Quality and Safety in the NHS: Evaluating Progress, Problems and Promise

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Executive Summary

1. The NHS in England is facing challenges and changes as great as any in its history. These include increasing demand, population demographics, changes in disease type and frequency, technological changes, and a major structural and culture change programme, all in a context of national economic austerity. In such circumstances, ensuring that organisational cultures remain focused on improving high quality and safe patient care is all the more important.

2. The research programme reported here was initiated by the Department of Health Policy Research Programme to assess the extent to which NHS organisations in England have cultures in which the most important values are those of providing and improving high quality and safe patient care. The programme used a combination of methods, including interviews, surveys and ethnographic case studies, to assess the extent to which organisational cultures and values support high-quality care and patient safety. It aimed to determine how to secure a sustainable focus on quality and safety, how quality improvement happens, how change in the right direction can be accelerated, and how innovation can be encouraged.

3. Virtually all those we interviewed were firmly committed to the ideal of a safe, high-quality health service for patients and to good patient experience. Many identified the values of compassion and care as at the heart of the mission for their organisations, and as their most deeply felt personal professional commitment. Our interviews, observations, surveys and documentary analysis were united in suggesting for organisations to succeed in delivering high-quality, safe care, they needed to have a clearly articulated vision, including explicit goals for quality and safety and a strategy for achieving them. But converting laudable aspirations for high-quality, safe and compassionate care into clear goals appeared challenging. Clarity about goals, how they could be achieved, and leadership for delivery were highly variable, and will be a focus for improvement in the future.

4. There were many examples of outstanding care throughout our research. But we found considerable variability in how far organisations succeeded in making their aspirations for high-quality care real: what we termed “bright spots” and “dark spots” were both evident, even within the same organisations. Bright spots included teams and individuals who demonstrated caring, compassion, cooperation and civility, and a

commitment to learning and innovation. Direct observations found that in many settings patients were often treated with kindness and respect, systems functioned well, and staff were busy but knew what they were doing and why. Compliance with many standards of good practice, such as hygiene and equipment counting, was observed to be very good in many cases.

5. Though much care was of such high-quality as to be inspiring, sub-standard care or "dark spots" were also evident. Dark spots were found where staff were challenged to provide quality care, were harried or distracted or were preoccupied with bureaucracy. Interviews and surveys with patient and carer groups suggested that patients and their carers were often concerned about quality and safety. Observations in clinical areas and our interviews confirmed that inconsistency was a feature of many settings. For example, though most staff spoke to patients politely and with kindness, some others were brusque, impatient or discourteous. Concerns were expressed at tendency towards task-focused rather than person-centred care. We found evidence of problematic handovers and interfaces between shifts, teams, departments and organisations, as well as a tendency in some settings towards team conflict and a diffusion of responsibility relating to particular patients. Patient and carer groups reported discontinuities in care between institutional boundaries and even within single organisations. These "responsibility cordons" left patients variously ill-informed, distressed and disappointed.

6. Confusion about leadership of quality and safety and overlapping responsibilities among a number of national-level organisations for leading, monitoring and improving quality and safety have created difficulties for NHS organisations. Multiple lines of accountability have produced misaligned performance measures for monitoring and reporting on quality and safety.

7. Few trust boards reported clear, agreed upon, challenging and measurable quality and safety-related objectives. Clarity of aims relating to quality and safety was not assisted by 'priority thickets': targets, standards, incentives, initiatives, drives and measures that crowd in from multiple external sources, and are ill-coordinated and misaligned. In trusts whose boards prioritised productivity and targets over safety, staff were less engaged, less satisfied, more stressed, and less likely to report being able to contribute to improvements in the workplace. Where safety was prioritised, staff experience on all these dimensions was more positive. However, there was a

low level of board innovation and a significant decline in the amount of innovation over the study period. Relatively few innovations by boards related to quality and safety; most related to efficiency and productivity. We found that high levels of competition between trusts were associated with lower staff satisfaction, poorer implementation of human resource management practices and lower levels of staff satisfaction with the quality of care they were able to deliver.

8. Using the NHS National Staff Survey data, we found that one of the strongest predictors of patient mortality in acute trusts was the percentage of staff working in well-structured teams. Although 91% of NHS staff report working in teams, only 40% worked in well-structured teams. Working in poorly structured teams was associated with higher patient mortality, more errors that could harm staff or patients, and higher levels of injuries to staff. Staff working in well-structured teams had better health and well-being and took less time off work. The best indicator of a variety of outcomes including staff health and well-being, absenteeism, intention to quit, quality of patient care, patient mortality and use of resources was the level of staff engagement. The research demonstrates a strong relationship between quality of staff management and the quality of patient care. It was thus disappointing that a number of key scores in the National Staff Survey and Acute Inpatient Survey, indicative of quality and safety issues, which had improved steadily in the years up to 2009, have since stagnated or deteriorated.

9. Although they were committed and innovative in their approaches, some staff reported often being unable to achieve their goals for patients because of organisational factors outside their control. Changes within organisations, uncertainty about priorities, poor systems, and increased workload and staff shortages created serious challenges. These frustrations were compounded by staff feeling they lacked support and appropriate intervention from management, further reducing their motivation and morale. However, when they had the right support, either from within their teams or as a consequence of enlightened management, front-line teams felt able to deliver high quality care, reinforcing their high levels of motivation and morale in a virtuous circle. Having appropriate resources and adequate staffing levels allowed staff to do their jobs effectively and this seemed to promote resilience by also enabling staff to explore new ways of working and develop reflective practice. Staff at the sharp end were very often aware of systems problems but could feel powerless to bring about change. Organisational change, uncertainty about priorities, poor systems, heavy workloads and staff shortages were all blamed for staff feeling they

lacked support, further reducing their motivation and morale. Disagreements between senior, “blunt-end” managerial staff, and clinical staff working at the “sharp end” of care, on the causes and solutions of quality and safety problems led to wasted effort and loss of trust. But strong focus by executive and board teams on their own role in identifying and addressing systems problems was powerful in supporting positive cultural change; our observations and interviews identified many examples of where impressive gains had been made by the sharp and blunt ends working together around unifying goals.

10. There was evidence of wide variation in the ability of NHS organisations to gather, identify sort, understand, monitor and appropriately act upon information about their performance in relation to quality and safety. In many trusts, an inability to interpret quality and safety-related data at board level was compounded by the use of ill-coordinated and sometimes poorly designed measurement processes at the front line. Data collection was sometimes used as a means of reassurance rather than as a way of detecting and acting upon problems. More constructive behaviours involved using data to go beyond merely ensuring compliance; data was used to challenge and reveal areas requiring action.

The findings suggest a need for a renewed but more coordinated emphasis on quality and safety to ensure that recent progress is not lost and that a focus on quality remains permanent amid other pressures. The research also suggests how best to secure quality and patient safety in the NHS:

- Direction for quality and safety must be set from the top. Clear national-level direction setting is crucial. It must avoid dispersing responsibility and accountability, and avert confusion and misalignments for service providers.

- Within NHS organisations, leaders must work with staff to agree clear, measurable and challenging objectives. Trust boards must make safety and quality their overriding focus, shaping organisational environments that promote continuous improvement in patient care quality and safety.

- Change programmes must embrace multifaceted and complementary strategies to effect deep and sustainable improvements. Some quality improvement techniques show promise and have been used with some success. But they need a supporting culture change if they are to succeed, and to avoid being treated as magic bullets.

- To secure improvement, the focus must be on both systems and individuals. This means enforcing personal accountability, ensuring that staff at all levels share an understanding of quality and safety problems and agree on solutions, and investing management time in addressing systems problems that require senior-level intervention.

- Supportive management that secures staff engagement is needed. Staff need to feel valued, respected and supported and successes should be rewarded.

- There is a need to increase the percentage of staff working in well-structured teams and reduce the percentage working in poorly structured teams by ensuring clear, challenging and measurable team objectives; better communication and coordination within and between teams; and encouraging teams to regularly take time out to review their performance and how it can be improved.

- A key objective of every team in the NHS must be to continuously improve the effectiveness with which they work with other teams (within and outside their organisation as necessary) to ensure effectiveness and efficiency in the delivery of high quality patient care.

- The patient perspective should be valued at all levels, from national to local. Patients' views should be the key source of intelligence for organisations about the quality and safety of their services.

- Organisations must get smarter with their use of intelligence. Burdensome and inefficient systems for data collection should be avoided; so too should a culture of using data as a form of comfort-seeking behaviour. The right information needs to be gathered, interpreted correctly and fed back to staff at the front line so that they can sustain and improve their performance.

- Innovation at the sharp end of clinical practice must be positively reinforced and supported by senior staff. And they should nurture environments in which front line innovation can flourish. Cultures of innovation at the sharp end of care need to be encouraged by ensuring work pressures do not crowd out space for the development of new ways of providing high quality care.

- Overall, there is a need for the issues identified in this report to be discussed at all levels of all NHS organisations and for shared strategies and solutions to be developed in the interests of high quality and safe patient care for all. That requires

cultures of involvement, good communication and consultation, constructive critique, exploration of opinions and ideas for innovation from the board through to the front line.

Cultures of quality and safety: Main Report

1.1 INTRODUCTION

The NHS in England is facing challenges and changes that are as big as any in its history. These include increased demand, a changing demographic profile, major changes in disease frequency, technological changes of extraordinary proportions, and a major structural and culture change programme. This is in a context of the need to make vast savings in order to keep pace with demands on the service in a time of national economic recession. The NHS has been further challenged by the findings of Sir Robert Francis's inquiries into the case of Mid Staffordshire NHS Foundation Trust,[1] [2] which investigated how catastrophic failings in quality of care went undetected and uncorrected.

Francis identified evidence of a large-scale failure of control and leadership at multiple levels, from what social scientists term the "blunt end" of the system where decisions, policies, rules, regulations, resources and incentives are generated[3] through to the "sharp end", often known as the 'frontline', where care is provided to patients. The distinction between the blunt end and the sharp end is of course a heuristic one; many within healthcare organisations function in hybrid positions both as managers and practitioners. Nonetheless, it is useful to recognise how the blunt end, by shaping the environment where care is delivered, may create the "latent conditions"[4] that increase the risks of failure at the sharp end, but may equally generate organisational contexts that are conducive to providing high-quality care. Such contexts include culture: Francis blamed an "insidious negative culture involving a tolerance of poor standards and a disengagement from managerial and leadership responsibilities."[1] Culture is, of course, a term that is widely used but notoriously escapes consensual definition, as usefully summarised by Mannion and Davies:

> *What is organisational culture? The answers are many, complex, and contested. But at the heart of many definitions is that culture consists of the values, beliefs, and assumptions shared by occupational groups. These shared ways of thinking are then translated into common and repeated patterns of behaviour: patterns of behaviour that are in turn maintained and reinforced by the rituals, ceremonies, and rewards of everyday organisational life. In everyday language, culture is "the way things are done around here," together with the shared ways of thinking that support these norms of practice.*[5]

The research programme we report here was initiated by the Department of Health Policy Research Programme to assess the extent to which NHS organisations in England have

cultures in which the most important values (in rhetoric and in practice) are providing and improving high quality and safe patient care. The research covered a critical period 2010-2012 following the publication of the first independent inquiry into Mid Staffordshire[6] in February 2010 and the White Paper on the NHS[7] in July 2010, and concluding in mid-2012. The programme involved a large number of sub-studies using different methods to seek evidence from staff and patients throughout the English NHS, from large sub-samples of NHS organisations, strategic level stakeholders, teams, and patient and carer organisations, and from detailed case studies. It was thus able to provide graduated levels of focus and multiple lenses (Appendix 1). The preliminary analysis presented here is based on data from:

- 107 interviews with key, senior level stakeholders across the NHS and beyond
- 197 interviews from the "blunt end" (executive and board level) of NHS organisations through to the "sharp end" where staff care for patients
- Over 650 hours of ethnographic observations in secondary and primary care
- 715 survey responses from patient and carer organisations
- Focus groups and interviews with patient and carer organisations
- Team process and performance data from 621 clinical teams, drawn from the acute, ambulance, mental health, primary care, and community trust sectors
- 793 sets of minutes from the meetings of 71 NHS trust boards from multiple sectors over an 18 month period

Each of the individual sub-studies will be reported separately, but there is considerable value in bringing the learning from them together holistically. In this report, we provide a synthesis across the studies to draw out high-level learning about culture and behaviour in NHS organisations; what influences culture and behaviour; and what needs to change to give effect to the vision of a safe, compassionate service in which patients and their families could have trust and confidence. It reports learning about:

- How staff culture and behaviour in the NHS can best be supported to deliver quality and patient safety
- The extent of leadership and staff motivation for high quality and safe patient care
- How to secure a sustainable focus on quality and safety, how quality improvement happens, how change in the desired direction can be accelerated, and how innovation can be encouraged and supported
- The views of patient and carer organisations in relation to these issues.

Papers based on these data are either in press, submitted for publication or in preparation. Details are updated regularly on the website www.lums.lancs.ac.uk/nhs-quality

1.2 METHODS

Research ethics committee approval and research governance approval (where required) was obtained for the programme of work, which involved eight sub-studies.

1.2.1 Sub-study 1: Stakeholder interviews

Within the NHS is a range of stakeholders – from the blunt end to the sharp end of health systems. The blunt end[8] is the source of strategies, policies and resources that forms the environment in which practitioners caring for patients at the sharp end work. We sought to conduct interviews with a wide range of strategic-level stakeholders across multiple NHS organisations and organisations involved with the NHS, with the aim of identifying what stakeholders understand the vision of delivering high quality and safe patient care for all to comprise, what is required to make it happen and what theories of change they are working with. We explored how they planned to implement quality and safety improvement, enhance leadership and promote engagement of workforce, and sought their views on what quality improvement means, how it could best be secured, and what stands in the way.

1.2.1.1 *Study design*

Data collection was undertaken over a period of 12 months from January to December 2011. Semi-structured telephone interviews were conducted using a semi-structured prompt guide that had been developed and piloted within the project team.

1.2.1.2 *Sampling strategy*

Sampling aimed to select those who had close involvement in quality and safety either through their posts, specific initiatives - either local or national - or through their involvement in research and commentary, for example from the charity/ think-tank sector. We sought to interview commissioners of NHS services; commentators with expert knowledge of health care (e.g. university researchers, members of research funding organisations, members of agencies supporting the NHS) and NHS staff. Emphasis was given to providing multi-level understanding of the NHS and focused on including NHS stakeholders at strategic level (e.g. those at board and executive level, including Chief Operating Officers), those engaged in management (e.g. ward managers, clinical directors, directors of nursing, human resources departments), and those with a designated role in relation to quality improvement and patient safety. We identified the different categories of stakeholder types heuristically as commentators, commissioners, managers, and clinicians.

We aimed to recruit from a wide range of health care organisations in England, including acute trusts, ambulance trusts, mental health trusts, community trusts, foundation trusts,

primary care trusts, strategic health authorities, general practices and health care commissioning organisations. Stakeholders were initially identified from publicly available information, such as conference brochures and websites, and from personal contacts identified by the research team and its advisory group. Snowball sampling was used extensively. Participants were purposively sampled to ensure a wide spread but not for statistical representativeness.

Recruitment of participants was initiated by e-mail to inform them of the study and invite them to take part in a telephone interview. Once a response indicating interest in the interviews was received, potential participants were allocated to one of the researchers who arranged the telephone semi-structured interview and forwarded an e-consent form and the interview prompt guide to the participant.

Participants came from across England, with a small number from Scotland and Wales, and from a wide range of organisations. Many of those interviewed performed composite roles that did not fall into discrete stakeholder types (see Table 1). For example, many managers were also clinicians (nurses, doctors or other clinical professionals) and, in some cases, clinicians were also active in undertaking research. Many held positions as clinician-managers, 44% of the manager participants were also clinicians. Several people who were involved in commissioning also had lengthy clinical careers and some academics had held NHS posts. All the commentators had specific research knowledge of quality, patient safety and health care management.

Table 1. Stakeholder participant profiles

Stakeholder categories	Number of participants	%
Manager-Clinician	47	44
Manager	18	17
Clinician	15	14
Commentator	13	12
Commissioner	7	7
Manager-Commentator	4	3
Commentator-Clinician	3	3
	107	100

1.2.1.3 *Conduct of interviews*

The same basic prompt guide was used across the interviews, albeit slightly modified for type of stakeholder (commentator, commissioner, clinician, or manager). It provided loose structure of open ended questions that focused on a general area of interest and allowed the researcher to probe deeply, to uncover new clues and provide insights into the meanings of the complex interactions, motivations, parties and politics. [9]

In conducting the interviews, researchers introduced the research study and gave an overview of the questions of interest. Prompt guides were used flexibly, and interview questioning was also open-ended, leaving room for the participant to raise other issues that they deemed pertinent. The average interview time was around 45 minutes.

Written summaries of each interview that reflected non-verbal aspects of the interview were produced. All interviews were electronically recorded, with participants' permission, and transcribed verbatim. Interview transcripts were verified with the electronic recording, de-identified (references to participants name and organisation were removed from transcripts) and imported into QSR NVivo 8 qualitative software.

1.2.1.4 *Data analysis*

Analysis of the interview transcripts was based on the constant comparative method. This involves repeated inspection of each transcript and interview summary and then allocating "open" codes to describe each unit of meaning. [10] Through comparison across transcripts, the open codes were linked and combined to generate higher order thematic categories and provided a framework for coding the transcripts with QSR NVivo 8 software. A sample of ten transcripts was also examined by two further members of the wider research team to provide their interpretation of the data.

Initial conceptual domains covered the following issues: content or understanding of quality and safety, processes and leadership of quality and safety, patient experience of quality and safety, impact of commissioning, regulation and change on quality and safety, and contextual influences on quality and safety. Analysis of the data and further development of the coding framework then progressed by iterative examination of the transcripts and continuous discussion between two researchers. This led to checking and re-definition of existing codes that identified themes and subthemes, and also allowed for inclusion of new insights into the final analytical framework.

1.2.1.5 *Research ethics*

Consent was obtained from those who were interviewed. Transcripts were anonymised and identifying details (such as job titles) were altered where necessary to preserve anonymity.

1.2.2 Sub-study 2: Ethnographic case studies

We conducted ethnographic organisational case studies with the following aims:

- assessing culture and behaviour in relation to quality, including the extent to which NHS organisations have become mobilised around quality
- identifying the extent of staff motivation, engagement and commitment to the principles of quality of care
- assessing how far clinical and non-clinical leaders and NHS organisational systems are promoting and supporting quality care for patients and carers
- assessing how quality improvements are evidenced in direct patient care (safety, effectiveness and experience)
- identifying organisational conditions that support or interfere with quality improvement
- providing deep conceptual understanding of what it takes for quality improvement practices to become embedded in organisational and professional routines and become largely unquestioned, and what tends to undermine such efforts
- making a substantial contribution to safety science and quality improvement that will add to the important lessons emerging from the literature
- identifying the practical action that can help promote behaviours and cultures supportive of high quality care by providing real-time feedback to organisations to enable practical, real-time learning.

Our study design involved comparative case studies across seven purposively chosen cases. The term “case study” is used in different ways by different disciplines, to the extent that it is a “definitional morass”. We used Gerring’s definition of “an in-depth study of a single unit (a relatively bounded phenomenon) where the scholar’s aim is to elucidate the features of a larger class of similar phenomena”.[11]

Case studies are especially powerful in addressing questions of "how and why", [12] though they remain an under-utilised research approach in the study of quality and safety in healthcare.[13] Baker notes that theory generated from cases "may help to make sense of the complex relationships that underline healthcare practice and elucidate why efforts to improve care can succeed in some circumstances, but not in others". [13] The particular value of conducting cross-case, comparative analysis is the ability to explore similarities, commonalities and differences, and thus to strengthen explanatory power. [12]

1.2.2.1 *Case studies: methods of data collection*

Our case studies collected mostly qualitative data, especially ethnographic observations, interviews, and documentary analysis, as well as a survey in one case study. The value of using ethnography to study aspects of patient safety and quality of care has become increasingly well established. [14-19] Ethnography involves direct observations of people conducted with a view to providing a vivid, resonant account of behaviour as it naturally occurs. [16] In conducting their observations (usually supplemented with chats, interviews, documents, and other data sources), ethnographers seek first to provide an empirical description of what happens. These descriptions can be valuable in their own right, in particular by making explicit what people take for granted in a situation, or know but do not articulate. The second aim of the ethnographer is to produce an analysis of what is seen. Sometimes that analysis may be quite specific to an individual setting, but, consistent with our aim of cross-case comparison, the more general objective is to generate concepts that will have transferability from one place to another.

Where we conducted our observations depended on the features of each case. For example, in some settings it was important that we observed meetings and events where decisions were made, information was gathered, learning was shared, ideas were generated, or a sense of common purpose were sought; in other settings, collecting data at the sharp-end of care was more appropriate. Ethnographic observations were captured in fieldnotes. These were then anonymised for subsequent analysis.

Semi-structured interviews were conducted across the range of our case studies, with the aim of eliciting participants' accounts of their views and experiences of seeking to secure quality and safety. We used a basic prompt guide, which had been formulated through review of the literature and extensive piloting, to structure the interviews. For example, the prompt guide included the prompt – "If a friend or relative were being treated at this organisation, what would worry you most?" This prompt guide was then modified for the specifics of each case study, so that it was possible to explore in more detail issues that were of particular salience in each setting. Use of the prompt guide in this way was also intended to align with the stakeholder interviews and provide opportunities for synthesis across the entire dataset.

In interviews, the prompt guide was used flexibly, with participants given the opportunity to explore issues in more depth where they wished to do so. This, combined with the limited time some participants could offer for interviews, meant that the prompt guide was not used rigidly but rather as a means of conducting a structured interaction. Not all participants received the same prompts, nor did they receive them in the same order.

In recruiting participants for interviews, we sought to collect data at the blunt end of organisations – where the senior teams (board and executive members) are located – as well as at the sharp end – where care is delivered to patients. [8] For a variety of reasons, we found that it was much easier to conduct interviews with people at the more senior end of organisations. Nurses, junior doctors, healthcare assistants and others working at the sharp end were extremely busy, often had little discretion over use of their time, and were unable to schedule interviews into their working day. In some cases, they were also reluctant to engage in a recorded interview. We therefore mostly accessed their views through informal chats which were recorded as fieldnotes.

1.2.2.2 *Selection of cases*

The cases were sampled purposively in order to provide insights into innovative or interesting aspects of quality improvement in diverse organisations. In each case, we sought to understand the organisational, cultural and behavioural conditions that supported or interfered with delivering safe, high quality care. Our seven case studies (see Table 2) involved four hospital trusts, including three large acute trusts and one smaller specialist trust; a quality improvement collaborative where we gained access to 11 of the 24 participating organisations and to the collaborative faculty; a very large scale quality improvement involving dozens of participating organisations; and one primary care provider organisation involving a chain of practices, of which we selected three for study.

Given our commitment to ensuring the anonymity of organisations participating in our study, we provide only a limited amount of detail on the organisational characteristics of our cases, though we highlight the features of interest of each (Table 2).

Table 2. Basic characteristics of case studies

Sub-study name	Type of organisation	Primary areas of inquiry
CS1	Large teaching hospital (NHS foundation trust)	Use of electronic prescribing system
CS2	Large teaching hospital (NHS foundation trust)	Campaign approach to quality improvement; implementation of surgical checklist
CS3	Large teaching hospital (non-foundation)	Pathways of care
CS4	Teaching hospital (NHS foundation trust)	Systems for learning from incidents, infection control
CS5	Quality improvement collaborative	Harm reduction in care delivery
CS6	Primary care provider company, including three general practice surgeries	Quality and safety systems in a privately owned company
CS7	Quality improvement collaborative	Mechanisms, determinants and effects of learning through collaborative work

Our choice of cases was to some extent driven by theoretical considerations and to some extent was pragmatically constrained. In terms of theory, we considered that it was important to have observations across a set of settings that shared some commonalities and some differences.[12] Thus, we chose to study two large scale quality improvement efforts because we theorised that it was important to learn from organised change efforts that involved collaboration, standardised data collection, and use of specific improvement techniques that are widely promoted.[20] We chose to study a large, privately owned company providing primary care services as it provided an important point of contrast with the NHS-owned facilities that we were studied, and is an example of a new organisational form in the NHS, but also offered the similarity of large-scale efforts at quality and safety.

We chose to study hospital based care provided by three large urban acute trusts and one specialist trust because these settings pose high risk to patients in terms of serious avoidable harm. [21, 22] However, it turned out to be very difficult to select trusts on grounds of differing performance. It became increasingly clear over the course of our study – and indeed was a finding of the Francis independent inquiry into mid-Staffordshire – that major challenges lay in the way of determining, using current publicly available data, the extent to which any individual organisation is providing safe and high quality care. Methodological problems with many of the measures mean that it is remarkably difficult to get reliable, valid data that allows organisations to be compared, [23-26] and even within the same organisation it is not unusual for

some parts of the organisation to be delivering much higher quality of care than others. [27] We thus selected organisations that offered important opportunities for learning – for example use of specific methods of improvement, or facing particular kinds of challenges – and explicitly sought the points of contrast and similarity in our analysis. The organisations we studied were diverse, and the challenges they faced diverse too. We have therefore focused our analysis on broad commonalities/ patterns across organisations, not on the inner contexts of each organisation. We have deliberately not given identifiers to quotations in order to preserve anonymity and to focus on the whole picture across our dataset rather than individual components. Data collected in each of the case studies is detailed in Table 3, and a brief description of each case follows.

