – merger*

Foundation 'Trust A' serves a population of approximately 400,000 and employs nearly 4,000 staff. It has returned deficits in excess of £1m in recent years and was placed in significant breach of its terms of authorisation by Monitor. The review into mortality indicators undertaken by NHS England as a result of the Francis Enquiry highlighted Trust A as having higher mortality ratios than the national average and included it within the 14 trusts selected for the Keogh Review. While the Trust takes forward its plans to address the Keogh recommendations it has been placed under 'special measures'. A re-inspection of the Trust will take place in July 2014. Following the Keogh review the CQC have made two unannounced visits to the Trust and reported Instances of poor quality care.

In light of the Keogh Review the Trust has 'paused' integration plans with Hospital 1, though areas for partnership working are still being actively considered. The Trust has therefore focused more recently on the actions required to address the Keogh recommendations. This includes the rapid recruitment plan to fill medical, nursing and midwifery vacancies and the redesign of the emergency department. These actions have not been taken in the context of a range of choices and they are therefore not classed as decisions of value under the terms of this study. Instead, it is the decision to integrate with Hospital 1 that will be considered. Even though the merger decision is presented here as one involving a range of choices there were nonetheless strong clinical, financial, legal and regulatory imperatives that constrained those choices for decision makers, as appears to be the case in reality within the NHS as a whole.

Discussions about a potential merger began on the basis of a number of factors. Firstly, Hospital 1 was unable to meet the financial criteria required to achieve Foundation Trust status due to significant PFI commitments. This necessitated consideration of merger with a local partner and Trust A was chosen as the preferred partner. Trust A meanwhile concluded that its medium to long-term financial and clinical sustainability would best be served by integration. Specific additional factors stated in the subsequent Public Engagement Report included the consideration of clinical guidance on optimum population numbers for the safe delivery of certain services and a desire to provide specialist services locally without patients having to travel elsewhere.

Four criteria for feasibility of integration were determined:

- Could both Boards agree that the integration would show tangible benefits to patients and the public?
- Would the long-term financial model for the merged Trust achieve the risk ratings required of FTs by Monitor?
- Would the clinical strategy be acceptable to both Boards and would it be approved by commissioners?
- Did both Boards agree that the post-integration plan demonstrated how the benefits identified could be achieved?

The criteria were agreed by a joint project board (consisting of Chairs, Chief Executives, Medical Directors and a Non-Executive Director from each Trust) and approved by both Trust Boards shortly after. A formal decision to develop more detailed merger plans was made at the subsequent AGMs of both organisations and the Cooperation and Competition panel recommended the integration should proceed to the next stage in the following months.

It is possible to map this decision on to the elements identified for tier three as follows:

1. **The decision to merge is not separated from the implementation** – though the potential for a merger would have been brokered and supported by the system architecture in place at the time the decision to proceed was made by each Trust's Board and the Board of each Trust would have subsequently been responsible for the merger happening in practice
2. **Decision-makers are more clearly located in the context affected by the decision** – the Boards of each Trust would have been directly and personally affected by a merger as a merged Trust would ultimately have required one single Board. Though some Board members may have ultimately left the merged organisation, others would have been responsible for leading the organisations through the implementation of their decision and beyond

3. **May be less immediately understood as primary resource decisions** – though the impetus for Hospital 1 was its inability to achieve FT status as a result of its financial circumstances and Trust A was financially challenged, the public presentation of the merger appears to have been more weighted towards the ability to provide clinical benefits for patients. Whether this was how it was understood at the departmental or unit level is unclear.
4. **Has responsibility that at times is more opaque** - Though it is clear that the Boards of both organisations were responsible for making the decision in a procedural sense, the responsibility for making ‘a’ decision was shared with the ‘system’ – Hospital 1 agreed a Tripartite Formal Agreement with the Department of Health, the local PCT cluster and the Strategic Health Authority. The agreement confirms that the preferred route to FT status for Hospital 1 was by integration with Trust A. In addition, Trust A, as an FT, also had a duty to consider the views of its Council of Governors, so responsibility here might be considered as shared and therefore more opaque.

The organisational determinants that could have been said to influence the decision making in this context are presented below.