Table 3. Data collection in the cases

Sub-study	Interview TOTAL	Observations in clinical areas (HRS)	Observations of meetings (HRS)	Total hours of observations	Survey Responses
CS1 – Acute trust	11	162	28	190	
CS2 – Acute trust	64	54	2	56	
CS3 – Acute trust	25	228		228	
CS4 – Specialist trust	24		4.5	4.5	
CS5 – Improvement collaborative	25		112	112	157
CS6 – Primary care provider	24	54		54	
CS7 – Improvement collaborative	37				
SUBTOTALS	210	498	146.5	644.5	
Stakeholder interviews	107				
TOTALS	317	498	146.5	644.5	157
		(6-8 hrs/day)	(1.5-2 hrs/mtg)		

1.2.2.3 *Comments on case study selection*

Though it would have been ideal to have conducted observations in more diverse settings – including, for example, mental health, ambulance services, and community health – we experienced major challenges in gaining access to organisations providing such care, not least because of institutional turbulence arising from the reforms that were ongoing at the time of our study. Organisations did not feel that they could cope with the extra burdens associated with research participation, and were also changing so rapidly that people with whom we opened negotiations often left their posts before agreement had been reached. Further, ethical and practical issues relating to the presence of observers in some settings (such as ambulances or mental health facilities) were a significant influence on case selection. Research governance procedures were so onerous that there was a real danger that we would be unable to complete data collection in time. Thus, pragmatism meant that we were influenced to some extent by the settings to which it was possible to gain access. Nonetheless, because we were able to obtain views from a much broader range of settings through our stakeholder interviews, we are satisfied that we have been able to access multiple perspectives in multiple organisations. Moreover, the trust board work, clinical teams survey and national staff survey analysis conducted in the other parts of our research programme provided rich and powerful intelligence across all types of trust.

1.2.2.4 *Case study data analysis*

Data analysis of interviews and fieldnotes was based on the constant comparative method. [10] The research team initially generated open codes based on transcripts and fieldwork notes, which were then grouped into higher order organising themes. We also used some sensitising concepts [28] where these were likely to enhance quality of interpretation and analysis. Coding of transcripts was supported by NVIVO software, and where appropriate was undertaken by more than one researcher. We increased the inter-subjectivity of findings through discussing the interpretation of results within the research group.

1.2.2.5 *Cross-case analysis*

We adapted Yin's approach to multiple case studies and cross-case synthesis. [12, 29] Yin notes that use of multiple case studies counters the problem of single case studies by allowing more intensive examination of the same issues across a wider range of examples, and makes more vivid areas of contrast and similarity. Our strategy was to code within and across cases, systematically searching for where clusters of codes formed a pattern. For example, we identified measurement and data gathering as important areas for analysis. Through repeated searching and comparison across the cases, we were able to identify thematic categories that offered richer insight – for example, the gathering of "intelligence" as a key task organisation seeking to improve quality and safety.

1.2.2.6 *Synthesis of interview data*

In order to maximise higher-level learning, we conducted cross-case analysis, and we combined data from the interviews across the cases and the stakeholders to form a single dataset for purposes of specific analyses. We combined the interviews from the case studies and the stakeholders so that they were effectively treated as a single dataset. Using a similar prompt guide across the case study and stakeholder interviews provided a focus and a mechanism for meta-comparison of description, explanation, and interpretation between both similar and different types of views of quality and safety in the NHS. Coding across this combined dataset helped to highlight the importance of issues that might otherwise have not been so clearly visible – such as the recognition of frequent examples of excellence throughout the NHS, but also of inconsistency.

1.2.3 Sub-study 3: Patient and Public Involvement study

The Patient and Public Involvement study was led by the National Association for Patient Participation (N.A.P.P). N.A.P.P. was a partner in the research programme, but took the lead in conducting this work and it was therefore user controlled. [30] N.A.P.P. was formed in 1978, and it promotes and supports patient participation in primary care. General practice patient participation groups (PPGs) become members of N.A.P.P., and obtain guidance on effective management of the PPG, and on ways to involve patients, including for example minority ethnic groups.

Evidence on patient experiences of the NHS is available from a wide range of surveys and studies, including studies that have enabled patients to provide feedback about safety issues.[31] A programme of surveys is run by or for the NHS itself, including regular adult inpatient surveys [32] and surveys of patients in general practice. [33] Although these surveys are systematic in development and administration, user-led studies have the advantage of focusing on issues that patients themselves have identified as important. Traditional surveys may fail to bring to light important concerns about the quality and safety of care, [1] particularly with respect to vulnerable patients who may be unable to complete such surveys, for example, the frail elderly. Moreover, our interest was in perceptions of quality and safety, rather than reports of experience or satisfaction.

The study was conducted in three phases:

- Phase 1: Pilot interviews with 10 purposively selected participants
- Phase 2: Survey of patient and carer organisations and groups
- Phase 3: Focus groups to reflect on findings and provide recommendations

1.2.3.1 *Pilot interviews*

We conducted 10 interviews with purposively selected participants, primarily with a view to generating dimensions for exploration in the Phase 2 survey. Ten individuals, all members of different patient or carer organisations (e.g. Carers UK), were first identified by N.A.P.P. and then sent a letter explaining the object of the interview and requesting their permission to forward their details to the research team. The sample therefore constituted lay people who were particularly interested in healthcare, and had experience of health care themselves, as well as some knowledge of the experiences of care reported by other patients. Their consent was sought, interviews were tape recorded and the anonymised transcripts sent to N.A.P.P. for analysis. An interview topic guide was developed, although questions were tailored to the specific answers of each participant. Respondents were at the outset of the interview asked about the organisation they belonged to, their position in that organisation and any role they had played in an effort to focus on quality of care and patient safety. The interview then focused on the following four areas:

- How respondents think people in patient and carer organisations define quality of care and patient safety
- Based on individual experience and on interactions with patient and carer organisations, identification of issues with patient safety and quality of care and any ideas for improvement.
- What are the key questions about quality of care, patient safety and accountability for an online survey to be distributed to a large number of people associated with different patient and carer organisations?
- Seeking respondents' thoughts on innovative ways of asking people how the NHS is addressing issues of quality and safety.

A content analysis of the transcripts was carried out and on the basis of this, the questionnaire for the online survey (Phase 2) developed.

1.2.3.2 *Patient Participation Group Survey*

A survey was developed using the themes and draft questions emerging from the first phase interview data. An initial version was developed and debated amongst the N.A.P.P. and wider research team, prior to being piloted in October/ November 2011, then revised and submitted for ethical approval (received January 2012). The survey consisted of 14 statements about various elements of the patient experience of healthcare provision and service delivery as perceived by patient and carer organisations. Respondents' agreement with each statement was measured using a six point Likert-type scale, with an open text box provided for each statement. Respondents were told that the questionnaire was focused on quality and safety in the NHS, including both primary and secondary care. The fourteen statements were:

1. In the course of their care patients generally receive high quality health information from a reliable source.
2. Patients are given the opportunity to understand and agree to treatment options.
3. Patients are generally treated with respect in the course of their care.
4. Staff usually have sufficient time to spend with patients.
5. Staff have usually read a patient's notes before seeing the patient.
6. Staff are usually sensitive to the emotional vulnerability that may be experienced by patients in hospital.
7. Staff usually make opportunities available to patients to express their concerns.
8. Staff have a good understanding of patient concerns.
9. Concerns raised by patients are usually responded to and followed up well.
10. Heath care staff have sufficient time to do their work properly.
11. All staff are well trained.
12. Patients are usually given sufficient information about what to expect during the course of their care.
13. Patients are usually given information about the benefits and risks including possible adverse drug reactions of medicines they are prescribed.
14. Quality of care and safety for patients has improved over the last three years.

The survey was sent electronically to the lay chair of 676 PPGs, comprising the majority of PPGs on the N.A.P.P. data base at that time. A link to the survey on the Survey-Monkey site (www.surveymonkey.com) was circulated to patient participant groups by N.A.P.P. using its database. A total of 715 responses were collected over a three week period in January/February 2012 (the survey was closed after this time), with 651 individuals responding to all 14 statements. We were unable to collect information about the characteristics of the survey respondents. Comments collected via the open text boxes ranged in length from a single word to several sentences and varied in number by question from 95 to 189 (see Table 4).

Table 4. Responses to survey by question

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14
Responses	713	713	704	709	704	706	705	700	702	707	704	706	709	707
Skipped	2	2	11	6	11	9	10	15	13	8	11	9	6	8
Open Text	189	146	131	181	160	136	130	113	120	164	150	95	121	142

Descriptive statistics were used to analyse the scaled responses to statements.

1.2.3.3 *Content analysis of open-text responses to survey*

The open-ended responses were subject to content analysis.[34] Two researchers derived the codes (themes) inductively based on multiple readings of answers for each question. In order to ensure the clarity of results, we aimed to create broad categories. Some answers were coded under more than one category, and therefore the total number of references in our database exceeds the total number of respondents.

1.2.3.4 *Focus groups*

The aim of focus groups was to reflect on the findings of Phases1 and 2 and to seek preferred solutions to problems identified in the earlier parts of the study.

This part of the research involved two facilitated Focus groups composed of patients in Leeds and in Coventry. The Coventry group met in Foleshill Road Fire Station, a community centre with good disabled access and was composed of 2 males and 4 females recruited from Mansfield Medical Centre PPG and a PPI Forum Meeting. All possible respondents were informed about the research and what the focus group involved. Respondents were those able to attend on a particular day and in that respect were therefore self-selected.

Ten patients attended the Leeds focus group. A flyer was distributed at two patient forum meetings to people living in the North Leeds CCG area. Most people confirmed their attendance by email whilst a few gave their contact details at the time. Information was then sent to people giving more information about the research and the arrangements for the focus group. All attendees are either members of their practice PPG and / or members of the CCG patient involvement group. There were 2 men, 8 women, (2 Black and minority ethnic

representatives), total 10. The focus group was held at the Marjorie and Arnold Ziff Centre, Stonegate Road, Leeds 17, which is one of the venues used for the CCG patient forum. The centre has good disability access and facilities.

Both groups were facilitated by Stephanie Varah, CEO of N.AP.P., who highlighted the findings of parts 1 and 2 and encouraged participants to focus on solutions. The Facilitator informed the participants that the Focus Groups were intended to help the researchers interpret the findings of the earlier parts of the study as well as assessing the participants views on: the obstacles to delivering improved quality safety and greater accountability in the NHS and the preferred solutions for delivering improved quality and safety in NHS. All respondents signed a disclaimer and understood that the findings may be included in reports and publications but individual people would not be identified.

The focus group transcripts were analysed thematically. The group participants were asked to concentrate on quality and safety issues that arose from the survey. We wished to test our understanding of the questionnaire findings and explore focus group members' ideas about them.

1.2.4 Sub-study 4: NHS Staff and Patient Surveys

The national NHS staff survey has been run annually since 2003. Compulsory for all NHS trusts in England, it includes an annual sample of at least 150,000 participants (apart from 2011). Each individual trust must provide a random sample of a size determined by the total number of its employees: trusts with up to 600 employees would conduct a census, but trusts with over 3000 employees would use a sample of 850.

Each employee included in the sample is sent a paper copy of the questionnaire with a reply-paid envelope. If they have not responded after three weeks, they receive a reminder letter; in the event of no response after a further three weeks they receive a second copy of the questionnaire. Questionnaires are administered by, and returned to, external survey contractors appointed by each trust; data are then returned to the national coordination centre, where results are collated and reports produced. The total number of respondents and response rate for the years 2007-2011 (the period we concentrate on for this analysis) were as shown in Table 5:

Table 5. Response rates for NHS staff survey, 2007-2011

Year	Sent out[a]	Returned	Response rate	Number of trusts
2007	291843	157667	54%	392
2008	289919	159691	55%	390
2009	289277	157450	54%	387
2010	311098	167736	54%	390
2011	250000	134967	54%	365

[a] Valid participants only

Until 2010 the survey coordination centre was led by members of our research team. However, the data used in this report are trust-level summaries available publicly, and therefore we were able to use data from the 2011 survey also. The number of trusts across England changed over this five-year period also, due to some mergers, changes of status (particularly amongst primary care trusts), and the formation of some new trusts (e.g. community trusts).

In addition to the staff survey, a set of national patient surveys is also administered. These are not connected with our research team in any way, but summary data are routinely published (data until the 2010 survey only was available at the time of analysis). The one survey to have been run annually over the previous few years is the national acute inpatient survey. In each acute trust, a sample of 850 inpatients is sampled and sent questionnaires via regular post. Response rates for this survey are shown in Table 6:

Table 6. Response rates for NHS acute inpatient survey, 2007-2011

Year	Sent out[a]	Returned	Response rate	Number of trusts
2007	126795	75949	60%	165
2008	126348	72584	57%	165
2009	124500	69348	56%	162
2010	123874	66348	54%	161
2011	127309	70863	56%	161

[a] Valid participants only

1.2.4.1 *Measures*

The survey questions (both staff and inpatient) were largely the same over the period from 2007-2011, although there were a small number of changes each year. Details of the

questions included in the staff survey, and the “key finding” scores included in the main survey reports, can be found at the NHS staff survey website (www.nhsstaffsurveys.com); details of the inpatient survey can be found at the NHS patient surveys website (www.nhssurveys.com).

1.2.4.2 *Data on staff experience*

All staff experience variables come from the NHS National Staff Survey (NSS). Most of the analysis we conducted involves organisational outcome variables, and therefore NSS scores are aggregated to the organisational (trust) level for this analysis (this involves averaging individual scores or calculating a percentage where applicable). The number of respondents and trusts varied across the surveys, but the most recent one used here (2009) included 390 trusts and 154,726 individual employees. The NSS data used included the following variables:

- “Overall” engagement, a combination of: Employee motivation (intrinsic psychological engagement); Ability to contribute towards improvements at work (staff involvement); Staff advocacy of the organisation (recommending the trust)
- Extent of positive feeling in the organisation (organisational climate)
- Staff job satisfaction
- Discrimination
- Presenteeism
- Line manager support
- Job design
- Witnessing of errors and reporting thereof
- Work pressure
- Bullying harassment and abuse
- Physical violence
- Team working
- Training
- Appraisal
- Stress
- Incident reporting procedures

Organisational outcome data were taken from a variety of published measures:

- Patient satisfaction came from the National Acute Inpatient Survey (www.nhssurveys.org), using the data on patients’ overall ratings of care [acute trusts only]
- Patient mortality data was the hospital standardised mortality ratio, as published by Dr Foster (www.drfosterintelligence.co.uk)

- "Quality of services" and "Use of resources" are the two Annual Health Check ratings published annually for trusts by the Healthcare Commission between 2005/6 and 2008/9
- Infection rates are the rates of Meticillin Resistant Staphylococcus Aureus (MRSA) infections per 10,000 bed days, as published by the Health Protection Agency (www.hpa.org.uk)
- Staff absenteeism rates are those measured by the Electronic Staff Record, collated by the NHS Information Centre
- Staff turnover as also collated by the NHS Information Centre

1.2.4.3 *Analyses*

The analyses conducted for the studies combined here include:

- Detailed correlation analysis between staff survey responses and adult acute inpatient survey responses, at the trust level (first conducted with the 2007 data and then repeated with later years)
- Multiple and multilevel regression analysis on individual level 2009 staff survey data, using HR practice variables to predict engagement (controlling for a range of demographic and work background factors)
- Regression and ordinal logistic regression analysis using staff survey scores to predict patient satisfaction (2009), patient mortality (2009/10), staff absenteeism (2009/10), staff turnover (2009/10), infection rates (2009/10), and Annual Health Check ratings (2008/9), controlling for trust type, size, and location (whether located in London or not)
- Regression and ordinal logistic regression analysis using changes in staff survey scores to predict changes in the above outcomes, using prior years' data as appropriate
- Latent growth curve modelling using staff survey scores (from 2007 or later) to predict changes in the above outcomes (over a three-year period where possible)
- Additional ad-hoc analyses included to supplement the above.

1.2.4.4 *Analysis of survey changes*

For the analysis of changes of staff and patient survey scores over time, we selected out those survey variables that were most relevant to quality and safety:

- Working extra hours (paid or unpaid)
- Training, learning and development, particularly in health and safety, and infection control

- Design of staff jobs
- Staff satisfaction
- Organisational climate for promoting innovation and involving staff in decisions
- Staff advocacy of the trust as a place to receive treatment
- Errors, incidents and near misses witnessed
- Infection control and hand hygiene

For each overall score and component part of the score (where scores were derived from multiple questionnaire items), the change from 2007 to 2009 and 2009 to 2011 was tested using paired t-tests of scores at the trust level. These years were chosen because 2011 was the most recent year of data available; the 2009 survey was immediately before the start of the study and a few months before the production of the “Liberating the NHS” White Paper, so the 2009-2011 difference gave the best indication of changes during the project period and since the announcement of significant changes in the NHS. The 2007-2009 period was chosen for comparison purposes; partly to compare how the similar preceding period looked in terms of change, but also because this period included the development and publication of the NHS Constitution. Analysis was restricted to the 311 trusts that remained consistent over the five years in question so that results could be compared meaningfully.

For the patient survey, a similar process was used. As with the staff survey, the analysis was limited to those trusts that participated in all surveys (157 in this case). The questions used for the patient survey analysis were:

- In your opinion, how clean was the hospital room or ward that you were in?
- How clean were the toilets and bathrooms that you used in hospital?
- When you had important questions to ask a doctor, did you get answers that you could understand?
- Did you have confidence and trust in the doctors treating you?
- Did doctors talk in front of you as if you weren't there?
- As far as you know, did doctors wash or clean their hands between touching patients?
- When you had important questions to ask a nurse, did you get answers that you could understand?
- Did you have confidence and trust in the nurses treating you?
- Did nurses talk in front of you as if you weren't there?
- As far as you know, did nurses wash or clean their hands between touching patients?
- Sometimes in a hospital, a member of staff will say one thing and another will say something quite different. Did this happen to you?
- Were you involved as much as you wanted to be in decisions about your care and treatment?

- Did you find someone on the hospital staff to talk to about your worries and fears?
- Overall, did you feel you were treated with respect and dignity while you were in the hospital?
- How would you rate how well the doctors and nurses worked together?
- Overall, how would you rate the care your received?
- During your hospital stay, were you ever asked to give your views on the quality of your care?

1.2.4.5 *Competitiveness analysis*

In addition to the NHS staff and inpatient surveys, we analysed data on the level of competitiveness in acute trusts. The main aim of this analysis was to determine whether there was an association between the quality of staff experience and the level of competitiveness in NHS acute trusts. Data for this purpose were supplied to us by Professor Carol Propper of Imperial College Business School, having been collected for a separate research project. This is a complex question that prompts further investigation into aspects of causality (it was not part of our initial protocol). The findings reported here have already been reported on the Department of Health's website and have been reported by the King's Fund. This research was supported separately by Department of Health funding but the research was conducted concurrently with the programme of research reported here. The findings are highly relevant to the research questions addressed in this programme of research and so are included here in the form of a simple cross-sectional analysis linking staff survey scores and the competitiveness index. This utilised competitiveness data and staff survey data from 2009.

The Herfindahl index of competition measures the extent to which a trust's activities have local competition from other trusts [35] – so trusts where there were a higher concentration of other trusts in the same region would have a higher index. Multiple regression analysis was used, controlling for trust size, specialist status, location (London vs. other) and teaching status. All "key findings" from the 2009 staff survey were used as outcome variables. [32]

1.2.5 Sub-study 5: Clinical Teams functioning, effectiveness and innovation

This sub-study examined the functioning of clinical teams across NHS organisations in England. It is the largest study of health care teams that we are aware of, based on our review of the literature. It examined all major aspects of team functioning, via the use of a comprehensive questionnaire survey instrument, with the aim of providing insight into: teams'

views of resources, their team characteristics, organisational supports, clarity of team objectives, conflict, communication, decision making, leadership, support for innovation, their effectiveness, inter-team working and their innovations in patient care. In addition team members were asked to report on innovations in patient care that they had introduced. In free text comments they reported extensively on barriers and helps to their work in delivering patient care in the NHS.

1.2.5.1 *Sample*

The sample comprised 486 clinical teams forming the core QSN team-working study (referred to hence as QSN teams), as well as 135 community-based mental health teams from a recent study of multi-professional team working in mental health conducted by the same researchers (MPTW teams), making a total of 621 teams [36] based at 51 different trusts.

There were 4683 responses from the 621 teams, a response rate of 59.6%. This includes 65 teams from whom fewer than three responses were received; these teams are deemed to be unusable for the data analysis and so were excluded. Of the 556 teams left, 4585 responses were received – a response rate of 61.9%.

- In acute trusts, there were 1066 responses from 143 teams (57.5% response rate); these were predominantly acute medical or surgical teams
- In mental health trusts, there were 2191 responses from 211 teams (62.9% response rate); these were predominantly adult, community-based teams
- In primary care, there were 582 responses from 100 teams (73.1% response rate); these were either small general practices or sub-teams within larger general practices
- In ambulance trusts, there were 746 responses from 103 teams (58.2% response rate); these were mostly ambulance station teams

1.2.5.2 *Measures and administration*

Trusts were initially selected from a list of all trusts in England so that there would be 20 each of acute trusts, mental health trusts and PCTs, and all 11 ambulance trusts. Selection of trusts was part-purposive (so that the 11 trusts including their multi-professional teams could be included), and otherwise random, but checked for representativeness in terms of location, trust size and trust performance (according to Annual Health Check rankings). In each trust that agreed to participate, local collaborators were appointed. These local collaborators identified relevant clinical teams for the study (in general between 10 and 20 per trust). Each team was asked by the local collaborator if they would participate, and following this contact details were passed to the research team for each of the team members. Emails were then sent to each participant including a link to take the survey electronically. Respondents were given at least four weeks to respond, with at least one reminder email coming if they had not responded after two weeks.

The main questionnaire measure was the Aston Team Performance Inventory (ATPI). [37] This comprises 18 dimensions of team inputs, processes, leadership processes and outputs measured across 100 questionnaire items. These dimensions and their descriptions are shown in Table 7. Basic demographic data were also gathered. In mental health and primary care teams, specific team effectiveness measures were also included (20 items for mental health teams [38] and 6 items for primary care teams, which were taken from a previous study of primary health care teams [39] with language updated to reflect changes in the NHS). Respondents were also asked to list changes that had taken place in their team in the previous 6 months, and whether they would be prepared to answer another, shorter questionnaire in the future.

Table 7. Summary of Aston Team Peformance Inventory (ATPI) scales

	No. items	Components/description
Team inputs		
Task design	11	Autonomy, task relevance, complete task, feedback, task interdependence
Team effort and skills	8	Team member motivation, Appropriateness of skills, team potency
Organisational support	11	Information and communication, training for team working, climate for team working
Resources	4	Resources provided to the team
Team processes		
Objectives	3	Clarity of, commitment to and agreement about team objectives
Reflexivity	4	Reflection on performance
Participation	7	Decision making processes, Communication, regular meetings, and trust, safety and support
Task focus	6	Concern with quality, service user focus, constructive debate and error management
Team conflict	5	Task and interpersonal conflict
Creativity	3	Practical support, and climate, for creativity and innovation

Leadership processes		
Leading	4	Extent to which team leader sets direction, acquires resources, and supports innovation
Managing	8	Extent to which team leader guides teams towards effective processes, monitors performance, gives helpful feedback, encourages inter-team working, and recognises and rewards performance
Coaching	5	Availability, concern for individual team members, encouragement and support, and encourages learning from error
Team outputs		
Team member satisfaction	6	Satisfaction with recognition for contribution, responsibility, team member support, influence over decisions, team openness and how conflicts are resolved
Attachment	3	Feeling of attachment to team and its members
Team effectiveness	3	Managerial praise, goal achievement
Inter-team relationships	5	Co-operation, and absence of destructive conflict, with other teams
Team innovation	4	Development of new products, services, and ways of working

In addition, ratings of team performance were gathered where possible from a separate source. Local collaborators identified, where possible, people external to the team who would be familiar enough with the team's work to answer questions about team productivity (six items),[39] performance (six items),[40] and innovation (eight items).[41] Of the 344 teams, in 256 these ratings were made by people external to the team, and in 88 by the team leader or another senior member of the team. Of the 256 teams with external raters, 45 were also rated by the team leader to provide evidence of rating consistency.

Innovation, or team changes, data were taken from the open-ended questionnaire item previously described using a method adopted by West et al.[42] These were collated, content analysed by members of the research team and, in the process, innovations were identified. Innovations were defined as the intentional introduction of processes or procedures, new to the team, designed to significantly benefit patients, staff, the team or the trust. One hundred and fifty innovations were identified across 108 of the teams (the 135 community mental health teams were not included as their questionnaire did not have this question). These were then rated by two members of the research team for the magnitude, radicalness, novelty and impact on patient care of the innovations. Ratings were aggregated to the team level to provide overall innovation scores for these 108 teams.

2721 respondents indicated they would be happy to be re-contacted. These individuals were sent a second questionnaire after three months, simply asking them to list changes that had taken place in their team in the previous three months. The same procedure was followed with these data, and a further 33 innovations were identified across 26 teams.