Factors influencing the tier three decision at Trust A	
Size	The scale and remit of the proposed merger required the decision making process to be formalised, procedurally driven, protracted, sequential and adaptive as information and knowledge was gathered and consolidated
Resource levels	Neither organisation could be described as having slack resources for decision implementation, and as the case of financial feasibility within the Outline Business Case was redacted due to commercial sensitivity, it is unclear what resource levels were available and how this might have influenced decision making.
Governance arrangements	The decision making body, as described below was accountable to each organisation’s Board. Hospital 1’s Board would have been formally accountable to the SHA, while Trust A’s Board would have been formally accountable to its Board of Governors
Decision making structures	The initial body established to progress the decision making process was constituted from both organisations’ Chairs, Chief Executives, Medical Directors and one representative Non-Executive Director – this decision making body might be considered to have a flat structure, so it is not clear how this body directed itself. It is also not clear what the degree of autonomy between and among each organisational quartet would have been.
Extent of connectedness	Given the complex nature of the decision outcome, a programme of work was begun which involved clinical teams and management teams from both organisations coming together to develop plans and strategies for the merger.
Organisational culture	Trust A was initially a naval hospital and transferred to the NHS in the 1960s. It is larger than Hospital 1, serving a larger population and employing more staff. It also provides some specialised services for the wider county population. Hospital 1 was legally established in the early 1990s with a new PFI hospital opened in in the early 2000s. It has a history of partnership working with other providers for specialist services.
Decision making antecedents	The Outline Business Case for the merger makes the following statement, ‘Relationships between the Trusts are good, strengthened by the appointment of the former Hospital 1 Chief Executive to Trust A in [date]. There are a number of existing partnerships and joint services, including: Ear, Nose and Throat (ENT), Urology, Audiology, Dermatology, Rheumatology and Pathology. Trust A have provided Level 3 Neonatal Intensive Care, ENT and Audiology services at X Hospital for over 10 years’
Absorptive capacity	Given the difficulties that both organisations were facing and continued independent service and technological developments at both Trusts, it is likely that absorptive capacity was stretched both in terms of the Executive team and at a departmental/unit level.

Given the range of factors described above, it is suggested that the over-riding factor in the decision making process in this case was the decision making antecedents i.e. the established relationship between the two organizations and existing and long-standing personal and professional connections.

### ***'Trust B' - merger***

Trust B' gained FT status in 2005. Together with Hospital 2, which is situated eight miles away, the organisation would have served a population of just under one million people and would have had a combined turnover of £400m. Trust B has a history of sound financial management and high quality services, for example winning 'Acute Organisation of the Year' and 'Safest Hospital in the UK' in recent times. It has consistently met or exceeded national targets and has some of the highest staff satisfaction results. Discussions about a potential merger began in anticipation of the need to react to future pressures by rationalising and centralising services, in order to remain viable.

'This is particularly relevant for some of the surgical specialities as national reductions in the number of junior doctors allocated means that [*Trust B*] will find it more difficult to maintain the current pattern of provision' (Board Meeting minutes).

The rationale for the merger was explained in the public consultation document as follows: Provision of more consultant-led care 24/7, meeting new quality standards issued by the medical Royal Colleges for safe and effective care, and meeting the efficiency challenges by reducing duplication and overheads. The option of merger was seen as providing the 'best opportunity to deliver the real benefits to patients that are believed possible' in comparison to the options of staying as two separate organisations with current reconfiguration of services, or remaining as separate organisations but with closer ties. Other potential merger partners were considered but the merger with [*Hospital 2*] was considered to be 'the most logical, beneficial and achievable'.

A meeting was subsequently held with Monitor to discuss closer collaboration and merger with Hospital 2 and the Boards of both Trusts agreed to proceed. A proposal was prepared and a case developed for the Co-operation and Competition Panel (CCP) highlighting the benefits of the merger against the possible interpretation by the CCP of a reduction in patient choice. Trust B Board reports for the following year comment that Monitor appeared reluctant to give advice on the merger as this was the first proposed merger of two FTs. Instead, Monitor expected the two parties to take independent legal and other advice.

A formal submission was made to the Office for Fair Trading (OFT) in the summer of that year. Trust B Board reports from the same period suggest that the OFT had given an indication that if there was local community support for the merger the OFT may be willing to consider this in its decision. The Trusts had also received an indication from Monitor that there were two potential options for how it would take its decision on the merger – the first would be to go through the process it used for aspirant Foundation Trusts; the second would involve a risk assessment in addition to a vote on the merger by both Councils of Governors.

Further work on defining the benefits case for the OFT and responding to their questions was concluded in September. This enabled the OFT's competition assessment process to begin with the initial phase to be completed within 40 days. The December Board report notes the media coverage of the merger was mainly negative and there had been a negative response from a local MP. In January of the following year, the Trusts received notification that the OFT was referring the merger to the Competition Commission.

By the summer, the Competition Commission's initial findings identified a substantial lessening of competition for services. In a press release the CC commented that 'It is now up to the trusts to provide evidence that the loss of choice for patients and the resulting loss of incentives to maintain or improve quality will be outweighed by benefits from the merger. We will evaluate all the evidence carefully and we will look to preserve any benefits in choosing a remedy. In order to take benefits into account, we will have to be convinced that such benefits are unlikely to be achieved without the trusts merging and may be expected to accrue within a reasonable period.'

The final decision to prohibit the merger was announced in October of that year, with the weighting given to maintaining competition ahead of benefits the patients. It took almost two years for various competition authorities to consider the proposed merger and reach a conclusion. It is also reported

that the hospital trusts spent £6.5m on planning for the proposed merger, including £1.3m on the competition issues raised.

It is possible to map this decision on to the elements identified above for tier three decisions as follows:

1. **The decision to merge is not separated from the implementation:** The decision to proceed was made by each Trust's Board while the Board of the newly formed Trust would have subsequently been responsible for the merger happening in practice. However in reality, members from each Trust's own Board were appointed to the shadow joint Board and work on preparing for the merger was well underway within both Trusts, meaning that the decision to merge was not separated from the implementation.
2. **Decision-makers are more clearly located in the context affected by the decision:** The Boards of each Trust would have been directly and personally affected by a merger as the merged Trust would have required a single Board, affecting either their continued employment, or their continued involvement in the day-to-day implementation of a merger.
3. **May be less immediately understood as primary resource decisions:** though the impetus for the merger was the need to react to future pressures by rationalising and centralising services, in order to remain viable, the public presentation of the merger was framed as the ability to provide clinical benefits for patients. It is possible that the decision to merge was understood as a primary resource decision differently by different departments, depending on the extent to which their services were affected and their services were seen as either 'winners' or 'losers' from the proposals
4. **Has responsibility that at times is more opaque:** Though it is clear that the Boards of both organisations were responsible for making the decision to proceed with proposals for a merger and undertaking the lengthy and costly preparatory work to do so, the responsibility for making 'the' decision was taken by the Competition Commission so responsibility here might be considered as more opaque, as the Boards of both organisations were unable to assume responsibility for the final decision.

The organisational determinants that could have been said to influence the decision making in this context are presented below.

Factors influencing the tier three decision at Trust B	
Size	The scale and remit of the proposed merger required the decision making process to be formalised, procedurally driven, protracted, sequential and adaptive as information and knowledge was gathered and consolidated. The length of time taken and the sheer volume of paperwork and information required by the regulatory bodies was burdensome.
Resource levels	Though the financial situation of both organizations could be described as relatively healthy, the process of planning and preparing for the merger was financially onerous and would have consumed significant amounts of many individuals' time. However, at no point did it appear that the resources required to proceed and implement the decision were regarded as untenable.
Governance arrangements	A Joint Programme Board was established to oversee the preparatory work for the merger. Regular reports were made by the chief executives of each organization to their Boards. Each organisation's Board would have been formally accountable for the merger decision to its Board of Governors as an FT.
Decision making structures	It appears as though internally, the FTs were so convinced of the rationale for the merger and were so focused on progressing with a programme of preparatory work and responding to requests from the OFT and CC for additional information/clarification that there was no public discussion of reviewing the original decision to proceed with merger plans, even when the process with the CC became so drawn out and resource intensive. A Joint Governor Reference Group was established to work through the practicalities of the merger but was not a decision making structure.

Extent of connectedness	Given the complex nature of the decision outcome, a programme of work was begun under a Joint Programme Board with associated work streams across both organizations to develop plans and strategies for the merger. A workshop was held for all work stream leads to 'review deliverables and milestones for a successful merger'. However it does not appear from Board reports that these work streams openly questioned the wisdom of proceeding in the face of the procedural difficulties.
Organisational culture	Both organisations have a history of high performance and achievement against a range of measures. They both have stable management and a stable workforce, situated as they are in a desirable location on the Dorset south coast. Their cultures might be considered to be open, inclusive and participatory. Both organisations worked with their staff in partnership with an external body to identify what was considered the best in each of their organisations with a view to building on this and incorporating into a new evolving culture for the merged organisation.
Decision making antecedents	There was no national precedent for a merger between two FTs and the case for protecting choice against anticipated patient benefits had not been tested in this way before. The OFT, Monitor and CC were navigating uncharted territory.
Absorptive capacity	It is possible that given the efficient programme management approach taken, both organizations became task and procedurally focused and used energies, time and resources to respond to the demands for more information, explanation and clarification from the CC. This drawn out process is likely to have resulted in reduced absorptive capacity to respond in a way that might have changed the decision made and could in addition have affected the organisations' abilities to challenge its ongoing commitment to the merger.