1.2.5.3 *Analysis*

In the first instance, differences between team types were studied by analysis of variance with Bonferroni post-hoc tests. The main analysis conducted was to determine the principal predictors of the outcomes measured: this included the external ratings of productivity, effectiveness and innovation, as well as self-report ratings of team member satisfaction and attachment (both measures of forms of well-being).

These predictors were studied by a combination of multiple regression on data aggregated to the team level, with stepwise entry. For each outcome, the four input variables, the six team processes, and the three leadership processes, were entered in separate blocks, thereby enabling determination of which inputs and processes are the most important predictors of each outcome. Team type and size were controlled for in this analysis; after analysis on the whole data set, each major team type was analysed in turn (with size still being controlled).

As there are large correlations between different dimensions of the ATPI, this presents difficulties in analysing the data, because traditional models would give estimates that may be biased by multi-collinearity of predictors. 43 The inclusion of multiple predictors would likely lead to regression coefficients that were not individually interpretable, whereas models

involving only individual predictors would fail to take into account shared variance with other dimensions. Therefore we used the comparatively recent technique of relative importance analysis 44 to examine the importance of each predictor. In doing this we report not traditional regression coefficients, but raw relative weights – the proportions of variance in the dependent variable that can uniquely be attributed to each independent variable (calculated by regressing the dependent variable on each distinct subset of independent variables). This is shown both as general dominance (the estimated proportion of variance in the outcome that can be uniquely attributed to an independent variable) and the relative weight (the proportion of the total effect that is attributable to a particular independent variable). These are considered more reliable than standardised (or unstandardised) regression coefficients in the case of highly correlated independent variables, and also prevent suppression effects suggesting counterintuitive directions of effect. The significance shown in the analysis derives from regression analysis with backward elimination, but should not be taken as a sign of importance beyond the single most important predictor in any one regression.

1.2.6 Sub-study 6: Objectives of trust board teams

Boards of 34 NHS trusts (11 acute, 9 ambulance, 11 mental health and 3 primary care trusts) were recruited using a combination of pre-existing trust contacts and stratified random sampling to ensure geographical representation across England. The research team approached Chief Executives of trusts with an invitation for their board team to be involved in the study. The research team then contacted each board member by email with an invitation that included a URL link to an online questionnaire. Each trust board team member completed the questionnaire, containing three components:

- The Aston Team Performance Inventory (ATPI) team processes scales, comprising 28 items across 6 dimensions (measuring team functioning): objectives (clarity of, commitment to, and agreement about team objectives), participation and interpersonal conflict), creativity and innovation (practical support, and climate for creativity and innovation). Each response was recorded on a five point Likert response scale, ranging from 1=low to 5=high.
- Free text comments that asked trust board members to ‘please describe your team’s two main objectives. These should be objectives that your team is currently working towards.’
- A measure that asked trust board team members to indicate, on a five point Likert scale, the extent to which the team objective(s) recorded in the free text comments had been met (1 = not at all, 2= somewhat, 3 = a moderate amount, 4 = quite a bit and 5 = very much).

Data were collected from 306 individuals (69% response rate); 58% were male; 43% were aged between 50 and 59 years and the majority 88% were white British. The average board

consisted of 9 members. The proportion of executive directors to non-executive directors was generally equal.The participants' responses to the ATPI team processes questions produced a satisfactory level of internal consistency, as calculated by Cronbach's alpha. Each dimension had a reliability of at least 0.70.i

Board members' responses to the questionnaire produced 612 free text comments. The free text comments were distributed to four raters (who were experts in organisational psychology and healthcare research) to conduct a detailed content analysis. Content analysis includes: data familiarisation (reading the objectives), data reduction (coding the objectives into categories) and interpretation (understanding the meaning of categories generated). The four raters then rated each of the objectives on a 1 (low) to 5 (high) Likert scale of specificity (indicating how specific the detail explaining the objective was) and agreement (the extent to which the raters perceive a common level of agreement between the objectives identified by the individual team members and the board as a whole). To achieve an acceptable level of reliability and validity, researchers worked 'blind' and were unable to see the boards' ATPI team processes scores or whether the objectives were considered as achieved.

Twenty per cent of the objectives were coded using content analysis and rated by all four raters as part of the pilot study. The remaining 80% were content analysed and rated by a combination of two of four raters. 100% agreement was reached for the content analysis, for both the pilot and main phase of analysis. An acceptable level of inter-rater reliability was achieved (>.7) for specificity and agreement, as measured by the ICC (2) - appropriate to samples where each team is rated by a sample of raters (in this study two from four raters).

The objectives were then coded on a third dimension 'challenging' by the fifth expert rater. The fifth rater was a psychologist with specific expertise in working with NHS trust boards. The challenging dimension was measured on a five-point Likert scale ranging from 1 (unchallenging) to 5 (challenging).

1.2.7 Sub-study 7: Board innovativeness

Seventy one Trusts were included in Study 7 including 20 Acute Trusts, 11 Ambulance, 20 Primary Care Trusts, and 20 Mental Health Trusts. A total of 793 sets of minutes, covering meetings taking place in the 18 month period between January 2010 and June 2011 were retrieved and analysed. We downloaded minutes from organisations' websites where available. Not all organisations had uploaded all minutes, so missing minutes were requested from the Freedom of Information officer where appropriate. Issues in the confidential sections of the minutes were not analysed. Data were organised into sets, covering Board meetings held in each organization in over the study periods. Minutes typically included around 20 pages of text describing discussions that took place and decisions that were made in board meetings. There was considerable variation in the quality of these meetings in terms of clarity and specificity.

1.2.7.1 *Analysis process*

Analysis occurred in two stages: In stage 1, two researchers independently content analysed the documents to identify innovations according to strict selection criteria. Innovations were defined as the intentional introduction of processes, services, products or procedures new to the unit of adoption (team, trust etc.), designed to significantly benefit patients, staff, organisation effectiveness, trust performance or the public. Analysis focused on the quality of patient care, such as clinical effectiveness, patient experience, and safety as well as productivity and staff engagement. Inter-rater agreement in relation to the identification of innovations was 100%.

The second step involved asking 'domain relevant experts' to assess the innovations on a set of pre-determined dimensions used in the innovation research literature. Domain relevant experts were senior NHS employees. They were asked to rate (on five point Likert scales) each innovation in relation to their magnitude (i.e. the likely impact of the innovation), radicalness (change to status quo), novelty (newness in the context) and likely positive impact on patient care.

Innovations were then categorised according to content area and a frequency count undertaken. The content areas were as follows:

Theme	Description
Productivity	The implementation of new processes included for example the decision to improve activity and patient throughput, administrative processes to save time, referral procedures to avoid misdirection, and lost appointment slots (DNA's – did not attend) in outpatient units.
Staff Engagement	Innovations that encouraged staff participation in decision making and measures that provided information about priorities and the direction of the organisation. Along with efforts that attempted to encourage staff consultation and ensure that staff are treated with respect and dignity.
Effectiveness	Innovations that were implemented to prevent people from dying prematurely, that enhanced the quality of life for patients suffering from long-term illness and helped those to recover from episodes of ill health or injury through the application of appropriate, effective medical and clinical intervention.
Patient Experience	Innovations that enhanced patient experience and promoted a positive experience of care included for example, the provision of choices, and the quality of information given to patients or carers, as well as improvement of the care environment.
Safety	The implementation of preventative health and safety measures to reduce falls or injuries. The implementation of new processes to improve cleanliness and ensure infection prevention and prevention of errors when medication was dispensed and administered.

1.2.8 Sub-study 8: Board focus on quality and safety

We aimed to conduct in-depth analysis of Board minutes of a small number of cases. We sought to select cases [12] that would represent a range across the quality spectrum and to represent a reasonable breadth of NHS services (acute, primary, mental health and ambulance). The sampling frame comprised 47 English NHS organizations that were participating in a larger research study. To select cases, we used publicly available patient complaint data to stratify the 47 organisations. Publicly available data on patient complaints according to a ratio of complaints per 100 staff per organisations were used to designate top and bottom quartiles of the 47 NHS organizations over the period 2008-2010. Using these

data, we selected eight case study organizations: one organization in the top and one in the bottom quartile representing four types of NHS service provider (mental health-, acute hospital-based, ambulance- and primary care).

1.2.8.1 *Data*

The data for our study comprised Board minutes over the three consecutive six month periods (2010-2011) as well as a six-month baseline period in 2008 corresponding the period immediately before the publication of the NHS Next Stage Review.[45] We downloaded minutes from organizations websites where available. Not all organisations had uploaded all minutes, so missing minutes were requested from the Freedom of Information officer where appropriate. Issues in the confidential sections of the minutes were not analysed. Data were organized into sets, covering Board meetings held in each organization in over the study periods.

1.2.8.2 *Analysis*

We undertook two types of analysis: ethnographic content analysis and summative analysis. Neither analysis attempted to draw out specific patterns in relation to board composition or whether there were any systematic differences between organizations according to organisational status (e.g. Foundation trust or type of provider).

We conducted ethnographic content analysis (ECA) [46] on minutes across the four time periods. One Board was excluded from this analysis because their minutes were heavily redacted, meaning that they were difficult to compare with other sites, and they were only provided in hard copy format and could not be coded electronically. Minutes from seven Boards were therefore used. QSR NVivo was used to assist in coding each set of minutes; some manual coding was also undertaken and recorded on spreadsheets. Coding was undertaken by one researcher, with continual checks and discussions with two further researchers to verify coding and resolve areas of ambiguity. All researchers were blinded to the patient complaint and climate scores of the organisations.

Summative analysis is a technique used to manage, organise and clarify large bodies of qualitative textual data. [47-49], and is designed to enable groups to work collaboratively using consensus-building activities to reveal major issues inherent in the data and grasp the "essentialised" meaning of texts.[50] It enables exploration of the interplay between part and whole by reading parts of the text and testing out what might be contained within the whole of the text, before returning to the specific and the particular.[50]

Four researchers from a range of disciplinary backgrounds were involved in the summative analysis. Analysts were blinded to complaints data and climate score of the organisations. Each analyst developed brief individual summaries of each set of minutes. Group discussions then took place to move towards a consensus about the essential themes and meanings.

These were used to generate a thematic summary by the lead analyst. These themes were elaborated through description and illustration.[51]

1.2.9 Synthesis across studies

Our multi-method approach, extensive coverage of trusts and teams in data collection, the use of in-depth qualitative and large scale quantitative approaches, enabled powerful overarching insights into cultures in NHS England. The large research team worked together throughout the research programme to integrate insights and findings in order to ensure that we achieved a rich synthesis of both findings and understanding. In this section of the report, we describe this synthesis of the findings rather than the detailed results of each individual sub-study.

Reporting this synthesis, which we present thematically, requires that in some cases we report the strong impressions of the research team, based on our data analysis and extensive discussions. In our aim to offer a synthesis of data rather than a simple reporting of data for each strand of the research, we have adopted an interpretive approach. It might be that others would reach somewhat dissimilar conclusions, but we believe that our careful scrutiny of the data, extensive discussions, careful cross referencing across strands, and detailed analysis of themes, have enabled us to produce a powerful, robust and rich picture of cultures of quality and safety in NHS England. Consequently, we are confident this report contains vital lessons for those concerned with developing the NHS.

1.3 FINDINGS

Among our high-level findings were the following:

- Many “bright spots” of aspects of culture and behaviour that suggested excellent, high quality care, defined as the effectiveness of care, safety and the patient experience.[52]
- Strong values and commitments among many staff, who were focused primarily on ensuring the best care for patients
- Staff being kind, thoughtful, respectful and attentive to patients’ needs
- Staff working hard, cooperating and supporting each other
- Good practices embedded in routine care, and widespread efforts to achieve improvement
- Imperatives for change emerging both within organisations and from external agencies
- The importance of leadership for quality and safety being widely accepted
- Outstanding ideas and innovations from both boards and front-line teams

We found that care across the NHS was often of a very high quality and even inspiring. However, variations in quality and safety of care were both witnessed by our researchers and reported in interviews with participants. Thus, though there were many “bright spots” of care, there was significant variability in:

- Quality and safety of care
- Compassion and courtesy
- Quality of care depending on the time at which it was provided (e.g. evenings and weekends)
- Quality of handovers, communication and cross-boundary working
- Compliance with standards of good practice
- Staff competence
- Staffing levels and resources
- Management and leadership
- Intelligence about quality and safety
- Quality of systems

1.3.1 Values and commitments

Virtually all those we interviewed were firmly committed to the ideal of a safe, high quality health service for patients and to good patient experience. Many identified this ideal as being at the heart of the mission for their organisations, and as their most deeply felt personal professional commitment.

We want to be a safe organisation for our patients. (Case study interview)

That's the starting point for everything. Quality underpins everything we do. (Case study interview)

However, delivering on these aspirations was often challenging. We found many examples of "bright spots" of good care, hard-working, compassionate and highly motivated staff, innovating to deliver benefits for patients. Some patients and staff expressed concern that they could not be confident that care would be good almost everywhere and at all times. We found many examples of sub-standard care or "dark spots" with serious implications for patient health and safety. Often such dark spots were evident in the same organisations that had many bright spots.

Yet it was not easy to predict which would be the best settings for patient care if we relied solely on nationally published data on performance. Nor was it easy to identify which would be the more consistently high quality care settings based on the accounts given in interviews with people at the blunt end of organisations (the senior executive and board teams). In all organisations, the senior teams asserted the primacy of quality and safety in their policies and practices, but, as we explore in more detail later, in some organisations there were significant dissonances between what staff at the blunt end described as their values and commitments and what was evident at the sharp end (the front line). Moreover, despite the rhetoric, senior teams often prioritised factors such as targets, productivity, cost efficiency and responding to external oversight above quality and safety of care.

Bright spots included many teams and individuals who demonstrated caring, compassion, cooperation and civility, with good, engaging leadership and a commitment to learning and innovation. In some case studies settings where we directly observed the sharp end of care, we were convinced of the high quality of care. In such settings, patients were treated with kindness and respect, systems functioned well, and staff were busy but knew what they were doing and why. In primary care, examples of bright spots included flexible, helpful and sensitive appointments systems. In acute care, we observed many highly motivated and engaged staff, and good examples of teamwork. We saw many good practices firmly established as a routine and accepted part of professional cultures. For example, hand hygiene throughout the organisations we studied was excellent, with very few lapses seen.

Saw evidence of team work and collaborative working on a number of the wards visited. The majority of the time people were prepared to help each other to complete tasks. … People were working extremely hard, often working much longer than allotted hours to fit in all that needed to be done. (Case study fieldnotes)

Some exceptional care by some nursing auxiliaries, where they approached patients who were extremely unwell and knew they were making a difference just by talking […]. One was reluctant to leave the ward, even though she should have gone home much earlier. (Case study fieldnotes)

On the stroke unit here, we're very much a team…And everybody does different jobs. But nobody is made to feel that their job is any less important than anybody else's because you happen to be a lower grade. (Case study interview)

Staff who were working in supportive, well organised environments reported that, though they were pressurised, they were fairly satisfied that a friend or family member would receive good care there.

My father is going in for treatment for cancer on Wednesday … Nothing concerns me about the treatment he's going to receive - nothing. (Stakeholder interview)

I think I'd honestly be quite, quite proud to recommend the organisation to a close friend…. I wouldn't have any qualms at all about friends or relatives using our service. (Stakeholder interview)

1.3.2 Variability in courtesy, compassion and caring

We identified considerable variation in the extent to which patients were treated with care, courtesy, civility and compassion. Our interviews with patient and carer groups, led by the National Association for Patient Participation (N.A.P.P), suggested that patients and their carers were unaware of information pertinent to their care and hence were not in a position to actively participate in decision making. Vulnerable patients, including the elderly, young or those lacking the ability to "*speak up*" or "*fend for themselves*", could "*be forgotten*". Participants from patient and carer organisations emphasised that they did not anticipate consistently good care. Even though care was often reported to be good, quality was seen as very dependent on individual organisations or even individual personnel.

The responses and comments to the N.A.P.P. survey were largely consistent with these interview impressions. Though many respondents to the N.A.P.P survey expressed positive views, comments also stressed the variability of services across the country and even within the same practice or hospital.

This is dependent on the personality and disposition of the people caring for patients. (N.A.P.P. survey)

I am treated with great respect at GP surgery. There is a high standard of professionalism and care embedded in the culture of my practice, less so in secondary services and treated with derision in mental health services. (N.A.P.P. survey)

In the N.A.P.P. survey, respondents were critical of the time staff had available to spend with patients and do their jobs properly. Around a third of respondents agreed with the statement "*Staff usually have sufficient time to spend with patients",* but an equal proportion disagreed. Many respondents commented on the poor staffing levels in hospitals saying that there were "*Never enough qualified staff"* to spend time with patients.

Staff are too busy to spend more than the essential time needed for patient care, and staffing numbers do not allow this and agency staff do not know patients. (Case study fieldnotes)

There were frequent references to staff being distant and inaccessible behind computer monitors for too much of their time:

Nurses always seem to be busy on the computer rather than with the patient. (N.A.P.P. survey)

They spend so much time on the computer sometimes the patient comes a poor second and is a nuisance. (N.A.P.P. survey)

Though some N.A.P.P. respondents praised "*some very committed hospital nursing staff*", many were also critical of perceived staff insensitivity to the emotional vulnerability of some patients. The majority of respondents to the N.A.P.P. survey agreed with the statement *"Staff are usually sensitive to the emotional vulnerability that may be experienced by patients in hospital"*, but 26.2% of the sample rated this statement as "neither agree nor disagree", and 22.5% disagreed. The majority of respondents agreed that *"Staff have a good understanding of patient concerns"* but, 30.4% neither agreed nor disagreed, and 18.2% disagreed. They were critical of failures to give patients opportunities to express concerns and of the quality of information given to patients on the benefits and risks of medications. There was much negative comment about hospitals in particular, relating to lack of care by nurses, lack of privacy, and lack of respect shown to the elderly and vulnerable.

Patients do feel that nursing care is getting less and less. (N.A.P.P survey)

Sometimes elderly are treated as if we are all suffering from dementia. (N.A.P.P survey)

Talking over the patient whilst in bed as if the patient was not there. (N.A.P.P survey)

Some respondents questioned the appropriateness of the training of nurses and doctors, and the quality of first line management.

A small number of excellent staff but far too many indifferent ones. (N.A.P.P survey)

There were reports of nurses not responding to patients' bells, leaving older patients in soiled nappies and even removing a bell from a patient because "*the patient was always making a fuss".*

Our observations in clinical areas and interviews with stakeholders confirmed that there were often high levels of courtesy and civility but that inconsistency was a feature of many settings, creating a weaker culture of care as a consequence. Many, many staff spoke to patients politely and with kindness, but a minority were brusque, impatient or discourteous. For example, we witnessed a patient with a 2pm outpatient appointment who was left to sit for an entire afternoon without any information or apology for the long delay. In another case, a patient with a broken foot was not offered water.

I was waiting four and a half hours and eventually I called somebody over and said – could you get me a drink of water, please – and she said – oh the fountain is over there – and I said – yes, can you tell me how [I can get a drink] when I am walking on crutches and not allowed to put my right foot down. How I can walk back with a glass of water? And she went – oh right – and I just could not believe it. (Stakeholder interview)

In interviews, concerns were repeatedly expressed about patients' experiences of care, including failures in communicating information, listening and generally engaging with patients. Some staff were said to have poor attitudes to patients, characterised by disrespect and incivility, especially in relation to the most vulnerable patients. Senior clinical nursing staff highlighted their concern about what they saw as a tendency towards task-focused rather than person-centred care.

General actually wanting to care ... it all seems so boom boom boom. You're in here, we'll fix you, we'll send you home again. (Stakeholder interview)

1.3.3 Variability in quality and safety of care

Though we observed much high quality care, consistency was a problem. Across our interviews and observations, there was evidence of concern about variability in quality of care, and a lack of confidence that care would be reliably good.

…what would worry me the most I think is consistency in care. (Stakeholder interview)

It would depend, in all honesty, it would depend on which ward they were on. (Case study interview)

There was a view that NHS organisations could not be relied upon to look after elderly or acutely ill patients consistently well.

…everything would worry me. I mean I can honestly say that because my father has recently been in hospital and I watched him like a hawk. (Stakeholder interview)

…if I had a very elderly relative, I would not be confident that they were always going to be helped to eat or they would get enough food. … you can't just have drinks round from 7 to 7 in the day because that's when the domestics work. That leaves potentially an awfully long gap where patients don't have a drink at all. (Stakeholder interview)

…what would worry me is if this person was elderly. They would be just left to their own devices. All the things that we have heard about in the press: the food would just be put in front of them, there would be minimum level of care from the nurses, and I think there is a lack of compassion. (Stakeholder interview)

In some settings staff spent much of their time trying to rescue situations or working with inappropriate and inefficient systems, and patients were often not given the care, respect and attention they needed. Staff working in these settings corroborated our impressions by reporting that they would be very anxious if a friend or family member were treated there.

I'd be embarrassed if a relative of mine came in…because sometimes they have to wait for hours to be seen... there have been instances where patients have suffered because they haven't been seen quick enough. There's a waiting room, you know, there'll be people with vomit bowls throwing up, got no bed to get into, they've had no basic nursing observations, it's shameful really. (Case study interview)

Across our case studies, there was evidence of concern about variability in quality and safety of care. In some areas, adherence to good practice, including compliance with the surgical checklist and other mandatory protocols, was inconsistent. In our observations, we saw examples of staff lacking in confidence about basic procedures being allowed to work with minimal supervision. Staff spent large amounts of time working with poorly designed IT systems, negotiating clinical pathways with many obstructions and gaps, and battling with pharmacy and other systems that were inefficient or ineffective (and sometimes both). We saw many examples of such systems that obstructed and frustrated well-motivated staff in their mission to deliver care to the standards they wanted:

Time wasted looking for notes / the right syringes / the right dressings, etc. ... Many notes go missing because people just too busy. (Case Study fieldnotes)

Patients are moved about from ward to ward on a regular basis often without good quality handovers. People were often brought up to ward with only one telephone handover sheet which had little information on it. Forms that should have been filled in previously were not completed. Staff wasted much time and energy chasing up information that should have been recorded earlier. (Case Study fieldnotes)

We found also evidence of problematic handovers between shifts, departments and teams, team conflict and diffusion of responsibility relating to particular patients. These responsibility cordons left patients variously ill-informed, distressed, in danger and disappointed.

Compliance with many standards of good practice, such as hygiene, was observed to be very good in many cases. For example, interviews and observations suggested that the surgical checklist was widely used, documentation was fully completed and interviewees reported audits showing over 90% compliance. We saw that equipment counts were thorough, simultaneously checked by two staff and performed multiple times. However, even when practice appeared on the surface to be compliant with relevant standards, staff engagement with the principles was sometimes variable. More often, compliance was not so much a behaviour problem as a consequence of the circumstances in which people were working. In many cases, they were so short-staffed or stretched that it was not possible to perform tasks correctly or fully.

I think observations do get missed, when it's [that busy]. Sometimes they can end up being 2 hourly rather than hourly. Like I say, treatments can't be given as quickly as they could be, because if you've got 2 or 3 new patients, you've got to admit and the doctor's just written up treatments. Then, you don't realise the treatments are there until you've admitted the 2 patients, so it could be an hour or so late. (Case study interview)

For instance, the rule is that no one with a drip in should be transported for X-rays, etc., by a porter without a trained staff nurse. Sometimes some other members of staff would have to accompany these patients because a trained staff nurse could not leave the ward otherwise the ward would be short staffed. (Case study fieldnotes)

Culture – is *in part* a function of the values that leaders promulgate and embody, so a key research question, particularly given the variability we report in quality and safety of care, was the extent to which leaders in the NHS were providing leadership in relation to high quality and safe patient care. Our findings in relation to leadership at national level are thus of particular relevance.

1.3.4 National leadership for quality and safety

Interviewees in the stakeholder sub-study described leadership as essential to maintaining the profile of quality and safety against the background "noise" of competing priorities, service changes and structural transformation. They saw leadership as critical for establishing accountability, providing focus, ensuring visibility of quality and safety priorities, celebrating successes, establishing and monitoring targets and goals, and setting direction for the future. However, during the period when our interviews were conducted in 2011, they were concerned that a "void" in leadership at national level had developed, as a result of the loss of key figureheads, the uncertainty generated by the major structural changes, and the loss of national organisations which had been dedicated to quality and safety. Interviewees indicated that this had weakened the focus on quality and safety nationally.

I think at the moment there is a bit of a void from the Department of Health to be perfectly honest. In the sense of who leads on quality, I don't get a sense you know that there is this one person who is driving quality at that level. (Stakeholder interview).

Well within the NHS the NPSA has been abolished. The short answer is (laughs) I used to know but I don't any more. It disappeared into some other, I have no idea where the function has disappeared to. (Stakeholder interview).

Interviewees indicated they were unclear about who was 'in charge', uncertainty about the shifting 'top tier' of organisations, and that they saw individual and organisational leadership in flux. The widespread sense of uncertainty is not surprising given the scale of structural and cultural change which the NHS has embarked upon.

There were some exceptions to this picture of a leadership vacuum. A small number of respondents answered the question about leadership without hesitation, naming various key post holders, such as the Chief Medical Officer, the Secretary of State for Health, the NHS Chief Executive, the National Institute for Clinical Excellence (NICE), the Care Quality Commission, or the government itself. However, reports of the locus of leadership varied, reinforcing the sense that leadership of quality and safety at national level was diffused. Other respondents identified national-level bodies which continue to play influential roles in quality

and safety, including the Care Quality Commission and the Royal Colleges. Several interviewees saw potential for leadership from the new Clinical Commissioning Groups and the National Commissioning Board (now NHS England).