Given the range of factors described above, it is suggested that the over-riding factors in the decision making process in this case were a lack of decision making antecedents, the decision making structures and governance arrangements, and a lack of absorptive capacity.

### ***'Trust C' – New service developments***

'Trust C' was established in the early 1990s and hopes to be granted FT status in the near future. It provides emergency care for a catchment population of approximately 400,000 people and planned care for a catchment population of approximately 300,000. It has 600 beds, employs nearly 5,000 staff and has an annual budget of over £200million. Last year was the seventh consecutive year in which the Trust generated surpluses and these were used to accelerate payment of a loan to the DH. For the year in question Trust C was aiming to make a surplus of just under £4m.

The Care Quality Commission (CQC) made an unannounced inspection of the Trust in February. This resulted from feedback from the local health community and focused on how the Trust was coping with increased numbers of emergency patients. Patients had been reported as waiting in corridors of the A&E department for treatment and the day surgery unit was being used for overnight stays. Elective surgery procedures were also being cancelled to accommodate emergencies.

Trust C had already begun to address these issues before the CQC inspection. An Ambulatory Emergency Care Network site visit was held in December which provided support to Trust C with data recording and implementation plans from other Trusts. In the performance report presented to the Trust C Board it was noted that the redesign of urgent care delivery within the Medical Assessment Unit had commenced and that Emergency Nurse Practitioners had been recruited in order to increase the number of patients being managed on the ambulatory care pathway. Winter Funding bids had been submitted to the commissioners with Trust C also subsequently receiving over £2m of additional winter pressures funding from the NHS. Trust C also called on the expertise of the national Emergency Care Intensive Support Fund (ECIST).

Longer term initiatives included the establishment of a new Emergency Surgical Ambulatory Clinic, with the Trust providing resource for an additional Consultant Emergency Surgeon, a new dedicated ultrasound machine and extra theatre capacity for emergency patients.

The Care Quality Commission (CQC) chose to inspect the Trust in its first wave of new style inspections as the hospital was considered to be a 'medium' risk in terms of its ability to provide high quality care. When the CQC completed its follow-up inspection during, it found that the Trust could lead change effectively. The CQC reported that the changes subsequently implemented had 'significantly improved how the Trust managed the demand for its services and ensured that patients received good quality and safe care.'

Though Trust C was facing an emergency admissions and capacity challenge, it continued to introduce new developments in a range of services including cancer. A specialist acute oncology service to manage urgent care for cancer patients was fully launched with the appointment of two new Consultant Oncologists and a team of specialist nurses. Trust C also replaced one of its two Linear Accelerators (LINACs) and upgraded its second and newer machine. This enabled treatment to be delivered faster and more accurately. It also meant that patients would only need one treatment plan, as both machines would now be capable of delivering the same treatment.

It is possible to map these decisions on to the elements identified above for tier three as follows:

1. **The decision is less clearly separated from the implementation:** There is no division between the decision made and implementation, with Board Directors with responsibility for making these decisions, also responsible for implementation i.e. Medical Director, Director of Nursing and Chief Operating Officer.
2. **Decision-makers are more clearly located in the context affected by the decision:** As above, decision-makers such as the Medical Director, Director of Nursing and Chief Operating Officer would be directly affected operationally by decisions leading to the appointment of new medical consultants and nursing teams and the development of new services or patient pathways.
3. **May be less immediately understood as primary resource decisions:** Decisions relating to investment in Emergency Care Services were unlikely to have been understood as a primary resource decision, as the imperative would have been to respond to capacity pressures by doing things differently. However, the purchase of the LINAC machine is more likely to have been understood as a primary resource decision.
4. **Has responsibility that at times is more opaque:** For the types of decisions highlighted here, this element does not entirely hold true. For while the problem of responding to emergency pressures may have been seen as a health system wide responsibility in the medium to long-term, responding to such pressures on an immediate basis would have been seen as resting entirely with the Trust Board.

The organisational determinants that could have been said to influence the decision making in this context are presented below.

Factors influencing the tier three decision at Trust C	
Size	Though each 'decision' referred to above requires quite modest investment when taken separately, taken as a composite programme of activity over a relatively short period of time, it represents a more significant investment both in capital and recurring revenue costs.
Resource levels	Trust C was aiming to make a surplus but was committed to good husbandry of its finances and achievement of its CIP in order to achieve its aspirations of becoming an FT. However, Trust C was able to negotiate additional monies to ease winter pressures and had allowed for a new LINAC in its forward capital plan
Governance arrangements	Trust C had established a shadow Council of Governors in anticipation of its FT application being approved but this would not have fulfilled any formal governance role. The Trust Board was formally accountable to the Strategic Health Authority and is currently accountable to the NHS Trust Development Authority
Decision making structures	From Trust C's Board and annual reports, and documents on its website, it is possible to see a clear audit trail of its decision making processes. For example, the 2012/13 Annual Report states that 'The Trust's strategy has

	been developed in response to the forecast needs of the local population which the Trust serves. Consultation on the strategy was undertaken through a comprehensive series of public meetings and publication of the Trust's plans. Staff were also asked to consider the proposals, and feedback from both groups were fed into the strategy...In order to deliver the strategy the Trust sets annual priorities as set out in the annual business plan. In April the Trust Board approved the [Trust C] Business Plan Summary.'
Extent of connectedness	Given the smaller scale nature of the individual decisions highlighted here, the opportunity to comment on the extent of connectedness is limited. However, it is apparent that the advice and input from clinical experts was sought through the Emergency Care Network and Emergency Care Intensive Support Fund. It is also possible to demonstrate liaison with commissioners during the winter pressures period specifically.
Organisational culture	The Trust had been pursuing FT status for some time. Achieving a year-on-year surplus to accelerate repayment of its legacy loan was clearly a priority for the organisation. In the minutes from a Board meeting, it is interesting to note that a Non-Executive Director sought assurance that care for patients and waiting times were not being affected by the delivery of savings. It is also interesting to note the following use of language in the standard presentation of the Finance report at the Trust Board meetings. - 'Not achieving financial duties will impact on the ability and sustainability to achieve the value for money conclusion.' - 'The NHS is committed to providing best value for taxpayers' money and the most effective, fair and sustainable use of finite resources.' - If 'The Trust fails to deliver its financial plan which leads to the Trust having a financial risk rating of two or less, resulting in a lack of confidence from the Trust's commissioners and the regulator. This increases their level of scrutiny which places additional resource pressures on the Trust and degrades the Trust's reputation.' One year on, the CQC's report from its inspection noted that staff had reported a tangible shift in culture from a corporate to a patient focus. The Trust had also been 'open and transparent with partners about challenges and funding had been used to support innovative changes.'
Decision making antecedents	In order to achieve the accelerated repayment of its legacy capital debt, Trust C would have had to make some tough decisions in order to deliver year-on-year surpluses.
Absorptive capacity	Though Trust C had been working towards FT status for some time, there had been no other significant programmes that might have limited its absorptive capacity

Given the range of factors described above, it is suggested that the key factors in the decision making process in this case were resources and organisational culture.

### ***'Trust D' – service relocation***

'Trust D' is a very large acute trust in England and provides acute services to more than 2.5 million people and provides specialist services to between three and four million people. It was formed from a merger and operates from three separate sites around the city. It provides approximately 1,500 beds, employs more than 14,000 people and has a budget of approximately £800 million. In the Trust Development Authority's (TDA) report on the financial performance of the NHS Trust sector presented to the TDA's Board meeting it was noted that Trust D was reporting an unplanned estimated deficit for the full year of £9million, against a planned surplus of £5.3 million.

The Care Quality Commission (CQC) chose to inspect the Trust as it was considered to be a 'medium' risk in terms of its ability to provide high quality care. However, its inspection report found that 'Outcomes for patients were mostly within the nationally calculated normal limits but in some cases they were better than expected... Both the National Patient Survey results and Friends and Family Test results were better than the national average.' It subsequently classed Trust D as a 'good' provider of services.