Many respondents were also concerned that: "*there's so many people who have got a finger in the pie"*. Lack of coherence, the proliferation of tiers and intersecting bodies and burgeoning of initiatives were perplexing for many; they reported a loss of coherence, energy and focus.

> *I think personally there are too many people leading it and I think there are too many initiatives coming down. If you look at something like the 'four harms',*[a] *you have got so many different initiatives and they are all asking different things. You have got your high impact interventions; you have got Safety Express; you have got NICE; you have got the Health Protection Agency, you have got the NPSA and everything. They are all perhaps giving guidance on similar things but slightly different guidance. And then you have to report in different ways on the same thing. (Stakeholder interview).*

1.3.5 Trust leadership

Interviews and observations repeatedly emphasised the importance of local leadership in establishing and signposting priorities for improvement, motivating staff and ensuring resources were available to pursue these priorities. Senior leadership, at board and executive level, was seen as critical in ensuring consistency between policy and practice, consistency across organisational levels and teams, and between the blunt end and the sharp end. The trust board was seen as particularly influential in setting the overall direction and demonstrating the commitment and organisational priority given to quality and safety. Participants reported that without senior leadership support, the enthusiasm and will of front line staff could weaken. The chief executive of provider trusts was seen as having a key role in developing a culture that encouraged staff engagement in developing changes aimed at improving patient safety and quality of care, and directing resources to where they were needed.

> *Staff also need attention from the higher level management of staff. Don't let them feel they just do all the hard work and nobody care about them. (Stakeholder interview).*

> *I think the most important thing is leadership. I think we need people to care and set an example and to declare the tone, this is what I want to happen. (Stakeholder interview).*

> *I think that what sends the message about all patient safety and quality really is that the leadership does have to come from the top ….otherwise the staff on the shop floor who are doing it, they, they lose the will to carry on as it were. (Stakeholder interview).*

[a] The four harms addressed by the "Safety Express" initiative are pressure ulcers, falls, catheter acquired urinary tract infections and blood clots (venous thromboembolism) (VTE).

In our two case studies of improvement collaboratives, participants identified managerial commitment as a precondition of success.

> *An inspirational team and [the chief executive] knew them all by name, knew what they were doing. (Case study interview)*

> *And I think our trust senior management [support] is really quite high, you know, we have quite a high profile. And then obviously that then, you know, that gives you sort of more motivation to continue [...] and carry on improving. (Case study interview)*

Where management failed to provide support, or did not provide the necessary resources, clinical teams struggled to make improvements.

> *Their senior leaders never engaged… they didn't have the support they required. It almost felt like, when it did come, it came so late and in a piecemeal way that they never got the service support that they required to make change really… Nothing, they just didn't have the authority to make the move. (Case study interview)*

> *So to redesign the service needs leadership to be able to put the resource in. (Stakeholder interview)*

Participants also emphasised the need for organisational leadership of quality and safety to be authentic. It was not just about leaders espousing the value of quality and safety; they had to display and communicate commitment in their actions so as to achieve wider "buy in" and engagement.

> *They have got to be, not just saying the right things from the top, they have got to be living them, or doing them. So there is no point in having a quality improvement strategy if actually the only time you see senior people is when they come to berate you about something that has gone wrong. (Stakeholder interview).*

However, leadership for quality and safety was seen as extending beyond the senior (board/executive) team. Participants suggested that it needed to be distributed across professional groups and levels. Clinicians, especially doctors, were described as the "real" leaders. Nursing leadership was similarly emphasised as key to patient safety and quality. The value of both "formal and informal" clinical leaders in promoting a focus on high quality care was emphasised. A particular role was identified for those with credibility amongst their peers, flair to innovate, clear professional values, effective managerial skills and personal qualities who could "lead by example".

Thus there was a widespread view that leadership for quality and safety should not be left in the hands of a few, but should be widespread and integral to everyone's remit in the NHS. This included "ordinary leaders" or the "*people on the ground*" such as nurses, junior and middle managers, doctors, and other health professionals.

> *So top down is not sufficient on its own. I do think you need top down because if you don't have that kind of drive, people down, further down the chain want out of it. Actually the*

person who needs to own this is at the clinical level, at the patient interface level. (Stakeholder interview)

Finding one consultant or two or three to commit to leading it, because there is no point in getting a manager to do it, because the consultant just ignores it to a degree. So I think it's about, one, it's nurturing those consultants and that's the medical director's office's duty. Nurturing those consultants who will make change. … And somehow championing them to deliver on that. (Stakeholder interview)

In any organisation you need some informal leaders as well and they will emerge and it's a matter of making the most of those. Some are the formal leaders and some are, sort of, don't have a formal position but clearly have an influence in their clinical areas. (Stakeholder interview)

1.3.6 Vision and objectives

Our interviews, observations, surveys and documentary analysis suggested that for organisations to succeed in delivering high quality, safe care, they needed to have a clear, explicitly articulated, unifying vision, including explicit goals for quality and safety and a strategy for achieving them. We found that clarity and unity around what constituted quality and safety was essential for organisations to maintain focus and achieve progress.

Organisations seemed most successful when they refused to be solely reactive in the face of external demands, and developed their own clear strategic vision of what was needed for their own organisation. These organisations sought to go beyond compliance and identify a distinctive mission of their own. This was especially important because our interviews and observations showed how easily service delivery pressures could weaken the focus on quality and safety, and because staff at every level were constantly engaged in trade-offs about what to prioritise and where to expend attention, energy and effort.

You can get carried away with the financial aspects of being a general manager and the activity and performance data. At the end of the day the thing that I hold onto is we're here to provide a service for patients and doing that has got to encompass quality and safety. So in that respect all the things we try to do, we try to bear in mind quality and safety as we do them and with varying degrees of success I suppose. (Case study interview)

Our case studies suggested that organisations varied in how they set out their own distinctive vision for quality and safety that aligned with but was not fully determined by external priorities. These organisations made their commitments clear in multiple ways – everything from staff newsletters, posters, websites, screensavers, to meetings with staff. They put quality and safety literally and figuratively on the top of their agendas, and were observed in meetings to spend considerable time discussing how to make improvements. However, we found substantial variability, in our interviews with stakeholders and interviews and with the blunt end of our case studies, in the extent to which senior teams had clear objectives and a unifying vision for quality and safety, and how far this vision was shared and communicated. Similar themes emerged in our questionnaire surveys of trust boards.

And we feel a lot of things that are talked about in meetings and we never hear about and then you might hear about six months later and we think – hey, I've never heard anything about that – and it directly impacts on what you do and this is a common concern that we have. (Case study interview)

One consequence of the failure to clarify objectives was the existence of frequent misalignments between the ways staff at the blunt end and staff at the sharp end of organisations conceived of quality and safety problems and their appropriate solutions. For sharp- end staff, problems of safety and quality tended to be seen in terms of weaknesses in systems, failures of reliability, and sub-optimal staffing and resources as the major threats to quality and safety. They reported intense frustration as they sought to cope with heavy demands that they thought exceeded organisational and personal capacity, and which signalled to them a low organisational priority given to quality and safety.

At the moment we got some problems, you know, most of the complaints and everything because the GPs keep changing, the patients not happy, because there is no continuity (Case study interview)

I think sometimes on the wards when you visit the ward and you see that there is only one or two members of very stressed looking staff looking after a high case workload, then although I know it's a good hospital generally, you know it does generate some concern… (Case Study interview)

In our surveys of front line teams, these same frustrations emerged again. Staff were frustrated by their inability to provide the quality of service they wished due to budget cuts, poor management, lack of consultation around change, and a focus on targets. Stress levels increased when the workload felt unmanageable because of staff shortages and when working with under-qualified or temporary personnel. Depleting staff resources was felt to directly affect the quality of service provision:

Resource problems are not from a lack of trying….but a lack of manpower / opportunities mean the team is forced into being a reactive crisis management service for most of the time, rather that the desired crisis avoidance service. As a result patient care suffers, service development is impossible and the team is under unnecessary pressure (Teams survey)

Several ambulance personnel in the teams survey expressed frustration over increased operational restrictions resulting in fewer opportunities for training, less essential equipment and lack of other key resources.

An increase in regulation and policies was also a source of frustration in primary care teams, particularly the use of 'blanket' policies which were seen as "*very prescriptive and not concentrated on clinical work*". Some staff felt management and commissioners did not grasp the nature of the service and the importance of interdisciplinary work:

Senior management does not seem to have grasped the fact that working across interdisciplinary boundaries it is essential to know one's team mates (Teams survey)

One staff member described a shift in climate to one of distrust in the organisation and a decreased sense of autonomy at work where changes are often “imposed” with no communication:

> *there continues to be a constant stream of changes ‘inflicted’ on us by the trust which has caused further uncertainty and us having to constantly think about our actions and where we are up to with the changes…some of the changes are ‘short lived’ before being either scrapped or changed again which results in a disillusionary team (Teams survey)*

Several staff from mental health teams expressed frustration over the lack of consultation around a move of administrative staff to a ‘central hub’. Staff felt this change reduced effective communication between staff and patients, made referral more difficult, increased the administrative workload for clinicians and reduced the level of consistency for service users. Frustration was also expressed by teams about limited guidance on objectives and how they could be integrated into service provision:

> *Little guidance on the ground of what the overall joint aim is and how we integrate to do it. We are given a set of targets to hit and discuss a plan to theoretically do so, however in practice it can't be done without taking into account human resources, staff shortages and lack of training. (Teams survey)*

A disproportionate emphasis on targets was frequently identified as a source of frustration across the sub-studies, with team members often noting a shift in focus from patient care towards facts and figures and particularly prioritising quantity of clients or patients seen over quality. One hospital team member reported that hourly baseline observations for medically fit patients and two hourly comfort rounds were expected to be completed with reduced staff resources, taking them away from more vulnerable patients and increasing the level of paperwork. Several staff noted the increase in auditing and associated paperwork as causing a factitious workload and reduced morale:

> *Some objectives set from higher in the organisation may not be appropriate, we are told we have to complete them therefore I feel that some tasks especially paperwork/audits etc are just 'tick box' exercises. (Teams survey)*

In contrast, in interviews some senior managers tended to see front-line staff behaviour as any important cause of quality problems and were less inclined to see solutions as lying in systems and resources. This meant it was sometimes difficult to detect a single, unifying vision of what quality, and safety meant across an organisation. Put simply, those at the blunt and those at the sharp end often did not agree on the causes of variation in quality and safety and, therefore, on how they should be addressed. This indicates a lack of effective communication between senior managers and front line staff and alignment of goals and strategies for addressing quality and safety problems.

This was compounded by lack of clarity about board objectives across many of the organisations we examined. Very few board members, in questionnaires, stated clear board

objectives that were challenging and measurable, and this was mirrored lower down in the organisational hierarchy. We also found that the 621 frontline clinical teams we studied generally reported being even less clear about their objectives than did the boards (average score for boards on a scale from one to five was 4.2, compared with 3.9 for primary care and acute teams, 3.8 for mental health teams and 3.5 for ambulance teams.

This is especially significant as we found that patient satisfaction was highest in trusts which had clear goals at every level. Patients in such trusts reported that communication between patients and staff was good and that they felt involved in decisions about their care. Similar findings emerged from the N.A.P.P. survey, interviews, and focus groups.

Also worrying was some evidence of a weakening focus on safety in our analysis of trust board members' responses to questionnaires, which asked them to identify two key objectives of their boards. The analysis (Table 8) reveals that 88% of boards identified objectives related to organisational effectiveness. These were defined as objectives that encapsulate the non-clinical aspects of effectiveness, including the extent to which the organisation is well managed and is a good place to work. They include establishing an organisational strategy, resolving capacity and estates issues, decision making, setting key performance indicators, team-working, ensuring the long term viability of the organisation, having a skilled workforce, delivery of the business plan, and planning for growth. A similar percentage identified clinical effectiveness as a key objective, defined as objectives aimed at delivering high quality patient care, effective treatment, and clinical outcomes. Clinical effectiveness also relates to maximizing, maintaining and enhancing the highest standards of clinical governance. However, only 35% identified patient safety as a key trust objective, suggesting a limited focus on patient safety.

Table 8. Trust Board objectives, reported in response to questionnaire

Trust Board Objective	%
Organisational Effectiveness	88%
Clinical Effectiveness	88%
Financial Stability	79%
Organisational Change	68%
Targets	68%
Experience	47%
Staff Engagement	38%
Safety	35%
Collaboration	18%
Productivity	18%

More encouraging evidence was found of the extent to which quality and safety-related goals were achieved. We asked board members whether their boards were achieving their objectives. Their answers suggested that objectives relating to quality and safety were more likely to be met than others: 92% of trust board members who mentioned safety-related objectives said that these had been met “quite a bit” or “very much”.

We also examined the relationship between trust board objectives and staff experience. The findings provided insight into how values transmitted by boards may affect the culture of their organisations. Where trust board objectives appeared to prioritise targets and (to a slightly lesser extent) productivity, staff were less likely to report receiving good human resource management including having a good quality appraisal, receiving training, learning and development beneficial to career development, agreeing a personal development plan, and having health and safety training. Their work experiences were generally poorer with staff reporting poorer quality of work design, work life balance, support from supervisor, job satisfaction and motivation, and a lower likelihood of recommending their trust as a place to work or receive treatment. They were less likely to report good communication from senior managers, managerial action being taken following errors, effective managerial action towards bullying, harassment and violence, and being able to contribute towards improvements at work. They were more likely to report experiencing violence or harassment from colleagues in the previous 12 months. Perhaps most concerning of all is that they had lower levels of overall engagement – significant since staff engagement is a key predictor of trust performance. Where safety was prioritised by trust boards, the opposite pattern of relationships was found in relation to most of these variables. For example, there were higher levels of engagement in trusts whose board objectives prioritised safety.

The potency of objectives and their priority at trust board level is illustrated by the effects of targets imposed at senior level, on front line services. A drive towards compliance with targets in the context of limited resources was reflected in how time was allocated across all trust types. For example, an increase in operational duties of ambulance staff to fulfil response time targets was prioritised over mandatory training. Despite major patient safety incidents, one mental health trust decided to allocate more unqualified staff to care for patients to accommodate a substantial reduction in resources. Even staff who had not yet been cleared by Criminal Record Bureau (CRB) checks were permitted to work with vulnerable patients, provided they were “adequately” supervised. Such experiences led frontline staff to express significant concerns over the impact of funding and resource cuts on their ability to provide adequate care, and ultimately ensure patient and public safety.

1.3.7 National trends

One consequence of the current reforms is increased competition between trusts in the NHS. We explored how such competition (which is likely to affect senior managers’ perceptions of their priorities) affected cultures of quality and safety. In collaboration with Professor Carol

Propper of Imperial College, we assessed whether staff experience was better or worse in hospital trusts with higher levels of competition. The evidence suggested that staff experience was generally worse, and that human resource management practices were less well implemented in trusts with higher levels of competition. In such trusts, there were lower percentages of staff having well-structured appraisals in the last 12 months; reporting good communication between management and staff; understanding their role and where it fitted in; reporting good work-life balance, quality of job design, opportunities to develop potential at work and working in a well-structured team environment. The staff in these trusts reported lower satisfaction, higher levels of work pressure and, most significantly, lower levels of satisfaction with the quality of work and patient care they were able to deliver. The data analysis is complex and there may be other explanations for these findings but they merit further exploration given their policy significance.

Weakening focus on quality and safety appeared to be reflected in other sources of data, including both the National Staff Survey and the acute inpatient survey, where a number of key scores, which improved steadily in the years up to 2009, have since stagnated or deteriorated. This includes a number of scores linked to quality and safety, such as adequate provision of staff to ensure completion of tasks, a blame culture following errors and incidents, and cleanliness of wards and hand-washing (Table 9).

Table 9. Changes in the National Staff Survey 2007-2011

	2007	2009	2011	Change 07-09	Change 09-11
"I have adequate materials, supplies and equipment to do my work"	3.22	3.36	3.38	+0.14**	+0.02*
"There are enough staff at this Trust for me to do my job properly"	2.62	2.78	2.72	+0.16**	-0.06**
"I do not have time to carry out all my work"	3.30	3.25	3.25	-0.05**	0.00

* $p<0.05$

On the National Staff Survey, we also found that measures relating to error and incident reporting, blame cultures, and improvements following incidents appeared to have improved only very modestly over time, while patients' reports suggested little change in relation to hand washing and cleanliness (Table 10). In effect, the required improvements in quality and safety, emphasised repeatedly by leaders throughout the service, are not occurring at

anything like the pace they should be, or at least that is how staff and patients appear to see the situation.

Table 10. Table 10: Changes in the National Staff Survey and Acute Inpatient Survey 2007-2011

	2007	2009	2011	Change 07-09	Change 09-11
Staff survey					
"My trust encourages us to report errors, near misses or incidents"	3.84	3.93	3.94	+0.09**	+0.01*
"My trust treats reports of errors, near misses or incidents confidentially"	3.55	3.63	3.66	+0.08**	+0.03**
"My trust blames or punishes people who are involved in errors, near misses or incidents"	2.75	2.67	2.68	-0.08**	+0.01
"When errors, near misses or incidents are reported, my trust takes action to ensure that they do not happen again"	3.47	3.54	3.57	+0.07**	+0.03**
Acute Inpatient survey					
In your opinion, how clean was the hospital room or ward that you were in?	3.45	3.60	3.63	+0.15**	+0.03**
As far as you know, did doctors wash or clean their hands between touching patients? (percentage of positive responses)	53%	59%	57%	+6%**	-2%**

Therefore, the analysis of both NHS Staff Survey and inpatient survey data over a five-year period revealed similar patterns. In general, there were improvements in scores nationally between 2007 and 2009, but subsequently these improvements have stalled or been reversed.

Within this general trend, there are some interesting details on the National Staff Survey. The number of staff who report working paid extra hours has decreased consistently, but since 2009 the number working unpaid extra hours has increased sharply. The percentage of staff receiving training in infection control related issues increased from 2007 to 2009, but fell again in 2011.

Some of the plateauing may reflect a natural maximum level being reached. For example, the percentage of staff receiving health and safety training increased from 2007 to 2009, and appears to remain relatively constant in 2011. Likewise, levels of job satisfaction increased

from 2007 to a moderately high level in 2009, and then stayed approximately the same in 2011.

In contrast, the percentage of staff in the National Staff Survey witnessing errors, near misses or incidents which could hurt either staff or patients increased slightly between 2007 and 2009 but then decreased in 2011. This may be related findings that between 2007 and 2009 there was an increase in the extent to which staff felt encouraged by their organisation to report errors, that incident reporting was handled confidentially, that action was taken to prevent similar errors occurring in the future and a that a decrease occurred in the extent to which staff felt they would be blamed or punished for errors.

There may be some effect of the novelty of policies having worn off. For example, the percentages of staff saying that hot water, soap and paper towels or alcohol rubs were 'always' available to staff, patients and visitors to the trusts increased significantly between 2007 and 2009, but decreased between 2009 and 2011 in each case. Likewise, in the inpatient acute survey, the largest improvements between 2007 and 2009 occurred for the questions broadly related to cleanliness and infection control. There were some further changes between 2009 and 2011, but these were in general either small or negative changes.

1.3.7.1 *Working extra hours*

The percentage of staff working additional PAID hours decreased from 31% in 2007 to 30% in 2009, and further decreased to 26% in 2011. The percentage of staff working additional UNPAID hours decreased from 53% in 2007 to 51% in 2009, but increased to 54% in 2011. Breakdowns by trust type (see table 9.4) show that between 2009 and 2011 staff working additional UNPAID hours *decreased* in acute trusts but *increased* in ambulance trusts. Between 2009 and 2011 the reported increase in UNPAID hours was consistent across all trusts types.

1.3.7.2 *Training, learning and development*

The percentage of staff receiving health and safety training increased from 72% in 2007 to 77% in 2009, and appears to remain relatively constant in 2011 at 76%. Breakdowns by trust type shows health and safety training increased across all trust types, with the largest increase occurring in ambulance trusts (from 34% in 2007 to 50% in 2009). There were further increases across all trusts between 2009 and 2011 apart from in PCTs, were health and safety training decreased from 79% in 2009 to 67% in 2011.

The percentage of staff receiving training in infection control related issues increased from 51% in 2007 to 66% in 2009, but decreased in 2011 to 60%. Breakdowns by trust type show infection control training increased across all types of trusts, with the largest increases occurring in ambulance (27% in 2007 to 55% in 2009) and mental health trusts (39% in 2007 to 60% in), and PCTs (46% in 2007 to 63% in). However, as noted above there was a

decrease in 2011 levels which can be partly attributed to a decrease in infection control training in PCTs (63% in 2009 to 33% in 2011).

1.3.7.3 *Aspects of job design*

Employees' understanding of their objectives and the feedback they have received improved between 2007 and 2009 (potentially this could be related to the introduction of key score findings (KSF) development reviews during this period), with further modest improvements between 2009 and 2011. Breakdowns by trust type show a relatively consistent pattern across different types of trusts; although staff in PCTs report less understanding of their role and responsibilities between 2009 and 2011 (which is perhaps not unsurprising given the changes in this sector).

There was also an increase in the level of resources between 2007 and 2009; however, perceptions of adequate staff levels deteriorated in ambulance trusts, between 2009 and 2011. There was a comparatively modest increase in staff involvement in decisions which affected them between 2007 and 2009, and that such increased involvement was most likely to have occurred in acute trusts.

1.3.7.4 *Staff satisfaction*

Employees' intention to leave their current employment decreased from 2.71 (on a 5-point scale) in 2007 to 2.53 in 2009, but then increased to 2.67 in 2011. Breakdowns by trust type show that intention to leave increased from 2.55 in 2009 to 2.92 in 2011 for staff members in PCTs, and from 2.53 to 2.67 for staff in ambulance trusts.

Levels of job satisfaction increased from 3.43 in 2007 to 3.51 in 2009, and then stayed approximately the same at 3.52 in 2011. Breakdowns by trust type show that, despite the increase in intention to leave between 2009 and 2011 reported above, levels of job satisfaction remained relatively constant across all types of trust, even PCTs.

1.3.7.5 *Organisational climate*

There was an increase in the extent to which senior managers were perceived to communicate with staff, involve them in decision making, and promote a climate where new ideas were encouraged between 2007 and 2009 (which would potentially be explained by the introduction of the NHS Constitution). Organisational climate scores remained relatively consistent between 2009 and 2011. There was a relatively consistent pattern across different types of trusts.

1.3.7.6 *Staff advocacy*

There was an increase in the extent to which care was seen as a high priority, increasing from 3.23 in 2007 to 3.49 in 2009; this then remained at 3.49 in 2011. Again there was a relatively consistent pattern across different types of trusts. However, staff recommendations of the

trust as a place to work decreased from 3.45 in 2009 to 3.31 in 2011, with the most pronounced drop being in PCTs (not surprising given the changes in this sector).

1.3.7.7 *Errors, incidents and near misses*

The percentage of staff witnessing errors, near misses or incidents which could hurt either staff or patients slightly increased between 2007 and 2009 (for staff, from 18% in 2007 to 20% in 2009, and for patients from 24% in 2007 to 25% in 2009) but then decreased in 2011 (staff 16%; patients 21%). Breakdowns by trust type show an increase in errors involving staff reported by ambulance trusts between 2007 (25%) and 2009 (31%); but a decrease between 2009 and 2011 (27%). For errors involving patients, there was a decrease in the number reported by staff between 2009 and 2011 in both PCTs (17% to 8%) and ambulance trusts (24% to 21%).

Between 2007 and 2009, however, there was an increase in the extent to which staff felt encouraged by their organisation to report errors; that incident reporting was handled confidentially, and that action was taken to prevent similar errors occurring in the future, and a decrease in the extent to which staff felt they would be blamed or punished for errors. This remained relatively unchanged between 2009 and 2011, and breakdowns by trust type also show a relatively consistent pattern across different types of trusts. There are, however, variations across trust type on the extent to which staff are informed over changes, or given feedback on changes made as a result of errors, with staff in PCTs reporting less information being reported to them between 2009 and 2011.

1.3.7.8 *Infection control and hygiene*

The percentages of staff saying that hot water, soap and paper towels or alcohol rubs were ‘always’ available to staff, patients and visitors to the trusts increased significantly between 2007 and 2009, but decreased between 2009 and 2011 in each case. Breakdowns by trust type show that the reported increases between 2007 and 2009 are relatively consistent across different types of trusts. The decreases between 2009 and 2011 are most pronounced in PCTs; however, there are also substantial decreases in the acute trust sector.