The proposal to separate emergency and elective surgery between the main two hospital sites would have been discussed as part of the previous merger strategy. This would have incorporated a whole programme of activity to maximise efficiencies across the two hospitals, in order to address the £60million funding gap at the time. This programme of activity would have been prioritised with the transfer of orthopaedic elective activity not planned until later in the year. However, in a three-month period the hospital's cancellation rate for operations was 10%. This was in large part due to increased levels of emergency activity – 2.4% over the same period. The Trust responded to public concern about the high level of cancelled operations by introducing a range of initiatives, one of which was to accelerate the transfer of elective orthopaedics. After the move the Trust's cancellation rate reduced significantly to only 2.77% (609 operations).

It is possible to map these decisions on to the elements identified above for tier three decisions in section 3.1:

1. **The decision is less clearly separated from the implementation:** There is no division between the decision made and implementation, with Board Directors with responsibility for making these decisions, also responsible for implementation i.e. Medical Director, Director of Nursing and Chief Operating Officer.
2. **Decision-makers are more clearly located in the context affected by the decision:** As above, decision-makers such as the Medical Director, Director of Nursing and Chief Operating Officer would be directly affected operationally by decisions leading to the transfer of elective orthopaedic surgery.
3. **May be less immediately understood as primary resource decisions:** Decisions relating to the transfer of elective surgery were unlikely to have been understood as a primary resource decision, for though the move of all elective surgery was planned for in the transformation programme as a means of realising efficiencies, the predominant factor at the time of the transfer was addressing the number of cancelled operations.
4. **Has responsibility that at times is more opaque:** For the decision highlighted here, this element does not entirely hold true. For while the problem of responding to emergency pressures may have been seen as a health system wide responsibility in the medium to long-term, responding to the knock on consequences of cancelled operations would have been seen as resting entirely with the Trust Board.

The organisational determinants that could have been said to have influenced the decision making in this context are presented below.

Factors influencing tier three decision at Trust D	
Size	When taken as a separate decision, the relocation of elective orthopaedic surgery this was a relatively modest decision in terms of scope. However, this formed part of a large scale programme of transformation following the merger of the two Trusts.
Resource levels	Resource levels at the time at the time of the previous merger were very low. However, the financial position of the Trust was turned around as a result of some stringent cost improvement programmes. Unfortunately it has subsequently found itself in financial difficulty again with an unexpected deficit this financial year.
Governance arrangements	The Quality Assurance Committee (of the Trust Board) monitors the quality of services Trust D provides and the quality of its risk management and assurance processes. The Directors' Group (Quality) meets monthly. The group's members are executive directors, corporate advisors to the Board, and Trust D's senior clinical leadership team. The group is responsible for leading and delivering the required quality standards and for driving continuous and sustainable improvement in the quality of our services. Though the Trust has applied for FT status, it has not yet been approved. Therefore a shadow Council of Governors has no statutory role in governance.
Decision making structures	The Trust Board is the ultimate decision making body and must approve business cases for change or investment. The transformation programme

	Better for You (BfY) has its own infrastructure with a Programme Director, who reports directly to the Deputy Chief Executive of the Board.
Extent of connectedness	The BfY Programme has fostered a greater sense of connectedness within the organisation and with external partners and stakeholders. Thousands of staff have been involved in 'listening events' and feeding back comments on the organisation's strategy and other ideas and suggestions for improvement.
Organisational culture	<p>The plans to achieve financial balance at the time of the merger resulted in a reduction of over 1,200 posts. As noted in the organisation's report – <i>Better For You – the story so far (2009-2011)</i>, this stringent response to the financial challenge had a damaging impact on staff morale across the organisation. It was recognised that in order to achieve the new vision for the merged organisation of becoming the best acute teaching hospital in the country by 2016, a significant cultural shift was needed to engage staff meaningfully in delivering effective and sustained quality improvement.</p> <p>The Better for You (BfY) programme emerged as the vehicle by which to achieve this cultural shift. The underlying philosophy of BfY is to focus directly on improving patient and staff experience. High quality and safer services, which reduce variation and eliminate waste will deliver financial savings. Safety, quality and value for money are considered to be of equal importance. Staff are engaged and empowered to make change happen in the workplace.</p>
Decision making antecedents	The Trust has been through a significant period of change that includes a merger, a change of leadership team, organisational restructuring, cost cutting, removal of staff posts, and adjustments to services and staffing. The establishment of the BfY Programme has also seen hundreds of projects and initiatives undertaken.
Absorptive capacity	The Trust has coped with significant challenges and changes but appears to have developed a culture of continuous improvement through the sharing of information and best practice to raise awareness and enable learning.

Given the range of factors described above, it is suggested that the key factors in the decision making process in this case were the culture of the organisation and its absorptive capacity.