Table 11: Changes in staff survey scores 2007-2009-2011 (all trusts combined)

	2007	2009	2011	p (2007-2009)	p (2009-2011)
Working extra hours					
% working additional PAID hours	31	30	26	.026	.000
% working additional UNPAID hours	53	51	54	.000	.000
Training, learning and development					
% receiving health and safety training in last 12 months	72	77	76	.000	.488
% receiving infection control training in last 12 months	51	66	60	.000	.000
Aspects of job design Role clarity					
"I have clear, planned goals and objectives for my job"	3.55	3.65	3.68	.000	.000
"I often have trouble working out whether I am doing well or poorly in this job"	2.72	2.66	2.65	.000	.003
"I always know what my work responsibilities are"	3.78	3.81	3.80	.000	.060
"I get clear feedback about how well I am doing my job"	2.90	3.02	3.06	.000	.000
Work pressure felt by staff					
"I cannot meet all the conflicting demands on my time at work"	3.19	3.18	3.17	.063	.108
"I have adequate materials, supplies and equipment to do my work"	3.22	3.36	3.38	.000	.022
"There are enough staff at this Trust for me to do my job properly"	2.62	2.78	2.72	.000	.000
"I do not have time to carry out all my work"	3.30	3.25	3.25	.000	.322
Involvement in decision-making					
"I am involved in deciding on changes introduced that affect my work area / team / department"	3.17	3.22	3.19	.000	.001
"I am consulted about changes that affect my work area / team / department"	3.17	3.23	3.21	.000	.008
"I can decide on my own how to go about doing my work"	3.60	3.63	3.65	.000	.003
Staff satisfaction					
Staff job satisfaction	3.43	3.51	3.52	.000	.708
Staff intention to leave jobs	2.71	2.53	2.67	.000	.000
Organisational climate					
"Senior managers here try to involve staff in important decisions"	2.63	2.76	2.75	.000	.057
"Communication between senior management and staff is effective"	2.60	2.73	2.73	.000	.796
"Senior managers encourage staff to suggest new ideas for improving services"	2.84	2.98	3.00	.000	.005
"On the whole, the different parts of the Trust communicate effectively with each other"	2.56	2.68	2.67	.000	.118

Table 11. Changes in staff survey scores 2007-2009-2011 (all trusts combined)

	2007	2009	2011	p (2007-2009)	p (2009-2011)
Staff advocacy					
"Care of patients / service users is my Trust's top priority"	3.23	3.49	3.49	.000	.999
"I would recommend my Trust as a place to work"	--	3.45	3.31	--	.000
"If a friend or relative needed treatment, I would be happy with the standard of care provided by this Trust"	--	3.59	3.58	--	.533
Errors, incidents and near misses					
% witnessing errors, near misses or incidents in the last month that could have hurt staff	18	20	16	.000	.000
% witnessing errors, near misses or incidents in the last month that could have hurt patients	24	25	21	.000	.000
"My Trust treats staff who are involved in an error, near miss or incident fairly"	3.36	3.38	3.39	.000	.392
"My Trust encourages us to report errors, near misses or incidents"	3.84	3.93	3.94	.000	.019
"My Trust treats reports of errors, near misses or incidents confidentially"	3.55	3.63	3.66	.000	.000
"My Trust blames or punishes people who are involved in errors, near misses or incidents"	2.75	2.67	2.68	.000	.587
"When errors, near misses or incidents are reported, my Trust takes action to ensure that they do not happen again"	3.47	3.54	3.57	.000	.000
"We are informed about errors, near misses and incidents that happen in the Trust"	3.00	3.02	3.06	.000	.000
"We are given feedback about changes made in response to reported errors, near misses and incidents"	3.04	3.08	3.09	.000	.112
Infection control and hygiene					
% saying hot water, soap and paper towels, or alcohol rubs are ALWAYS available for staff	60	70	66	.000	.000
% saying hot water, soap and paper towels, or alcohol rubs are ALWAYS available for patients	51	62	57	.000	.000
% saying hot water, soap and paper towels, or alcohol rubs are ALWAYS available for visitors to trust	53	65	63	.000	.048

Table 12. Changes in staff survey scores 2007-2009-2011 (broken down by trust type)

	All	Acute	PCT	MH	Ambulance
Working extra hours					
% working additional PAID hours					
2007	31	34	20	28	72
2009	30	34	20	26	71
2011	26	29	13	24	68
% working additional UNPAID hours					
2007	53	54	56	51	30
2009	51	51	55	52	32
2011	54	53	59	55	37
Training, learning and development					
% receiving health and safety training in last 12 months					
2007	72	73	75	71	34
2009	77	78	79	77	50
2011	76	81	67	81	55
% receiving infection control training in last 12 months Infection control training					
2007	51	59	46	39	27
2009	66	70	63	60	55
2011	60	71	33	66	50
Aspects of job design					
Role clarity					
"I have clear, planned goals and objectives for my job"					
2007	3.55	3.56	3.55	3.57	3.25
2009	3.65	3.67	3.61	3.67	3.38
2011	3.68	3.75	3.54	3.72	3.50
"I often have trouble working out whether I am doing well or poorly in this job"					
2007	2.72	2.70	2.72	2.70	3.09
2009	2.66	2.63	2.69	2.63	3.05
2011	2.65	2.61	2.70	2.61	3.01
"I always know what my work responsibilities are"					
2007	3.78	3.84	3.72	3.74	3.63
2009	3.81	3.88	3.72	3.77	3.60
2011	3.80	3.91	3.59	3.79	3.65
"I get clear feedback about how well I am doing my job"					
2007	2.90	2.86	2.97	3.05	2.33
2009	3.02	2.97	3.10	3.17	2.39
2011	3.06	3.01	3.15	3.19	2.47

Table 12 (cont): Changes in staff survey scores 2007-2009-2011 (broken down by trust type)

	All	Acute	PCT	MH	Ambulance
Work pressures felt by staff					
"I cannot meet all the conflicting demands on my time at work"					
2007	3.19	3.20	3.24	3.15	3.05
2009	3.18	3.17	3.24	3.16	3.10
2011	3.17	3.17	3.15	3.21	3.16
"I have adequate materials, supplies and equipment to do my work"					
2007	3.22	3.19	3.26	3.31	2.86
2009	3.36	3.33	3.45	3.40	2.95
2011	3.38	3.32	3.56	3.39	3.03
"There are enough staff at this Trust for me to do my job properly"					
2007	2.62	2.54	2.69	2.76	2.52
2009	2.78	2.72	2.86	2.88	2.65
2011	2.72	2.68	2.79	2.79	2.53
"I do not have time to carry out all my work"					
2007	3.30	3.32	3.35	3.23	3.02
2009	3.25	3.26	3.30	3.23	3.04
2011	3.25	3.26	3.23	3.28	3.12
Involvement in decision-making					
"I am involved in deciding on changes introduced that affect my work area / team / dept"					
2007	3.17	3.14	3.32	3.22	2.45
2009	3.22	3.20	3.34	3.26	2.44
2011	3.19	3.18	3.32	3.21	2.49
"I am consulted about changes that affect my work area / team / dept"					
2007	3.17	3.16	3.27	3.20	2.54
2009	3.23	3.23	3.30	3.25	2.58
2011	3.21	3.22	3.28	3.21	2.60
"I can decide on my own how to go about doing my work"					
2007	3.60	3.57	3.71	3.61	3.33
2009	3.63	3.60	3.73	3.64	3.28
2011	3.65	3.60	3.82	3.63	3.26
Staff satisfaction					
Staff intention to leave jobs					
2007	2.71	2.73	2.68	2.71	2.67
2009	2.53	2.52	2.55	2.55	2.53
2011	2.67	2.58	2.92	2.60	2.67

Table 12 (cont): Changes in staff survey scores 2007-2009-2011 (broken down by trust type)

	All	Acute	PCT	MH	Ambulance
Staff job satisfaction					
2007	3.43	3.38	3.51	3.49	3.13
2009	3.51	3.48	3.60	3.57	3.17
2011	3.52	3.48	3.59	3.58	3.16
Organisational climate					
"Senior managers try to involve staff in important decisions"					
2007	2.63	2.58	2.77	2.67	2.12
2009	2.76	2.73	2.91	2.78	2.19
2011	2.75	2.70	2.90	2.79	2.22
"Communication between senior management and staff is effective"					
2007	2.60	2.58	2.71	2.62	2.07
2009	2.73	2.72	2.84	2.73	2.13
2011	2.73	2.70	2.87	2.74	2.14
"Senior managers encourage staff to suggest new ideas for improving services"					
2007	2.84	2.84	2.94	2.82	2.35
2009	2.98	2.97	3.09	2.95	2.43
2011	3.00	3.02	3.07	2.98	2.53
"On the whole, the different parts of the Trust communicate effectively"					
2007	2.56	2.59	2.60	2.54	2.05
2009	2.68	2.72	2.73	2.64	2.11
2011	2.67	2.71	2.68	2.67	2.12
Staff advocacy					
"Care of patients / service users is my Trust's top priority"					
2007	3.23	3.28	3.24	3.22	2.68
2009	3.49	3.55	3.50	3.44	2.75
2011	3.49	3.55	3.47	3.45	2.84
"I would recommend my Trust as a place to work"					
2007	--	--	--	--	--
2009	3.45	3.49	3.45	3.40	3.07
2011	3.31	3.42	3.11	3.35	2.98
"If a friend or relative needed treatment, I would be happy with the standard of care provided"					
2007	--	--	--	--	--
2009	3.59	3.64	3.60	3.45	3.45
2011	3.58	3.66	3.48	3.51	3.55

Table 12 (cont): Changes in staff survey scores 2007-2009-2011 (broken down by trust type)

	All	Acute	PCT	MH	Ambulance
Errors, incidents and near misses					
% witnessing errors, near misses or incidents in the last month that could have hurt staff					
2007	18	20	14	20	25
2009	20	21	13	22	31
2011	16	19	7	19	28
% witnessing errors, near misses or incidents in the last month that could have hurt patients					
2007	24	29	16.67	18.98	23
2009	25	30	16.66	21.37	24
2011	21	28	8.19	19.85	21
"My Trust treats staff who are involved in an error, near miss or incident fairly"					
2007	3.36	3.39	3.38	3.33	3.03
2009	3.38	3.41	3.41	3.36	3.03
2011	3.39	3.42	3.41	3.36	3.02
"My Trust encourages us to report errors, near misses or incidents"					
2007	3.84	3.87	3.85	3.80	3.55
2009	3.93	3.95	3.93	3.91	3.64
2011	3.94	4.00	3.82	3.98	3.71
"My Trust treats reports of errors, near misses or incidents confidentially"					
2007	3.55	3.57	3.58	3.53	3.22
2009	3.63	3.65	3.66	3.63	3.25
2011	3.66	3.68	3.65	3.67	3.31
"My Trust blames or punishes people who are involved in errors, near misses or incidents"					
2007	2.75	2.74	2.68	2.79	3.05
2009	2.67	2.68	2.58	2.71	3.03
2011	2.68	2.68	2.60	2.70	3.01
"When errors, near misses or incidents are reported, my Trust takes action to ensure that they do not happen again"					
2007	3.47	3.49	3.47	3.46	3.09
2009	3.54	3.56	3.54	3.55	3.11
2011	3.57	3.60	3.54	3.59	3.18
"We are informed about errors, near misses and incidents that happen in the Trust"					
2007	3.00	3.03	2.97	3.00	2.63
2009	3.02	3.06	2.99	3.05	2.59
2011	3.06	3.13	2.92	3.13	2.69

Table 12 (cont): Changes in staff survey scores 2007-2009-2011 (broken down by trust type)

	All	Acute	PCT	MH	Ambulance
"We are given feedback about changes made in response to reported errors, near misses and incidents"					
2007	3.04	3.06	3.02	3.10	2.69
2009	3.08	3.10	3.05	3.14	2.67
2011	3.09	3.15	2.93	3.20	2.78
Infection control and hygiene					
% saying hot water, soap and paper towels, or alcohol rubs are ALWAYS available for staff					
2007	60.48	64.84	58.18	54.15	45.79
2009	70.36	74.36	68.45	64.94	53.87
2011	66.10	71.21	59.28	63.66	52.24
% saying hot water, soap and paper towels, or alcohol rubs are ALWAYS available for patients					
2007	51.20	56.62	45.93	47.02	31.38
2009	61.95	68.81	55.00	56.71	38.43
2011	56.86	65.44	42.14	56.75	35.74
% saying hot water, soap and paper towels, or alcohol rubs are ALWAYS available for visitors to trust					
2007	52.72	55.32	49.50	45.72	--
2009	64.99	68.10	62.55	56.65	--
2011	62.59	64.53	59.02	57.08	--

1.3.7.9 *Changes in inpatient survey over time*

Table 13 shows that the largest improvements between 2007 and 2009 occurred for the questions broadly related to cleanliness and infection control. There were some further changes between 2009 and 2010, but these were in general either small or negative changes. Perceptions of the cleanliness of the hospital wards and rooms (3.45 on a 4-point scale in 2007 to 3.60 in 2009), and toilet/bathroom facilities (3.32 in 2007 to 3.48 in 2009) both increased during this period. Routine hand washing by both doctors (53% in 2007 59% in 2009) and nurses (68% in 2007 to 72% in 2009) also increased during this period.

There was also a sharp rise in the percentage of patients saying they had the opportunity to give their views on the quality of their care (7% to 9% to 11%), although the overall total remains low. There were small, but statistically significant, increases in ratings of how well the doctors and nurses worked together, and overall ratings of care, from 2007 to 2009; however, these were matched by subsequent decreases from 2009 to 2010.

Table 13: Changes in inpatient survey scores 2007-2009-2010

	2007	2009	2010	p (2007-2009)	p (2009-2011)
Hospital ward					
In your opinion, how clean was the hospital room or ward that you were in? (1=not at all clean to 4=Very clean)	3.45	3.60	3.61	.000	.002
How clean were the toilets and bathrooms that you used in hospital? (1=not at all clean to 4=Very clean excludes: did not use toilet bathroom)	3.32	3.48	3.51	.000	.000
Doctors					
When you had important questions to ask a doctor, did you get answers that you could understand? (1=Yes, always / Yes, sometimes 0=No)	94	94	94	.585	.092
Did you have confidence and trust in the doctors treating you? (1=Yes, always / Yes, sometimes 0=No)	97	97	97	.111	.692
Did doctors talk in front of you as if you weren't there? (1=Yes, often / Yes, sometimes 0=No)	28	28	28	.944	.846
As far as you know, did doctors wash or clean their hands between touching patients? (1=Yes, always / Yes, sometimes 0=No excludes: Don't know / Can't remember)	53	59	58	.000	.018
Nurses					
When you had important questions to ask a nurse, did you get answers that you could understand? (1=Yes, always / Yes, sometimes 0=No)	95	95	95	.316	.842
Did you have confidence and trust in the nurses treating you? (1=Yes, always / Yes, sometimes 0=No)	97	97	97	.687	.998
Did nurses talk in front of you as if you weren't there? (1=Yes, often / Yes, sometimes 0=No)	21	22	22	.003	.022
As far as you know, did nurses wash or clean their hands between touching patients? (1=Yes, always / Yes, sometimes 0=No excludes: Don't know / Can't remember)	68	72	71	.000	.000
Your care and treatment					
Sometimes in a hospital, a member of staff will say one thing and another will say something quite different. Did this happen to you? (1=Yes, often / Yes, sometimes 0=No)	34	35	35	.010	.157
Were you involved as much as you wanted to be in decisions about your care and treatment? (1=Yes, definitely / Yes, some extent 0=No)	89	89	89	.343	.762
Did you find someone on the hospital staff to talk to about your worries and fears? (1=Yes, definitely / Yes, some extent 0=No)	78	78	78	.310	.519
Overall					
Overall, did you feel you were treated with respect and dignity while you were in the hospital? (1=Yes, always /Yes, sometimes 0=No)	97	97	97	.123	.766
How would you rate how well the doctors and nurses worked together? (1=Poor to 5=Excellent)	4.06	4.10	4.07	.000	.000
Overall, how would you rate the care your received? (1=Poor to 5=Excellent)	4.10	4.13	4.11	.000	.002
During your hospital stay, were you ever asked to give your views on the quality of your care? (1=Yes - 0= No excludes: Don't know / Can't remember)	7	9	11	.000	.000

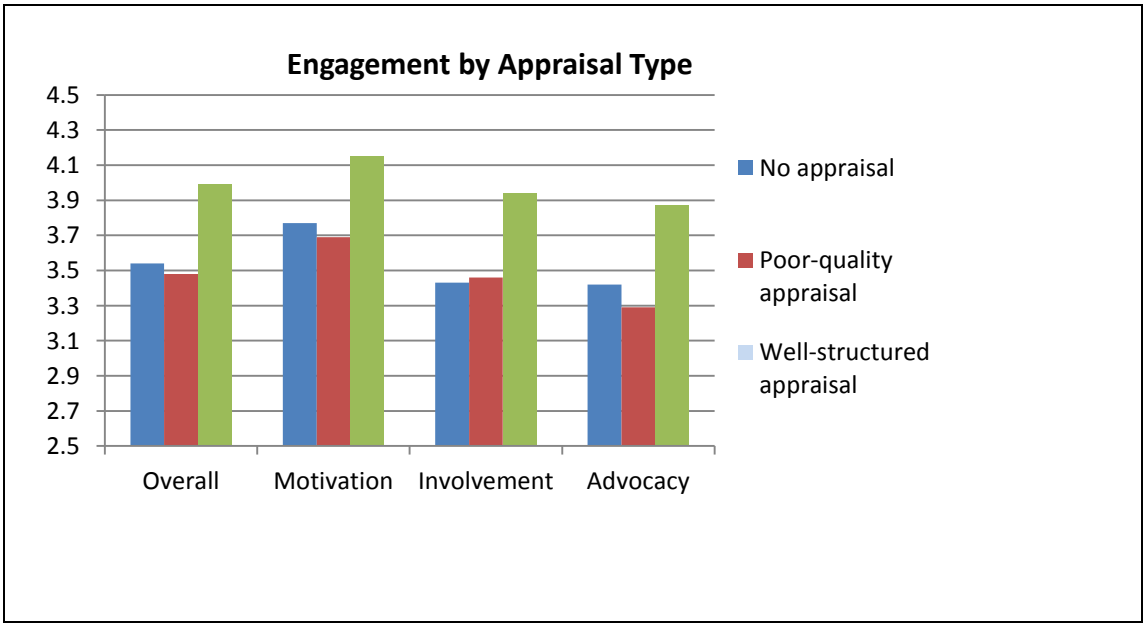
1.3.7.10 *Work Engagement*

Engagement of staff, in all its various forms, is a key factor in promoting organisational effectiveness, whether that means patient experience, quality and safety outcomes, or efficiency and financial performance. The following section shows how engagement, along with other elements of staff experience, is linked to such outcomes; here we consider what elements of staff management in the NHS promote higher engagement.

One of the key people management practices found in previous research to predict organisational performance was staff appraisal. In the NHS staff survey appraisal was measured in one of two ways: either having a "well-structured" appraisal, where respondents indicate that the appraisal or performance development review (including KSF reviews) they had received in the previous 12 months helped them improve how they did their job, involved setting of objectives for their work, and left them feeling valued by their trust, or another type of appraisal (where at least one of these things did not happen). In the 2009 survey, 32% of staff had received a well-structured appraisal in the previous 12 months, and a further 39% a non-well structured, or poor quality, appraisal.

Our analysis showed that the type of appraisal is a key factor in predicting engagement. Overall engagement was substantially higher amongst staff who had received a well-structured appraisal. Conversely, for staff who had received a poor quality appraisal, engagement levels were slightly lower than for staff who did not receive an appraisal at all. Likewise, staff who had agreed a personal development plan with their line manager had higher engagement levels than those who had not (see Figure 1).

Figure 1: Engagement by Appraisal Type



When staff feel that they work in a well-structured team environment (one where teams have clear objectives, have to work interdependently to achieve these objectives, and meet regularly to discuss their effectiveness and how it might be improved) their engagement levels are also higher than those who do not. Staff who report that they have an interesting job also report higher levels of engagement, and associations are also found with other aspects of job design, in particular having good support from the immediate manager, feeling that the role makes a difference, having low levels of work pressure, and having clear job content, feedback, and the opportunity to be involved in decision-making.

Engagement is also linked to the health of staff. Higher engagement levels are found amongst staff who do not report suffering from work-related stress, and amongst staff who did not feel under pressure to come to work when they were not fully fit to do so. Generally speaking, when employees rated their own health and well-being more highly, they also reported higher engagement (of all types – motivation, involvement and advocacy), see Figure 2. However, there were significant differences between groups of trusts and staff in terms of engagement levels. Ambulance trusts generally had much lower engagement than others (although the difference was only slight in terms of motivation), with ambulance staff having the lowest of all staff groups, while general managers usually had the highest of all staff groups, see Figure 3.

Figure 2: Engagement by Trust type

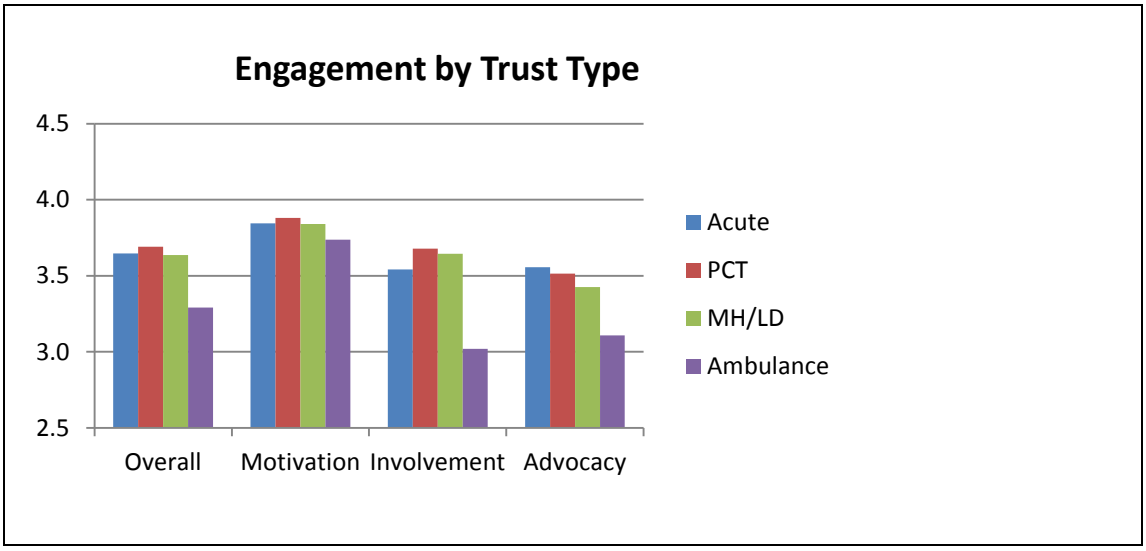
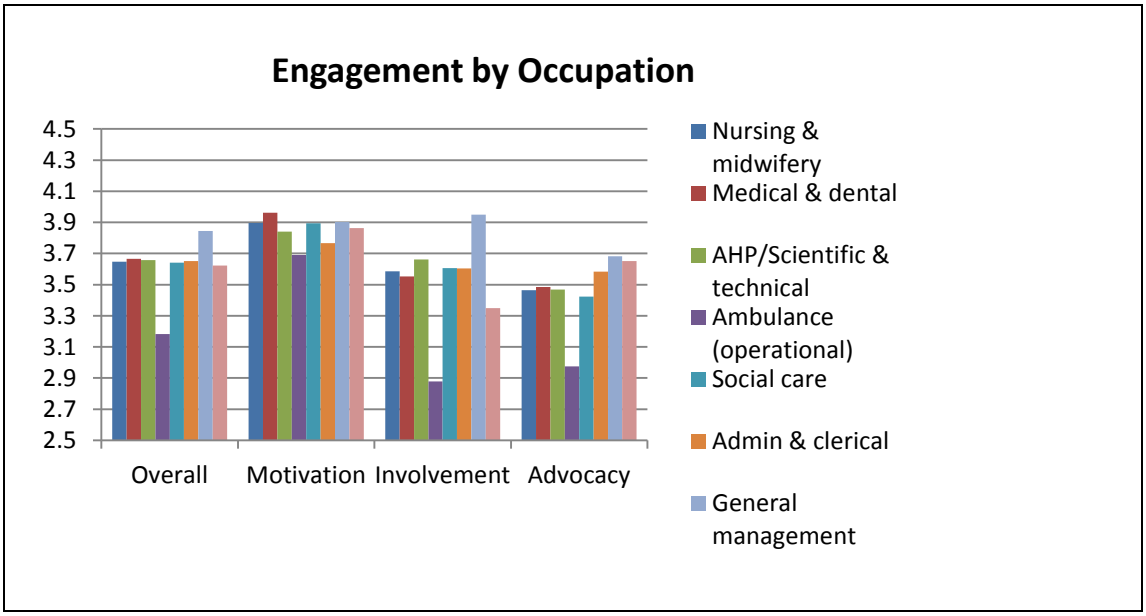


Figure 3: Engagement by Occupation



1.3.7.11 *Patient Satisfaction and staff experience*

The quality of patient experience, as measured by inpatient satisfaction in acute trusts, is strongly linked with engagement and other aspects of staff experience. Patient satisfaction is significantly higher in trusts with higher levels of employee engagement. The main driver for this is the "advocacy" element of engagement, which has by far the highest correlation with patient satisfaction. However, other elements of management are also clearly related to patient views.

Clarity of objectives is one such key predictor. Patient satisfaction is highest when:

- staff understand what the goals of the trust are
- care is provided by teams that have clear objectives
- individual staff members have clear goals for their jobs

Staff satisfaction is also directly related to subsequent patient satisfaction. For example, staff reports of the supportiveness of immediate managers and their perceptions of the extent of positive feeling (communication, staff involvement, innovation & patient care) in their trusts directly predicts patient satisfaction. Not surprisingly, staff intention to leave their jobs is also strongly related to lower levels of patient satisfaction (see Figure 4).

Figure 4 Patient satisfaction and staff intention to leave

Some of the associations found suggest that there are reciprocal effects between elements of staff experience and patient experience. The extent to which staff are committed to their organisations and to which they recommend their trust as a place to receive treatment and to work is strongly related to patient satisfaction. This suggests that staff positivity may create atmospheres that are more conducive to positive patient experience, but also that staff may react to positive atmospheres by being more positive themselves.

There is also a clear link between discrimination, and aggression against staff, and patient satisfaction:

- The greater the proportion of staff from a black or minority ethnic (BME) background who report experiencing discrimination at work in the previous 12 months, the lower the levels of patient satisfaction
- Where there is less discrimination, patients are more likely to say that when they had important questions to ask a nurse, they got answers they could understand and that they had confidence and trust in the nurses.

Where there was discrimination against staff, patients felt that:

- doctors and nurses talked in front of them as if they weren't there
- they were not as involved as they wanted to be in decisions about their care and treatment
- they could not find someone on the hospital staff to talk to about their worries and fears
- they were not treated with respect and dignity while in hospital

Likewise, when staff report bullying, harassment or abuse from patients' relatives, friends, carers and other members of the public, patients do not feel treated with respect and dignity while in hospital. The percentage of staff experiencing physical violence from patients, their relatives, friends or carers is also associated with low subsequent patient satisfaction.

These results suggest that a spiral of negativity can emerge when staff are not treated supportively and with respect, whether by managers or by the public. Creating a positive, supportive environment is likely to produce an environment within which the best quality of care is provided. Not surprisingly, in such well-managed trusts, staff are less likely to be planning to leave than are staff in poorly managed trusts. This message is amplified by the finding that when staff report high work pressure, patients also see the service as under-resourced, commenting that there were too few nurses to provide care. In trusts where more staff report witnessing errors, near misses or other worrying incidents in the previous month, patients too report that they did not receive sufficient support, information, privacy or respect.

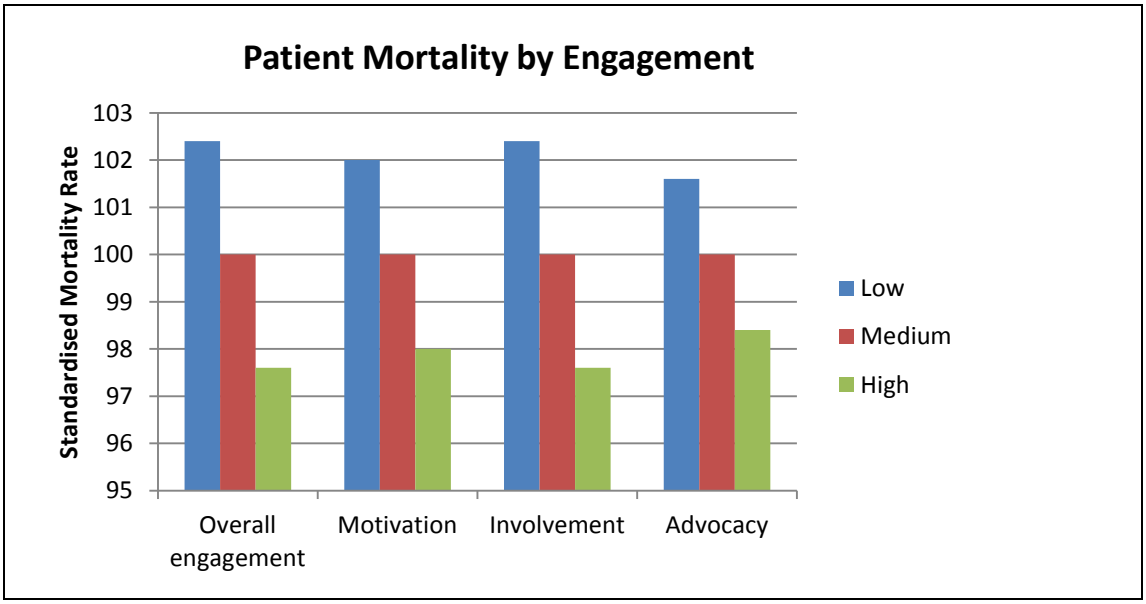
HR practice variables were linked to improvements in the level of patient satisfaction:

- Hospitals with high percentages of staff receiving job-relevant training have higher patient satisfaction
- Higher levels of well-structured appraisal meetings are associated with greater patient satisfaction
- Organisations with good support provided by immediate line managers have higher levels of patient satisfaction
- The proportion of staff who have undertaken health and safety training since joining their trust is also strongly related to patients' perceptions of the quality of care they receive.

1.3.7.12 *Patient Mortality*

Engagement is linked to patient mortality in acute trusts, even when mortality in the previous year is controlled for. This includes significant relationships with all forms of engagement, suggesting that in organisations where engagement is highest, the levels of patient mortality (as measured by the HSMR) are lower. This is such that for an "ordinary" (one standard deviation) increase in overall engagement, mortality rates would be around 2.4% lower (see Figure 5).

Figure 5: Patient Mortality by Engagement



Another strong predictor of patient mortality in acute trusts is the percentage of staff working in well-structured teams: those that have clear objectives, that meet regularly to review their performance and how it could be improved, and whose members work closely and effectively together. The analysis showed that, all else being equal, 5% more staff working in well-structured teams was associated with a 3.6% lower mortality rate. Other key staff variables significantly associated with patient mortality include:

- good training, learning and development opportunities for staff
- support from immediate managers
- staff having opportunities to influence and contribute to improvements at work
- the percentage of staff receiving well-structured appraisals (those where the appraisal helps the employee improve how to do his/her job, clear objectives are set, and the appraisal is felt to be useful by the employee)
- a positive organisational climate (in terms of good communication, staff involvement, and innovation).

1.3.7.13 *Turnover*

Turnover is a major cost for NHS trusts, with each staff member leaving costing thousands of pounds in direct costs alone – and often more in lost productivity. Our analysis shows that several staff experience variables are related to actual turnover.

Staff engagement is strongly linked to turnover, with turnover rates approximately 0.6% lower in trusts that have a one standard deviation higher engagement score, all else being equal. Other variables that are associated with staff turnover are:

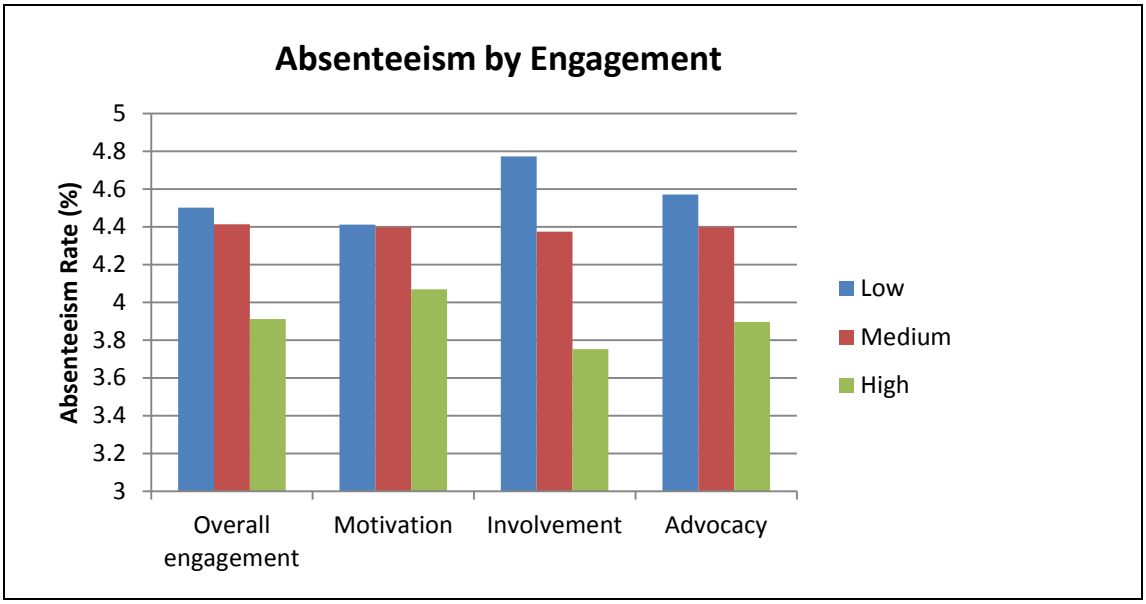
- Staff job satisfaction
- Work pressure felt by staff
- Using flexible working options
- Receiving job-relevant training, learning or development
- Receiving health and safety training
- Working in well-structured teams
- Experiencing physical violence, bullying, harassment or abuse from either patients (or their relatives) or from colleagues
- Quality of job design (clear job content, feedback and staff involvement)
- Support from immediate managers
- Fairness and effectiveness of incident-reporting procedures
- Availability of hand-washing materials
- Overall organisational climate (extent of positive feeling in the organisation)

This suggests that many areas of staff experience, including the quality of line management received, the extent of training, and the feeling of working in a safe environment, are critical factors in retaining employees. When staff work in a well-structured team environment, they are much less likely to intend to leave the trust.

1.3.7.14 *Absenteeism*

Engagement once again was a critical factor in explaining absenteeism. Overall engagement, as well as the three constituent parts, were all statistically significant predictors. The effects were such that high engagement was associated with much lower absenteeism than low or moderate levels of engagement. An increase of one standard deviation in engagement would be equivalent (all else being equal) to a saving of around £150,000 in salary costs alone for an average acute trust (see Figure 6).

Figure 6: Absenteeism by Engagement



Other factors predicting the rate of absenteeism include:

- Dissatisfaction with the quality of work and patient care delivered
- Not having an appraisal in the previous 12 months
- Work-related stress
- Physical violence from colleagues or patients
- A lack of equality and diversity training

Indeed, these are many of the same factors that predict lower engagement. This is perhaps not surprising as when staff have bad experiences in the workplace this is likely to lead to lower engagement as well as poorer physical and mental health, and possibly greater detachment from the job, which would in turn explain why employees did not attend work so often.

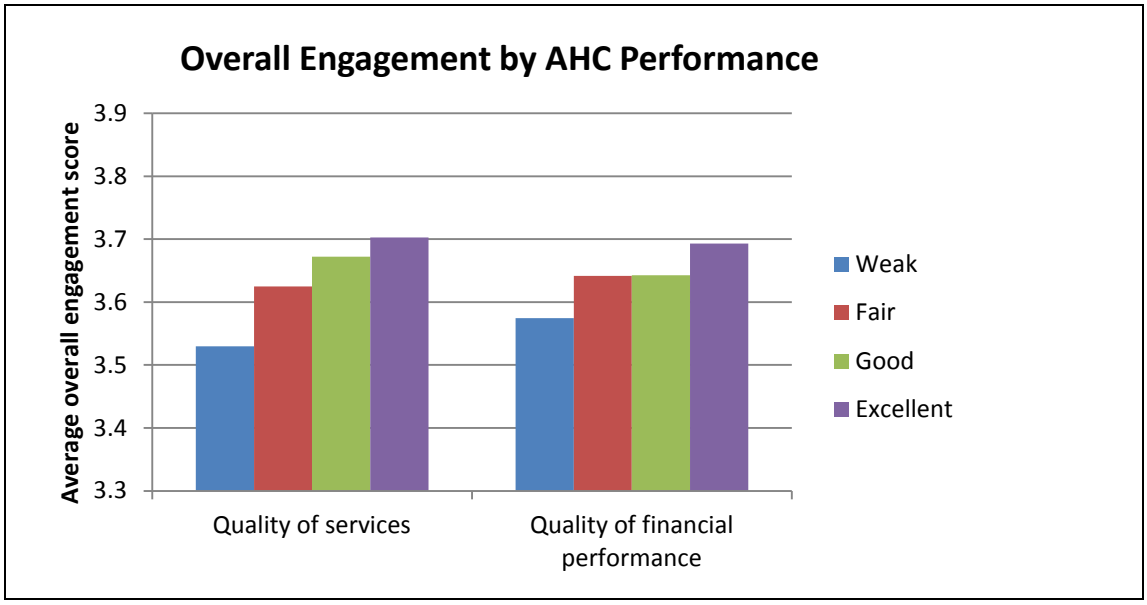
1.3.7.15 *Annual Health Check Performance*

The Annual Health Check (AHC) provided two measures of organisational performance: Quality of services, and Quality of financial performance (previously known as Use of resources). Although relatively blunt ratings, the range of different indicators used by the Care Quality Commission (and previously the Healthcare Commission) in deriving them ensures they represent organisational effectiveness in a wide-ranging way.

Both measures were again related to engagement. In the case of Quality of Services, all three sub-components of engagement were also significantly associated with the outcome; in the case of Quality of Financial Performance, involvement and advocacy were, but motivation was not. The differences between organisations of differing performance ratings are

exemplified in the following chart (It should be noted, however, that due to the timing of the two measurements, the AHC performance variables were released during the middle of the survey period), see Figure 7.

Figure 7: Overall engagement by AHC performance



The Quality of Financial Performance rating was also related to the proportion of staff working in well-structured teams – those with clear objectives, requiring interdependent working, and that meet regularly. This suggests that the use of such teams not only produces better outcomes for staff (e.g. engagement and health outcomes) and patients (e.g. mortality), but also results in more efficient working.

Other factors that are associated with better ratings on both Annual Health Check scores include:

- Higher levels of well-structured appraisals
- Higher levels of training, learning and development
- Lower levels of staff stress and work pressure
- Lower levels of witnessed errors, near misses and incidents
- Higher use of flexible working options

The common themes displayed here, along with the results for most other outcomes, suggest that effective staff management and improved working environments are important not just for the quality of care and the well-being of both patients and staff, but also for the productivity of NHS trusts.

1.3.7.16 *Infection Rates and Errors*

In trusts where a large percentage of staff feel they can contribute towards improvements at work, infection rates are decreasing, reinforcing the value of staff involvement in service improvements and of creating cultures of engagement and innovation. This effect is such that where 10% more staff feel able to make such contributions, there would be on average .057 fewer cases of MRSA per 10,000 bed days. This may appear to be a small effect, but given the large volume of activity in most acute trusts this could easily make a real difference in the occurrence of MRSA infections in hospitals.

Infection rates are also lower where:

- there is greater staff training
- staff report errors, near misses and incidents
- incident reporting procedures are deemed to be fairer and more effective

These results suggest that focussing on training and putting effective procedures in place may pay dividends with regards to decreasing infections in hospitals and the associated health and productivity benefits.

1.3.8 Priority thickets

A major challenge in creating unifying visions for patient safety and quality, and setting clear objectives, was the range, diversity and complexity of external expectations and requirements that NHS organisations are expected to meet. In stakeholder and case study interviews, participants reported that targets, standards, incentives, and measures seemed to crowd in from multiple external sources. There was also a perception that the same information was required multiple times in different formats, and that the cost of producing data for external regulators was very high. The proliferation of externally set priorities and the number of different agencies and actors who could set standards, created "priority thickets" – dense patches of overlapping or disjointed goals that commanded very substantial attention and resources. Priority thickets were often so dense that they inhibited organisations from developing their own clearly articulated strategies and organisational energy was diverted into serving multiple masters. There was a perception that too many external bodies had a say in what NHS organisations should do, and that these externally imposed priorities conflicted, competed, or otherwise failed to cohere.

> *We have so much – I mean if you just look around the office there's so much – you know every week we've got to do this this week we've got to do that this week. Sometimes you just feel swamped with it and I am sure lots of people say that – you know – and you just can't remember what that's called and what that government initiative is called and what the Trust wants you to do this week. ... Sometimes I go through my email and there's like six new things when I've been off two days and I think I've no idea what they are talking about. (Case study interview)*

Faced with so many competing demands, ethnographic work suggested some organisations tended to revert to a highly bureaucratised form of management, characterised by proliferation of rules, procedures and forms corresponding to externally imposed demands. It seemed that many of these were motivated by a need to display compliance, rather than by genuine efforts to make systems safer or of better quality. Much of this activity was thus defensive and reactive. In interviews, and in their board minutes, there was evidence of organisations giving accounts of themselves that were compliance focused, trying to show how they were conforming to external expectations or to find external attributions for why they were not compliant.

The focus on bureaucratised compliance caused problems for the sharp end. On one case study ward, for example, we counted over 100 different forms that staff had to complete. This had the paradoxical effect of reducing the priority given to quality and safety, since there were so many different signals as to what was important and where attention should be directed. The forms obscured, rather than revealed, what was important. They were also perceived by staff at the sharp end as a distraction from the real work of caring for patients, rather than something that enhanced or supported safe, high quality care.

> *It's just a constant battle against all these things that the Government and the Trust are throwing at you from the top and just maintaining that level of safety that we have clinically – it's like a battle is what it feels like. (Case study interview)*

Some externally set goals were important in setting direction and signalling the significance of particular activities. For example, national audits and other large scale improvement activities, including the collaboratives we studied, were used to give focus, legitimacy, and status to local actions.

> *I think for me that the biggest outcome has been that [the collaborative] helped re-focus on patient safety. (Case study interview)*

> *We've used national best practice. Now for some things it doesn't exist, but that thing about being seen within 12 hours of admission, this is straight out of NCEPOD… when it comes out of national documentation people, you know, I think we accept it, it's hard to say this is rubbish. So using high level national data I think is the key. (Case study interview)*

However, organisations seemed most successful when they refused to be solely reactive in the face of external demands, and developed their own clear strategic vision of what was needed for their own organisation. These organisations sought to go "beyond compliance" and have a distinctive vision, mission and set of objectives of their own.

1.3.9 Organisational intelligence

A major challenge to maintaining consistent, high quality, safe care was ensuring that intelligence was available to organisations, teams, and individuals about how well they were doing and where the risks in their systems lay. We found evidence across board minutes,

interviews, and observations that NHS organisations were putting considerable time, effort and resources into data collection and monitoring systems. These included systems for monitoring various aspects of quality of care, compliance with good practice and clinical outcomes. However, case studies suggested that the degree to which data collection efforts translated into actionable knowledge, and then into effective organisational responses, differed markedly between organisations. Two links in this process seemed especially vulnerable: the transformation of large quantities of data which were difficult to transform into intelligence about actual harms and potential risks in care systems, and the way in which such intelligence was then used in seeking to change behaviour and improve care processes.

Organisations sampled tended to rely on a combination of routinely collected data, new data collection initiatives, and sporadic sources of knowledge such as spot checks and audits. To a varying extent they also drew on feedback provided by clinical staff and patients as a means of assessing trends in the quality of care provided. In our case studies of NHS provider organisations, contrasts were evident between organisations in the approach taken to data collection and use. Some devoted strategic attention to data collection and monitoring while others were more reactive in their collection and use of data.

Our case studies and board minutes suggested that behaviours in relation to organisational intelligence about quality and safety could be heuristically distinguished along a spectrum from problem-sensing (actively seeking weaknesses in systems and taking action to strengthen them that went beyond sanctioning staff) to comfort-seeking (avoiding discomfiting information and finding comforting explanations when evidence of weakness did emerge, along with passivity about improving organisational systems).

Problem-sensing meant that the senior team and middle management were forward looking, were cautious about being self-congratulatory, and were focused on reliability-seeking. It required actively seeking out challenging evidence about where things were going wrong, and emphasised and demanded honesty about flaws in organisations: one senior executive said "if I'm not anxious, I'm not happy". Problem-sensing did not rely on one strategy for gathering intelligence, instead using many in the search for genuine, deep learning. These included listening to patients and to staff, as well as using more formal measurement and data collection methods, including gaining informal feedback on what was troubling staff by speaking with them directly.

> *So we do site visits regularly and we try and speak to staff – we don't just be escorted round by the manager – we try and build relationships with the team and we do get gripes and moans and stuff so you know you will get – we have not got enough receptionists this week or so and so is off sick or it's been a real stress because of this. …so we can kind of troubleshoot quite quickly on those sorts of things but then if somebody said something serious – so another site I went into and somebody showed me something that actually was very concerning and because I was there I just stayed there and actioned it that moment. (Case study interview)*

Problem-sensing behaviours included finding ways to make it easier for staff to make their concerns known; improved reporting was welcomed evidence of a healthy organisation.

> *Our incident [reports] have gone up since it's gone electronic. Now that's not because we've got more incidents now, it's just that people feel more confident using the system...and rather than writing a form and having to hand the form to your manager...and the manager sign off the form and then being dependent on the manager…they feel very confident about doing it online so I think that is good. (Case study interview)*

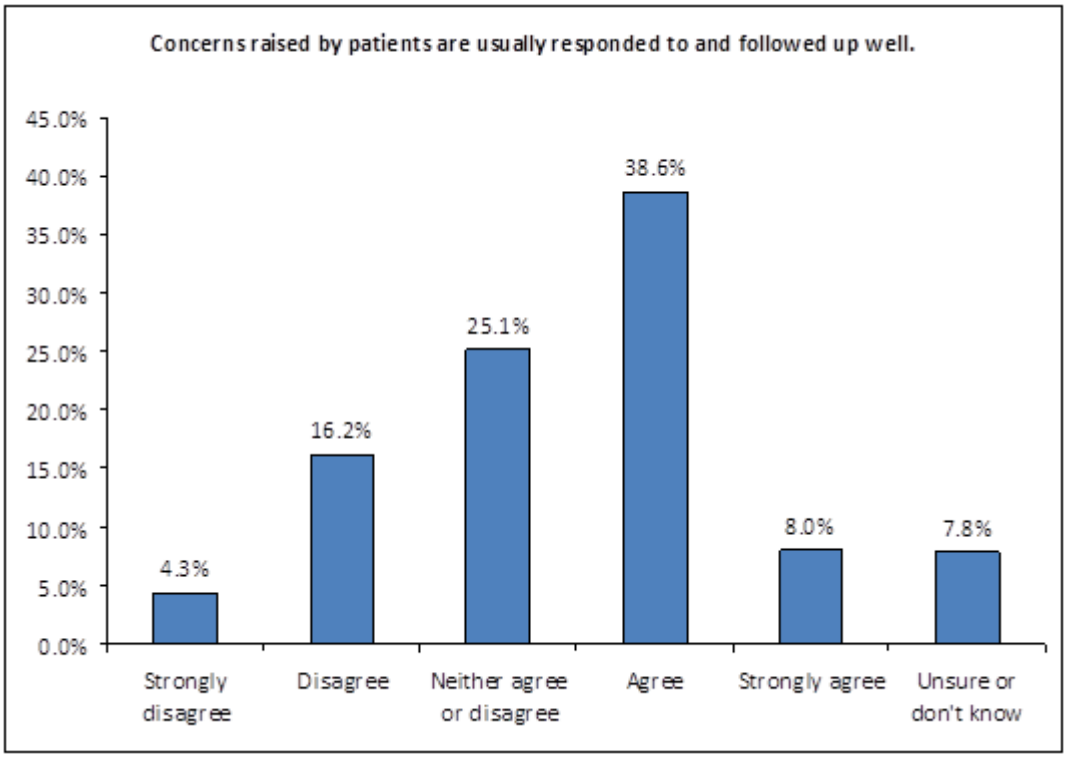
Problem-sensing behaviours were distinctive in how they went "beyond compliance". One primary care case study reported that they had introduced an incident-reporting system that went above and beyond the requirements for reporting to the National Reporting and Learning System, and commented that *"there's nothing that worries us more than a site where there are no [reported] incidents".* A large acute trust reported that they had spent considerable time developing a strategy that they felt would deliver excellent quality, safe care, and found that any requirements for external reporting were largely taken care of in the process.

Proactive intelligence-gathering and interpretation required considerable investment both in systems for generating data on patient safety, and in analysis to identify system weaknesses and root causes. One trust, for example, had implemented an information system for incident reporting, and worked to develop a culture among sharp-end staff in which reporting was mandatory and non-reporting of even small incidents was not tolerated. Here, the trust worked actively to generate the kind of data that might unearth problems rather than provide false reassurance. But even here, senior staff recognised the need to be alert to other sources of knowledge that might provide early warnings about areas of risk that formal reporting systems were not always equipped to pick up:

> *You look at incident reporting, sometimes wards that implement something really well have higher number of incidents, because they report more and you can see higher reporting is actually reflective of staff awareness. But also you look at complaints, compliments, we look at them, whenever you get compliments you make sure staff are given the recognition. (Case study interview)*

Problem-seeking behaviours were especially attentive to patient perspectives. For instance, one case study site conducted detailed reviews of letters from patients to identify where they could improve quality of care and patient experience. Some stakeholders referred to home grown trust initiatives that led to weekly conferences at unit level and sessions where patients actively told their stories to clinical staff. One clinical manager recounted how his trust focused on improving customer care by arranging 'customer care groups' or meetings where staff and patients identified key issues for improvement. However, again, organisations varied in how well they were "hearing" patients, as was also reflected in the N.A.P.P. survey (Figure 8).

Figure 8: Responses to patient concerns (NAPP survey).



Problem-sensing cultures were characterised by a willingness to learn from what staff had to say about what worried them. They created multiple forums for staff and showed that they were listening.

> *It's management being open and transparent about things that haven't gone quite right. Staff feeling absolutely confident that they can report things and there'll be no negative consequences (Stakeholder interview).*

These organisations empowered staff with the information they had provided. Using data in this way provided an effective way of both demonstrating to sharp-end staff the existence of problems of quality and safety, and ensuring they contributed to finding the solutions. They encouraged sharing of knowledge about how best to improve; they provided encouragement, but also cautioned against over-optimism; and they fostered a spirit of healthy competitiveness amongst staff, teams and directorates.

By contrast, comfort-seeking behaviours involved excessive focus on external impression management and seeking reassurance that all was well. These behaviours involved gathering data but not gathering intelligence; data without proper interpretation limited understanding and insight. Serious blind spots arose when organisations used a very limited range of methods for gathering data, were preoccupied with demonstrating compliance with external expectations, or did not use sources of intelligence that provided real knowledge of the real issues at the front line. In these organisations, it was more difficult for staff to report concerns.

Well the problem with it is you have to write all that bloody paper, you have to fill in so many bits of paper to get a risk incident reported and I thought to myself, if I was on the ward I wouldn't do it either, you know, why would I spend an extra five minutes at the end of the shift writing something down when no harm had come to anybody, why would I do that, you'd just think, oh that were lucky, I'll not do that again. (Case study interview)

Comfort-seeking behaviours tended to emphasise predominantly positive news and results from staff, and there were some suggestions of dismissiveness towards staff who tried to report concerns. Information that challenged rather than comforted senior teams was prone to being rejected or explained away. Comfort-seeking behaviours tended to suppress concerns raised by staff.

I think we have the culture of pushing down from above at every level but there is no, how are you getting on with that? Or why isn't that working? Let's have a conversation about, let's have an open conversation about that. There is no empowerment; there is no making people work together. (Case study interview)

Comfort-seeking relied more on formal, mechanistic data-gathering processes, even though "street level" knowledge might be more useful in providing insights. This meant that comfort-less awareness of the existence, nature and scale of problems, with the consequence that organisations were less likely to take appropriate action to address them. When results were poor or evidence of problems did emerge, comfort-seeking behaviours meant that the senior team were more likely to blame individuals or introduce another set of forms, and put less effort into fixing systems.

Another way in which problem-sensing and comfort-seeking strategies differed was in how they responded to serious adverse events. In some cases, organisations used these events as challenges to improve. They actively sought to learn from them and to change how they did things.

We had a series of incidents around the management of acutely ill and deteriorating patients, and we just had a little clutch in particular that came together in which, there was almost like an emotional response within the organisation, of people saying crikey this, just isn't good enough. (Case study interview)

In this organisation, the events constituted a 'dramatic trigger' that brought dormant concerns about quality and safety to life. The events raised the profile of quality and safety among clinical and managerial staff alike, and were treated by the executive team as a window of opportunity in which to transform quality and safety from background noise to actionable problem. However, sometimes organisations reacted less productively to such events, failing to share learning or to improve systems, or explaining events away as uncharacteristic "blips" rather than as a symptom of deeper pathologies.

Well I think it's this performance culture that I've got to have this SUI (serious untoward incident) completed by this date, it must be signed off by the clinical director, this that and the other. Rather than hang on a minute, what actually, what was the quality of what was

said in the SUI and how are we then going to embed that in changing the organisational structure and culture moving forward to stop that happening again.(Case study interview)

Organisations (and microsystems within them) were of course located on a continuum from the "problem-sensing" to the "comfort-seeking" extremes. One important concern shared across all organisations was a focus on maintaining the trust's positive public image alongside a careful vigilance about media attention, and a perceived need for defence and clarification of criticism. Sometimes media attention acted to call organisations to account, but sometimes it encouraged less positive defensive behaviour that might encourage blind spots rather than intelligence-gathering. Improvements in response to or anticipation of media attention could therefore have positive or negative impacts on behaviours and outcomes.

All organisations faced challenges with measuring and assessing quality of care. Some trusts had invested in data collection systems that were integrated into routine informatics systems. These offered considerable advantages over data systems requiring dedicated audits and extra forms. However, electronic data alone ran the risk of directing too much attention to easily measured aspects of practice, requiring this approach be complemented by a range of additional strategies. Trusts also made widespread use of techniques such as audits or unannounced spot checks of practices relating to hygiene and patient safety. These too had advantages and disadvantages: they signalled senior interest and intent around quality and safety and kept sharp-end staff "on their guard", but were often poorly designed and prone to provoking tensions between senior managers and front line staff.

At the sharp end of practice, there was often intense frustration with quality monitoring work. A feature of many settings was a large number of audits and audit forms that appeared disconnected to clinical priorities and caused staff to divert their efforts away from patient care.

So, so a lot of the time we are good at collecting data but we don't collect data in a meaningful way as in, why are we collecting this data and what are we trying to do with it? ...We collect data just because it can be collected. … Yes it does need a joint kind of working between clinicians and people who are collecting the data. But then before we do that we need to get clinicians to understand why we need to collect the data. (Case study interview)

Often the data collected were not fed back to sharp end staff, or if they were, only in a form they found unintelligible and did not result in any change. Consequently, staff at the sharp end feeling pessimistic about the possibilities for improvement.

Sometimes, if you filled a form out you might not get any feedback as to what has happened to it. So it becomes a sort of like I have reported, therefore, it's out of my hands now, I don't expect to get anything back, and then the same thing happens the next day, and you know you think I have already filled a form out about that and nothing has happened, so I am not going to bother filling a form out. (Case study interview)

If not well managed, new data collection activities were prone to being treated by sharp-end staff as wearisome and fruitless accountability exercises. Staff felt that the main purpose of much data collection was to allow an individual to be blamed if something did go wrong, not to make the system safer. Staff also worried that data were being used to suggest that systems were safe when those at the sharp end perceived that they were unsafe – for example because of under-staffing.

> *Staff complain that there is much too much paperwork to be completed. Forms for everything. Some duplication. New forms introduced but a lack of understanding of how they should be used. (Case study fieldnotes)*

> *I came in the other day there to an audit that I didn't know anything about. Nobody explained it to me, so you know I can't get involved in these audits if nobody explains. (Case study interview)*

> *About maternity: …it's frequently understaffed and it feels like an unsafe environment at times, but yet there is a very big drive to try and prove that it's a safe environment… (Case study interviews)*

The evidence we collected highlighted the usefulness of tools that integrated different types of real time data that could help in giving a holistic understanding of patient care at ward, directorate and trust level. Many trusts reported using quality dashboards to provide readily accessible, comprehensive real time data to identify problems in processes and systems of patient care. Organisations, however, did, however, struggle to encourage whistle-blowing. It proved difficult to design systems that would encourage staff to come forward.

> *Respondent: We do have a whistle blowing policy which people can follow but don't use it very much at all.*

> *Interviewee: Why do you think that might be?*

> *Respondent: I don't think they feel confident that it would stay anonymous and they may be right because actually the whistle might be blown but if is about an actual episode or incident, those individuals involved in that incident will know who is in the room. And being a whistle blower is not a comfortable place to be in so I think more work is needed there really.*

1.3.10 Variability in management and systems

We found considerable variability in the quality of management, particularly in relation to the management of staff and ensuring their well-being and effectiveness . Linking staff experience, using the NHS national staff survey, and NHS trust outcomes, we found that consistency between the goals of ensuring high quality care and the goal of providing high quality people management is vital for health care effectiveness. This research used data from several years' NHS Staff Surveys (2005 to 2009), particularly focusing on staff attitudes, engagement and people management practices, but also examining staff perceptions of quality and safety within trusts. The data revealed the links between these and a range of organisational outcomes including patient satisfaction, patient mortality, staff absenteeism

and turnover, infection rates, and Annual Health Check ratings of quality of services and use of financial resources as published by the Care Quality Commission (CQC). The full details of this research are published on the Department of Health web site,[38] but we summarise here the key findings regarding quality and safety here.

National Staff Survey (NSS) data suggested that staff views of their leaders were strongly related to patients' perceptions of the quality of care and staff satisfaction and commitment predicted patient satisfaction over time. Staff perceptions of the supportiveness of their immediate managers and the extent of staff positive feeling both predicted patient satisfaction. In places where staff reported high work pressure, patients also reported too few nurses, insufficient support, information, privacy and respect. In trusts with poor staff health and well-being, high injury rates, and a high level of staff intention to quit their jobs, patients were generally less satisfied, and CQC ratings described poorer care and poorer use of resources. These findings were consistent across trust types (primary care, ambulance, mental health, community and acute).

We found considerable evidence that the higher the levels of staff engagement and health and well-being, the lower the levels of patient mortality (Hospital Standardised Patient Mortality Ratio - HSMR). Patient mortality rates were found to be associated with the spread of Human Resource Management (HRM) practices across staff; support from line managers; and well-structured appraisals (e.g. agreeing objectives, ensuring the individual feels valued, respected and supported). Mortality was also lower in trusts whose staff had opportunities to influence and contribute to improvements at work and where there was a positive and supportive organisational climate. Of the variables we studied, amongst the best predictors of patient mortality was the percentage of staff working in well-structured teams, i.e. those with clear objectives, whose members worked interdependently and who met regularly to review and improve team performance.

However, our data suggest that, though 91% of NHS staff report working in teams, only 40% work in *well-structured* teams. We found that working in poorly structured teams was associated with higher mortality, more errors that could harm staff or patients, and higher levels of injuries to staff. In a typical trust (average-sized acute trust), having 10% more staff working in poorly-structured teams was associated with a 3.5% higher mortality rate (i.e. approximately 65 deaths). Staff working in poorly-structured teams were around 25% more likely to witness an error or suffer work-related injury or illness compared with staff not working in teams. Staff working in well-structured teams, in contrast, had better health and well-being and took less time off work. [38]

We found, using analysis of the National Staff Survey, that staff were more likely to report intending to leave their jobs when they experienced harassment, bullying or abuse from their colleagues or managers, when they witnessed high levels of errors that could harm patients or staff and when they did not see effective action by managers towards violence or

harassment from patients or other members of the public. They were less likely to intend to leave if they had flexible working options and worked in effective and supportive teams. Importantly, a key factor was whether staff felt dissatisfied with the quality of work and patient care they were able to deliver.

Overall, the best predictor of a variety of outcomes including staff health and well-being, absenteeism, intention to quit, quality of patient care, patient mortality and use of resources was the level of staff engagement. The scale of these effects is exemplified by the finding that amongst two comparable acute trusts where one had a moderately higher level (one standard deviation) of engagement, mortality would be on average 2.4% lower. These findings suggest a strong relationship between quality of management and quality of care, as was recently reported in a King's Fund publication. [53]

Consistent with our case study observations and interviews, our analysis of reports from the 621 clinical teams in our questionnaire survey revealed many staff reporting frustration with systems and management. Although they were committed and innovative in their approaches, they were unable to achieve their goals for patients because of organisational factors outside their control. As noted above, changes within organisations, uncertainty about priorities, poor systems, increased workload and staff shortages created serious challenges to providing high quality and safe patient care. These frustrations were compounded by staff feeling they lacked support and appropriate intervention from management, further reducing their motivation and morale.

On the other hand observations and interviews in the case studies showed that front-line teams often played a key role in developing resilience and support in the face of the frustrations staff experienced. Through support established within their teams or as a consequence of enlightened management, staff could feel enabled to deliver high quality care, reinforcing their high levels of motivation and morale in a virtuous circle. Questionnaires from clinical teams in our teams survey showed that having access to appropriate resources that staff felt allowed them to complete their job successfully and adequate staffing levels seemed to promote resilience by enabling staff to explore new ways of working and develop reflective practices. This in turn helped them to improve the quality of care they were able to deliver and to do so more efficiently and productively.

Staff reported constantly having to compensate for defects in systems at every level. Sometimes these were physical, involving poorly designed physical spaces, patients obscured from nurses' vision, missing standardised equipment, or ineffective systems for ensuring that equipment was clean. Sometimes they were behavioural, including ineffective methods of ensuring that patients' details were adequately handed over from one team to the next. Multiple examples of defective systems were seen throughout our research programme. Staff were very often aware of the systems problems but felt powerless to bring about

change, again indicating the need for much closer communication between managers at all levels and front line staff.

In our stakeholder and case study interviews, many participants highlighted the importance of management and leadership, including managers' ability to change systems to make them more effective, efficient, and safe. Those in senior, "hybrid" positions that combined the knowledge and professional legitimacy of clinical experience with managerial authority, could be especially influential. Several, for example, highlighted the role of senior nurses in leading for quality:

> *Oh it's mainly the drive of the chief nurse, simple as that. What [chief nurse] combines is a real passion for improving quality of care, combined with actual practical ability to do it. (Stakeholder interview)*

In interviews and observations, it was clear that practical management skills and intelligence about strengths and weaknesses were as important as leaders espousing values of quality and safety.

> *Now it's fine having the right sort of values but if you don't have a practical way of executing them it does not get you anywhere. (Stakeholder interview)*

Practical management skills were clearly in evidence in many settings where we conducted observations because systems were well designed and functioned smoothly. Organisations that had strong missions in relation to quality and safety invested significant effort and resource in supporting systems improvement. For example, some had invested heavily in IT systems with an explicit focus on patient safety, had set up specialist units to address quality and safety, had run campaigns focused on patient safety and quality of care, or arranged for staff to learn about improvement methodologies. Thus, one case study hospital identified that delays in getting drugs from pharmacy to wards resulted in patient safety problems, and actively invested in ways of strengthening the systems. Another hospital responded to a range of internal and external imperatives by mounting a campaign to close the gap between evidence and practice across a range of errors, and invested significantly in making the campaign:

> *The kind of the history to [the campaign] was that sort of the senior management really – the clinical directors, the clinical governance leads and you know the Chief Exec and the Chief Nurse – were looking really at around serious untoward incidents that the Trust had had, but also around the national guidance with patient safety and thinking of ways in which we can kind of look at the practices that we have [and] what we could do around it and that's kind of where the campaign was born. A proposal was put into the Board of Directors and it went from there and it was allocated that we would need resources to it. (Case study interview)*

However, in many instances that we heard about and witnessed, there was poor management of operations. The blunt end of organisations did not always share perceptions of front line staff about how difficult it was to make systems work at the sharp end, and tended

to blame individuals for problems that actually arose from organisational deficits (e.g. staffing levels or physical infrastructure) or poorly designed systems (e.g. excessive and badly laid out forms, and lack of standardised procedures for conducting handovers).

> *While the challenges are there, but we can face those challenges by doing more systems thinking. …. And the reason why we don't is because we do not understand that quality and safety is actually a systems issue. … One clinical area in a trust cannot deliver quality and safety unless the entire organisation has signed up to a global concept of quality and safety with proper systems in place to deliver it. It's all very nice to talk about it …it's a very different ballgame delivering it or even understanding how you deliver quality and safety system that is joined up. (Case study interview)*

Through the board minutes analysis, the interviews, and the case studies, we saw much evidence of reliance on communication-and-compliance as a means of improvement. Communication-and-compliance techniques involved telling staff what to do (without involving them in goal or standard setting), checking what was done, and then disciplining or shaming staff in the event of deviations from the standards set, and much less often recognising or rewarding them when they achieved goals. Such approaches certainly had an important role, especially when the problem being targeted was primarily behavioural in character – such as hand washing or use of the surgical checklist. Across all of our sub-studies there was evidence that implementing cultural change effectively required that leaders and managers are consistent and firm in the enforcement of standards.

> *We had the stick which was the medical director, who had already stated that the surgical checklist was not an option, it was obligatory to do it, so anybody not doing it would be obviously faced with disciplinary charges. (Case study interview)*

However, ethnographic work in case study trusts and our analysis of staff survey data shed light on the unintended consequences of relying solely on an autocratic, highly bureaucratised style of management, characterised by a proliferation of rules, procedures and forms corresponding to externally imposed demands. We observed forms not designed well for the tasks at hand; duplicated information required on other forms; or their purpose was not explained to staff. In one example, a trust introduced intentional rounding – where patients were supposed to be asked once an hour whether all their needs for drinks, pain relief and toilets were met, and reassured that someone would be back in an hour. The system was launched in such a way that staff at the sharp end understood it simply as another form to document what they were doing anyway. No real change in practice occurred, yet the board was reassured (comforted) that intentional rounding had been implemented.

> *The hourly rounding forms have now become a pain…[staff member] felt that they needed to have more dedicated time to implement it. (Case study fieldnotes)*

These kinds of communication-and-compliance approaches had the paradoxical effect of reducing the priority given to quality and safety. They created too many competing signals about what was important and where attention should be directed. The forms obscured, rather

than revealed, what was important. They were also perceived by staff at the sharp end as a distraction from the real work of caring for patients, rather than something that enhanced or supported safe, high quality care. Often, forms were seen as little more than blame-allocation devices – a way of finding an individual to blame when something went wrong. They contributed to a feeling that management was ill-informed about what it was like to work at the sharp end.

> *A lot of the clinical service managers are not clinical. … You do need someone who actually understands the services, because if they understand the services…they understand what the nurses can do. (Stakeholder interview)*

We found, in observations and interviews, risks that some staff could become transactional in such contexts, focused on short-term measurable tasks. This led to the neglect of valuable, but harder to measure, aspects of their practice. Such a focus could affect the quality of patient interaction and result in staff being sometimes rude, abrupt, unkind, or neglecting basic courtesies. In one setting that we observed, staff were so busy with tasks that were documented that they did not remember to open the curtains for patients to let in daylight.

Excessive use of "communication-and-compliance" techniques meant that professional work relating to quality and safety was at risk of becoming dominated by defensive practice, with little ownership taken of quality and safety issues by front line practitioners. We found substantial risks that staff could feel deflated, discouraged, and alienated when communication-and-compliance was the predominant approach. When staff were simply told what to do, but not helped or empowered to make change, they became frustrated and felt they were blamed for problems but not enabled to solve them.

> *Some of the [quality and safety reports] that we have to do...I think they're just to tick a box and report to [overseers] to show we're doing it, rather than ...driving any change in cultural behaviour. (Case study interview)*

Review of the international literature on climates and cultures in healthcare suggests that such hierarchical command and control cultures are the least effective cultural type in terms of predicting healthcare performance around the world. Staff involvement in decision making, supportive management and good communication between staff and managers are all consistent predictors of positive trust outcomes.

There were many bright spots too in leadership across our sub-studies. In our survey of front line teams, one team member described the work of a health and safety nurse who observed practices in each department in order to resolve problems locally. Another explicitly noted the positive influence of a member of staff from their multi-disciplinary team:

> *Since we have had a new occupational therapist, new ideas have come to the ward. She is very proactive which then gets you motivated. New ideas that have been brought to the ward re help in the community for patients when they go home. (Teams Survey)*

Statements often referred to the motivational effect a positive team leader had brought to the team. Such statements described a team leader who ensured the work load was evenly divided, was flexible in leading with and encouraging new ideas, and who designed work in a way that was seen as useful and valued by the wider team. Some staff felt changes in leadership within their teams allowed them to work more closely with inter-disciplinary team members and allowed for a more relaxed atmosphere where staff were not intimidated or afraid to ask for help. Another team leader described the effects of encouraging team work and support:

> *I inherited a 'team' that had been encouraged to not work as a team! I am making progress in developing a supportive team who shares information and supports each other, however there is further work required. We are beginning to share information, ideas etc. (Teams Survey)*

In the team surveys, explicitly valuing staff views and suggestions was seen as encouraging a strong team working ethos and shared goals and objectives. Staff from mental health teams described increased communication between teams, reflective practices and opportunities to discuss issues, along with recognition and praise as boosting morale. Several staff noted the positive effects of collaboration and joint working such as the positive effect of joint assessments and information sharing for the well-being of staff and quality of interventions in a mental health team. An ambulance staff member described the benefits of shadowing to build relationships between different teams:

> *We have worked hard on building relationships with the road staff we work with all the time we have had road staff spend time in the control room and have had control room staff observing the work of ambulance personnel. (Teams Survey)*

Several team members described the motivational effects of a manager who made positive changes such as simplifying administrative processes, devising daily management plans and being engaged in personal development and training needs of staff:

> *Since we have had our new manager […] the team has gone from strength to strength. She has all the qualities needed to make each member feel valued and supported. Whatever changes occur due to the strong team we have we are able to adapt and support each other. Although there are many changes in ways of working we feel we are able to move forward and offer clients the best care and support. We are all committed as a team to this. (Teams Survey)*

An approachable team leader who tried to keep the team abreast of developments and engaged them in organisational change was also evident in statements reflecting team resilience. Increased opportunity for input and discussion around restructuring, organisational change and targets was noted to increase morale. Adequate staffing levels featured heavily in team member statements, because this enabled change to be implemented. One team member described a more efficient admission and discharge process through the use of

additional staff which reduced waiting lists and allowed for increased patient contact. Several noted the importance of team autonomy and empowerment to remove barriers:

> *Having struggled with issues of demand outstripping capacity in recent years, we have recently reviewed our referrals system and working processes. We did this via some 'creative' team sessions to brainstorm options, so was a team decision in how we worked differently. It was very successful and the team have received good feedback. (Teams Survey)*

Establishing approaches more suited to specialist service provision was also noted positively by team members:

> *Ward 1 have worked very hard to move away from some restrictive 'rules' that were put into place to manage security / risk issues and are now taking an individual patient needs led approach to all decisions made about patient care - we no longer have 'blanket rules' in place. This has significantly improved staff / patient relations allowing us to support our patients recovery needs much more efficiently and positively and reduced conflicts and unnecessary disagreements between staff and patients. (Teams Survey)*

1.3.10.1 *Board leadership*

Observations and interviews suggested that a strong focus by executive and board teams on their own role in identifying and addressing systems problems was powerful in supporting positive cultural change. Recognition by senior teams that they needed to fix systems problems that prevented staff from functioning well as well as demanding personal accountability appeared to be important to improvement. The senior team could encourage and enable front-line teams to address challenges and to innovate but they also needed to recognise the difficulties staff faced and intervene to address these where necessary. This required good and sustained communication between senior managers who could achieve system change and front line staff who were able to identify the problems that got in the way of their improving quality and safety. Senior managers also needed to take responsibility where it was clear that senior, organisation-wide, or cross-boundary perspectives and inputs were needed to bring about change that would enable staff to provide high quality and safe care.

> *Then when you actually got these [nurses] in the room you suddenly realised, meeting after meeting, that, "Actually we're letting the team down because as an executive team we're not sorting out a major structural problem in [another department]". (Case study interview*)

The qualitative (observations and interview) data suggest that disciplinary sanctions were still judiciously used in these organisations, but as part of a wider range of strategies around quality and safety that sought to help staff be proactive about improving their practice. There seemed to be a broader understanding of the issues, often informed by a more participative approach to identifying their causes:

If it is down to you not being bothered; we will take action. If it's down to you not having the education; we will take action. If it's down to the system not working properly; we will take action... It's as much the organisation's fault as the individual. There will be some individuals – you'll have the 1 [or] 2 per cent who don't care basically, who have just lost the plot completely – and we need to weed those out. But the vast majority of people want to do a good job. (Case study interview)

Achieving positive cultural change required engagement with, and belief in, the change process from both blunt -end and sharp-end practitioners. This meant that organisations had to be honest in confronting their problems, and use emotional engagement and hard data to convince staff of the need for shared purpose.

We launched the patient safety [campaign] with an event [where] I talked about a patient who had died of a line-associated septicaemia. [And I said] while that [sort of thing] was happening, we could not say we were a centre of excellence. So we used that patient's story... Reading that to our medical staff committee, our senior nursing forum, our board, [and] at that patient safety launch where we had, you know, staff and patients and public in the audience was actually really quite powerful because nobody then could [ask,] 'Why are you doing this?' (Case Study interview)

Implementing cultural change effectively involved truly empowering staff in frontline teams to innovate. The challenge was for senior managers to find ways of ensuring front line staff feel they will be listened to, their efforts at improving the efficiency and quality of care will be supported, and that their intelligence about systems will be highly valued.

1.3.11 Team working

Our survey of 621 clinical teams demonstrated that team inputs and team processes were significantly linked to the effective provision of good quality care. In general, research evidence shows that team working in health care is associated with better patient outcomes. However, we had great difficulty in identifying teams in each of the trusts we worked in. Senior managers were sometimes unable to identify teams and team leaders. When team leaders were identified they were often confused about who the team members were, and team members had low agreement about who were the members of their teams. Although on the surface, team working seems well established and widespread, there was a surprising and common lack of clarity about team purpose, objectives, membership, leadership and performance.

The survey of 650 clinical teams enabled us to identify factors that predicted effectiveness among NHS clinical teams. Particularly important inputs were the effort and skills of team members, and the resources made available to teams. Good processes were also vital. Differences between team types on all dimensions are shown in Table 14. Differences should be treated with caution as it is not known whether the teams in our sample are representative of all teams in their sector.

Table 14: Average scores for each dimension by type of team

Dimension	Acute	Ambulance	Mental health	Primary care
Task design	3.71[b]	3.26	3.63[b]	3.65[b]
Team effort and skills	3.73[b]	3.40	3.70[b]	3.78[b]
Organisational support	3.41[b]	2.94	3.33[b]	3.63[abc]
Resources	3.03[bc]	2.84	2.71	3.47[abc]
Objectives	3.88[b]	3.54	3.81[b]	3.92[b]
Reflexivity	3.35[b]	2.91	3.47[b]	3.38[b]
Participation	3.66[b]	3.28	3.79[b]	3.73[b]
Task focus	3.86[b]	3.61	3.85[b]	3.80[b]
Team conflict	2.32[d]	2.40[d]	2.34[d]	2.16
Creativity	3.69[b]	3.34	3.67[b]	3.68[b]
Leading	3.71[b]	3.44	3.71[b]	3.78[b]
Managing	3.75[b]	3.44	3.82[b]	3.72[b]
Coaching	3.82[b]	3.62	3.90[b]	3.85[b]
Team member satisfaction	3.66[b]	3.35	3.74[b]	3.74[b]
Attachment	4.01[b]	3.80	3.99[b]	4.14[bc]
Team effectiveness	3.06[b]	2.57	3.02[b]	3.15[b]
Inter-team relationships	3.33[bc]	2.97	3.11[b]	3.39[bc]
Team innovation	3.71[bc]	3.02	3.56[b]	3.62[b]

[a] Significantly higher than acute teams ($p < .05$); [b] Significantly higher than ambulance teams ($p < .05$); [c] Significantly higher than mental health teams ($p < .05$); [d] Significantly higher than primary care teams ($p < .05$)

1.3.11.1 *Team processes as predictors of outcomes*

Tables 15 to 19 show the relative importance of team processes as predictors of externally rated outcomes.

Table 15: Relative importance analysis: Team processes as predictors of external ratings of productivity, performance and innovation (across all trust type teams)

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.022	19.7%***	.015	14.4%***	.012	18.0%
Reflexivity	.019	16.6%	.009	08.2%	.010	15.8%
Participation	.020	18.0%***	.008	07.3%	.011	16.8%
Task focus	.012	10.3%	.005	04.7%	.005	08.0%
Team conflict	.011	09.7%	.004	03.6%	.006	08.8%
Creativity & Innovation	.014	12.5%	.007	07.2%	.012	18.7%***
R^2	.113		.105		.064	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 16: Relative importance analysis: Team processes as predictors of external ratings of productivity, performance and innovation in acute teams

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.078	34.3%**	.050	34.7%	.068	32.4%**
Reflexivity	.023	09.9%	.020	14.0%	.023	10.8%
Participation	.042	18.2%	.024	16.7%	.040	18.8%
Task focus	.027	11.9%	.017	12.0%	.027	12.8%
Team conflict	.016	07.2%	.011	07.6%	.016	07.8%
Creativity & Innovation	.031	13.5%	.018	12.6%	.029	13.5%
R^2	.228		.144		.211	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 17: Relative importance analysis: Team processes as predictors of external ratings of productivity, performance and innovation in ambulance teams

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.006	14.1%	.002	06.9%	.006	08.0%
Reflexivity	.013	32.1%	.009	26.7%	.017	22.4%
Participation	.006	15.6%	.003	08.9%	.013	16.6%
Task focus	.005	13.0%	.006	18.9%	.007	08.6%
Team conflict	.001	03.5%	.000	01.3%	.004	04.6%
Creativity & Innovation	.005	12.9%	.005	15.9%	.019	25.2%*
R^2	.041		.034		.077	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 18: Relative importance analysis: Team processes as predictors of external ratings of productivity, performance and innovation in mental health teams

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.015	08.0%	.021	12.2%	.014	06.9%
Reflexivity	.018	09.9%	.009	05.5%	.014	06.9%
Participation	.025	13.3%	.016	09.1%	.019	09.8%
Task focus	.009	04.6%	.037	21.1%	.009	04.8%
Team conflict	.087	47.5%***	.035	19.9%	.094	47.2%***
Creativity & Innovation	.030	16.2%	.011	06.5%	.036	18.2%
R^2	.184		.174		.199	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 19: Relative importance analysis: Team processes as predictors of external ratings of productivity, performance and innovation in primary care teams

	Productivity		**Effectiveness**		**Innovation**	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.044	20.0%	.030	14.8%	.007	10.9%
Reflexivity	.073	33.4%***	.065	32.3%***	.036	53.7%
Participation	.034	15.5%	.035	17.3%	.007	11.2%
Task focus	.028	12.9%	.026	12.8%	.006	09.1%
Team conflict	.009	04.3%	.009	04.5%	.002	03.6%
Creativity & Innovation	.019	08.9%	.019	09.6%	.006	09.0%
R^2	.218		.203		.066	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Overall, the team process that was the most important predictor of productivity, was objectives, accounting for the most variance (19.7%), closely followed by participation (18.0%). The team process that was the most important predictor of effectiveness was objectives (14.4%). Climate for creativity and innovation was the most important predictor of innovation (18.7%).

Tables 20 to 24 show the relative importance of team processes as predictors of well-being outcomes.

Table 20: Relative importance analysis: Team processes as predictors of self-ratings of team member satisfaction and attachment (across all trust type teams)

	Team member satisfaction		**Attachment**	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.128	15.8%***	.113	18.1%***
Reflexivity	.109	13.5%	.063	10.1%
Participation	.154	19.1%***	.124	19.8%***
Task focus	.122	15.1%	.108	17.3%***
Team conflict	133	16.5%***	.097	15.4%
Creativity & Innovation	.122	15.2%	.097	15.4%
R^2	.806		.627	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 21: Relative importance analysis: Team processes as predictors of self-ratings of team member satisfaction and attachment in acute teams

	Team member satisfaction		**Attachment**	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.156	18.4%***	.140	21.6%***
Reflexivity	.108	12.8%	.074	11.4%
Participation	.147	17.4%**	.133	20.6%***

Task focus	127	14.9%	.115	17.8%
Team conflict	158	18.6%***	.071	11.0%
Creativity & Innovation	.140	16.5%	.108	16.7%
R^2	.849		.647	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 22: Relative importance analysis: Team processes as predictors of self-ratings of team member satisfaction and attachment in ambulance teams

	Team member satisfaction		**Attachment**	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.116	15.6%	.121	18.5%
Reflexivity	.112	15.1%	.067	10.3%
Participation	.140	18.8%*	.129	19.8%**
Task focus	.147	19.8%***	.131	20.1%**
Team conflict	.118	15.8%	.088	13.4%
Creativity & Innovation	.095	12.8%	.112	17.2%
R^2	.744		.651	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 23: Relative importance analysis: Team processes as predictors of self-ratings of team member satisfaction and attachment in mental health teams

	Team member satisfaction		**Attachment**	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.118	14.7%	.092	14.9%
Reflexivity	.105	13.0%	.063	10.1%
Participation	.189	23.6%***	.152	24.6%***
Task focus	.117	14.6%	.092	14.8%
Team conflict	.146	18.1%**	.126	20.3%**
Creativity & Innovation	.125	15.5%	.091	14.7%
R^2	.803		.619	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 24: Relative importance analysis: Team processes as predictors of self-ratings of team member satisfaction and attachment in primary care teams

	Team member satisfaction		**Attachment**	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Objectives	.125	16.6%	.103	18.1%
Reflexivity	.103	13.7%	.047	08.4%
Participation	.161	21.5%***	.102	18.0%
Task focus	.099	13.2%	.119	21.0%**
Team conflict	.140	18.6%***	.120	21.1%**
Creativity & Innovation	.118	15.7%	.072	12.7%
R^2	.751		.568	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Overall, the team processes that were the most important predictors of team member satisfaction included participation (19.1%), (absence of) team conflict (16.5%) and objectives (15.8%). The team processes that were the most important predictors of attachment included participation (19.8%), objectives (18.1%) and task focus (17.3%).

1.3.11.2 *Leadership processes as predictors of outcomes*

Tables 25 to 29 show the relative importance of leadership processes as predictors of externally rated outcomes.

Table 25: Relative importance analysis: Leadership processes as predictors of external ratings of productivity, performance and innovation (across all trust type teams)

	Productivity		Effectiveness		Innovation	
Leading	.029	31.0%***	.016	16.8%***	.013	30.8%**
Managing	.026	27.9%	.010	09.8%	.010	24.6%
Coaching	.017	17.7%	.007	07.2%	.007	15.8%
R^2	.094		.097		.041	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 26: Relative importance analysis: Leadership processes as predictors of external ratings of productivity, performance and innovation in acute teams

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.048	42.8'%**	.029	42.7%	.035	44.9%
Managing	.028	25.4%	.018	26.9%	.018	23.4%
Coaching	.024	21.1%	.018	25.8%	.015	19.7%
R^2	.112		.068		.078	

***$p \leq .05$ **$p \leq .01$ ***$p \leq .001$**

Table 27: Relative importance analysis: Leadership processes as predictors of external ratings of productivity, performance and innovation in ambulance teams

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.020	28.5%	.006	19.0%	.012	21.9%
Managing	.026	37.0%*	.012	36.5%	.019	36.8%
Coaching	.014	19.6%	.006	19.2%	.008	15.6%
R^2	.070		.032		.052	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 28: Relative importance analysis: Leadership processes as predictors of external ratings of productivity, performance and innovation in mental health teams

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.083	51.9%	.086	35.7%*	.044	46.3%
Managing	.041	25.8%	.049	20.5%	.022	22.4%
Coaching	.035	22.1%	.061	25.6%	.022	22.6%
R^2	.159		.240		.096	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 29: Relative importance analysis: Leadership processes as predictors of external ratings of productivity, performance and innovation in primary care teams

	Productivity		Effectiveness		Innovation	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.027	24.6%	.014	20.5%	.009	26.3%
Managing	.051	46.3%*	.023	33.4%	.016	45.3%
Coaching	.025	23.0%	.018	26.3%	.009	24.6%
R^2	.111		.069		.036	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Overall, the leadership process 'leading' was the most important predictor of productivity (31.0%), effectiveness (16.8%) and Innovation (30.8%), and was substantially more important than 'managing' or 'coaching'.

Tables 30 to 7.32 show the relative importance of leadership processes as predictors of well-being outcomes.

Table 30: Relative importance analysis: Leadership processes as predictors of self-ratings of team member satisfaction and attachment (across all trust type teams)

	Team member satisfaction		Attachment	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.192	29.8%**	.133	31.9%***
Managing	.196	30.4%**	.127	29.9%
Coaching	.193	30.0%**	.133	31.3%***
R^2	.645		.426	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 31: Relative importance analysis: Leadership processes as predictors of self-ratings of team member satisfaction and attachment in acute teams

	Team member satisfaction		Attachment	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.231	30.8	.168	32.8%
Managing	.256	34.1***	.177	34.6%***
Coaching	.243	32.3	.164	31.9%
R^2	.751		.512	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 32: Relative importance analysis: Leadership processes as predictors of self-ratings of team member satisfaction and attachment in ambulance teams

	Team member satisfaction		Attachment	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.147	33.7%	.089	29.8%
Managing	145	33.2%	.100	33.4%***
Coaching	133	30.5%	.098	32.7%
R^2	.437		.298	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 33: Relative importance analysis: Leadership processes as predictors of self-ratings of team member satisfaction and attachment in mental health teams

	Team member satisfaction		Attachment	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.193	31.6%	.135	31.5%
Managing	.205	33.5%*	.141	32.9%
Coaching	.205	33.5%*	.149	34.9%*
R^2	.612		.427	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Table 34: Relative importance analysis: Leadership processes as predictors of self-ratings of team member satisfaction and attachment in primary care teams

	Team member satisfaction		Attachment	
	General dominance	Relative weight as % of R^2	General dominance	Relative weight as % of R^2
Leading	.206	35.0%***	.135	37.0%***
Managing	.180	30.5%	.097	26.6%
Coaching	.188	31.9%	.123	33.5%
R^2	.589		.366	

*$p \leq .05$ **$p \leq .01$ ***$p \leq .001$

Overall, all three leadership processes were significant predictors of team member satisfaction (managing 29.8%, coaching 30.4%, leading 29.8%). Likewise, leading (31.9%) and coaching (31.3%) were significant predictors of attachment.

Clarity and agreement about team objectives were key to clinical team effectiveness along with a participative approach to decision-making, engaging all team members. Teams that regularly took time out to reflect on their objectives, how they were going about achieving these and how their performance needed to change were particularly likely to be more effective and innovative. Yet we observed that teams were often under such workload pressure that they felt unable to take time out to learn about how to improve their provision of patient care. Low levels of conflict between team members were also characteristic of the most successful teams. However, these inputs and processes varied substantially between types of team.

Ambulance trusts had far lower levels of team working than other types of trust, and ambulance teams were clearly weaker in terms of most inputs and processes than teams in other sectors. The only exceptions to this were that mental health teams had equally poor resources and equally high levels of conflict, though teams from acute trusts also displayed high levels of conflict. In contrast, primary health care teams appeared to have better inputs and processes than most, including more positive perceptions of organisational support and resources, and lower levels of team conflict than all other team types.

These findings suggest that all NHS teams should ensure they have clear and agreed objectives. These objectives should be challenging (stretching) and measurable if they are to be effective. They should be limited in number (no more than six or seven) and one should be focused on improving the effectiveness of their cooperation with other NHS teams in order to deliver high quality patient care. Additionally, a 20 year programme of research, largely conducted in the NHS,[54, 55] suggests it is vital for productivity and innovations that teams regularly take time out to review their performance and how it can be improved. All of this involves an approach to team management and leadership that empowers teams and

encourages them to constantly seek new and improved ways of delivering patient care. This is the opposite of command and control approaches.

Even more fundamental is the need for NHS organisations to determine where tasks and challenges require teamwork and to ensure that staff understand which teams they are members of, what are their respective roles and what the overall purpose of their teams is.

1.3.11.3 *Quality improvement initiatives*

In our stakeholder interviews, we identified many examples of attempts to go beyond communication-and-compliance approaches, and to use specific methods for stimulating local innovation, sharing learning, and encouraging change. These included Plan-Do-Study-Act (PDSA) cycles, collaboratives, use of Lean and Six Sigma (particularly through the Productive Ward), Listening into Action (LiA) and other techniques. In our case-study of a quality improvement collaborative, we noted how using approaches that tapped into the wisdom, skills, and enthusiasm of front line staff helped to generate not just innovation but energy and commitment. One team, for example, came up with the idea of a whiteboard that provided a vivid visual display, rather like an airport arrivals board, of which patients were awaiting what procedures. This had a positive impact on compliance rates, and staff on the unit concerned felt strong ownership and pride in what they had achieved.

> *We devised the whiteboard, we are very proud of that whiteboard. It is simple but effective. It is a visual aid for the staff working in the acute stroke bay to know exactly what key indicator care is needed and when. (Case study interview*)

However, we also observed a tendency towards 'magical thinking' (an assumption that an initiative would solve many or all problems easily and quickly) in the use of some quality improvement methods (e.g. lean techniques, PDSA cycles, walkarounds). Sometimes, a 'solution', such as executive walkarounds, was applied without addressing the wider supporting mechanisms that needed to be in place for it to have the desired effect. In some cases, there was insufficient acknowledgement of the effort, expertise, and investment required to make such approaches work, and substantial ongoing problems with quality of data collection and interpretation. Many stakeholders indicated that focusing on improving organisational structures and processes could bring benefits for quality and safety by removing layers of management, reducing excessive paperwork and wasteful processes, realigning and rationalising of national policy standards, audits and change initiatives, and clarifying structures and processes of accountability.

> *It's got to be joined up working, integration, because there is so much waste. (Stakeholder interview)*

> *If only we could eliminate some of the waste and the inefficiency in the way in which health services are delivered then there would be more than enough to address a lot of these issues. (Stakeholder interview)*

Process innovations related to 'the Productive Ward', a national programme based on 'Lean' principles, were identified by some respondents as particularly successful in delivering improvements. More generally, making a case for changes by using data and analysis to identify the root cause of problems appeared to give front line staff ownership and galvanise them to take action. Many managers and clinicians observed that this approach appealed to clinical and scientific mind-sets that valued evidence based practice. Monitoring and constant feedback in real time appeared critical to building this evidence base. Staff specifically highlighted process improvements related to reducing variation, delays, re-work and waste. They also identified the importance of building in balancing measures that take account of unintended systemic consequences of cumulative micro level changes.

> *We have Leaned, thoroughly Leaned our processes. And so we map them all and our productivity has increased. And I think the proudest thing is that, with our key performance indicators we're probably 98% compliant, with turning the samples around within one hour of collection for the 'urgents'. (Stakeholder interview)*

However, we also found evidence that some quality improvement activity was ill-coordinated and duplicative. This frustrated staff. For example, some perceived that initiatives such as Safety Express and The Productive Ward overlapped.

> *You know you see the same old idea rehashed in six different colours and that can be…the way something is packaged, when you open it sometimes you say – when did we last hear about this initiative, was it 10 years ago. (Stakeholder interview)*

> *Where there's overlap that the frontline staff get really frustrated that they seem to be asked to be doing the same things time and time again and why is this any different to the last initiative that came out from the Department. We do need to streamline some of the initiatives that are coming out, because staffs just get really frustrated with it all. (Stakeholder interview)*

Across the interviews and case studies, the need for quality improvement to be adequately resourced was emphasised. Time was required for staff involvement in changing practices, communicating effectively, fully and appropriately with all groups, levels and professions, and acknowledging that senior managers did not have all the answers. In some cases, there was insufficient acknowledgement of the effort, expertise, and investment required to make such approaches work, and substantial on-going problems with quality of data collection and interpretation.

> *People think sometimes, you know, I certainly know when we tried to roll out the programme initially…staff on the ward [saw] this was an extra thing to do on top of their day to day work. So the biggest problem to try and engage people with was that they didn't perceive they had time. (Stakeholder interview)*

> *I think that creates an overload of sort of, bureaucracy, paperwork, too many priorities or conflicting priorities and not enough people or, if there are enough people not enough*

motivated, highly trained or whatever people, to actually deliver in a coherent way. (Stakeholder interview)

Walkarounds involved trust executive and board members visiting clinical areas. In interviews, participants reported that walkarounds could be a way of achieving a direct and powerful understanding of what was happening on the ground, while also signalling the commitment of the senior team to quality and safety.

As execs, we walk through out services, informally and formally a lot of times. I spent a whole afternoon on our wards, walking through the wards, talking to people, and finding out. 'Cos there's nothing, I think, like the eye contact. (Stakeholder interview)

However, some walkarounds were more effective than others. Done well, they could be an opportunity for ensuring that the blunt end and the sharp end were in alignment, for reinforcing shared goals, and for managers to continually learn about (by active listening) the concerns and difficulties faced by front line staff. Done less well, they came across as "checking up" on staff, or further alienated staff by appearing to show that managers had no real idea of what life was like at the sharp end especially when managers used walkarounds to talk rather than listen.

I think that some senior staff who do the walkabouts will ask somebody a question. … I think the sad thing is that sometimes that [the person asked] is then perceived to be very negative so sometimes it is not always seen as somebody that was raising valid concerns. (Case study interview)

In one example we observed a senior manager coming to a busy acute medical ward on a walkaround, where he spent more than half an hour feeding a single patient. He seemed to imply that all members of staff should be doing the same, and left without completing the mandatory nutrition chart. At the time, there were very few nurses on the ward and they were coping with multiple tasks under intense pressure. This left staff feeling that managers had very little insight into what it was like at the sharp end, though no doubt the manager thought that he had offered a good model of caring.

Over the course of the research, we had an overwhelming sense of the strong need for communication between blunt end, middle managers, first line supervisors, and front line staff that is sustained, intense, mutually respectful, inquiry more than advocacy oriented, and focused on achieving a shared understanding of quality problems.

1.3.12 Innovation for quality

1.3.12.1 *Trust boards*

Mirroring the decrease of attention given explicitly to quality and safety by trust boards that we described earlier, we found a clear trend of decreasing levels of board innovation, suggesting less effort on systems improvement. An analysis of board minutes from 71 NHS Trusts covering an 18 month period between January 2010 and June 2011 identified a total of 144 innovations that were implemented in organisations. This represents an average of between one and three innovations in each organisation. More than half of these were focused on increasing productivity (73), with very few related to safety (14) (Table 35).

Table 35 Frequency of trust board innovations January 2010 – June 2011

Wave	Staff Engagement	Productivity	Safety	Experience	Effectiveness	Total
1	9	31	6	8	8	62
2	11	30	5	3	7	56
3	1	12	3	6	4	26
Total	21	73	14	17	19	144

Productivity-focused innovations sought to increase throughput, reduce the time spent with patients or facilitate efficiency in keeping, maintaining and accessing medical records, though these may often have important patient safety implications if done well:

> *Representatives attended the public board to formally present the Trust with an award for the implementation of the medical records electronic tagging system which had significantly reduced the number of missing health records within the organisation. (Board minutes)*

Another productivity innovation that was identified described the merging of two systems to ease access to information by ambulance personnel, linking computer aided dispatch to electronic patient record information to enhance accuracy of first diagnosis and emergency decision making:

> *Ambulance Computer Aided Dispatch will link with the Electronic Patient Record and be a first for the whole NHS system. (Board minutes)*

An example of an innovation aimed at enhancing safety was concerned with the administration of medication to inpatients:

> *The nurses who are carrying out the medicine round on the ward now wear a red tabard so that everyone knows not to disturb them so their concentration is not interrupted. (Board minutes)*

Innovations relating to staff engagement encouraged open communication around incidents, by providing staff with the means to report concerns and problems experienced within their own workplace and other organisations without fear of reprisal

> *A purple card system was in place locally, whereby staff in any organisation (GP practices, Trusts, PCT etc) could raise concerns about issues or incidents that it was felt had not gone right in dealing with another health organisation. (Board minutes)*

One innovation aimed at enhancing effectiveness through the promotion of medication management in the community successfully prevented unnecessary re-admissions to hospital:

> *The PCT has employed a community pharmacy technician who visited patients for example stroke patients to review how they are getting on with their medication and any problems with compliance due to side effects or other issues. The scheme is successful in [Trust] and prevents readmission to hospital. (Board minutes)*

Another innovation allowed staff to develop skills in effective communication with patients from different backgrounds by implementing training events:

> *The Trust were holding a new type of communications training event today that was advertised to all staff focusing on; communicating with older patients and carers, communication with patients with different abilities, communicating with patients with communication problems resulting from medical or surgical reasons and communication with those whose first language is not English. (Board minutes)*

Overall, we found generally low levels of innovation by trust boards, especially in relation to quality and safety, and this decreased rapidly over the time scale of the research. According to the content analysis of trust board meeting minutes, an average acute trust board decided on the implementation of between two and three significant innovations between January 2010 and June 2011, whilst mental health trust boards decided on between one and two innovations during the same time period. PCTs appeared to be more innovative than mental health trusts.

The number of innovations introduced by NHS trust boards appeared to decrease over the study period. The largest number of innovations (62) was identified in data covering the time between January and June 2010, followed by 56 innovations between July and December 2010. Only 26 innovations were identified in data covering the time between January and June 2011. Although the analysis conducted does not permit conclusions about causality, it is likely that external pressures, such as changes in the policy context, and major structural change in the NHS resulting from the coalition government's reforms, had stifled trust board innovation, as boards sought to respond to these pressures .

These findings suggest that Boards should be modelling radical innovations focussed on improving quality and safety of patient care, inspiring all in their efforts to recognise that

developing new and improved ways of delivering patient care is a key role requirement for all in the NHS.

1.3.13 Innovation by front line staff and teams

In stakeholder and case study interviews, we found considerable emphasis on the need to listen to staff at the sharp end about how improvements could best be secured and to support their ideas for innovation.

> *If you listen to the staff on the ground and let them own what needs to be owned, you would probably improve the quality and reduce the financial pressure. They have got all the answers down there; just let them get on with it. (Stakeholder interview)*

> *Listen to the staff and empower the staff and stop telling staff what to do and let them come up with the answers. (Stakeholder interview)*

> *It's giving people back the individual responsibility. There's lots of staff that I talk to who perceive that only managers can make change and don't understand that actually the small things that you do day to day to improve patient quality is the biggest change. (Stakeholder interview)*

Strategies included encouraging staff to 'think outside the box' and to have courage in trying out new ideas, building staff confidence in new ideas by generating an evidence base, persevering to find new solutions, and constantly using real time feedback to inform the development of new solutions.

> *The big thing about making sure somebody's got responsibility for something and making sure that gets actioned. (Case study interview)*

In several cases, the executive team described how they encouraged teams at the sharp end to find good solutions when things had gone wrong, and were only punitive when teams or individuals did not acknowledge or accept failings.

> *We had an incident in endoscopy whereby the same scope was used twice. So used in one patient, then used again before it was decontaminated…they came in they said "This is a never event. We take responsibility. These are all the actions we've taken. This is the evidence to show the action is in place. We've changed the process; we've educated all of the staff. We've taken these six actions, very simple actions that will ensure that this never event never happens." And basically they were in for about ten minutes and we said "That is brilliant, that is absolutely brilliant. That is all we can ask of you. We completely agree with the direction you've travelled. You've taken responsibility; you've sorted the problem out yourself." And you could see they were visibly proud of the fact that they had sorted the problem out. And the exec team acknowledged that they had sorted the problem out. And that was strong. The next people came…they got an absolute hammering cos they just wouldn't agree that they had done anything wrong. (Case study interview)*

> *The time I knew we'd really succeeded was when a charge nurse emailed me and said "I've had an MRSA bacteraemia on my ward. I am mortified. I have already looked at what's gone on and this is what I'm going to do about it". … what that said to me was this man has learnt,*

what he was upset about was not this made him and his ward look bad, but it impacted on a patient. … he wasn't target chasing. He wasn't saying to me I'm scared you're going to tell me off. He was telling me he was ashamed that this had happened and that he knew how to fix it, and actually that's what we really need, is everybody on a ward to want to do that. (Case study interview)

We saw many examples of innovation focused on quality and safety of patient care by front line teams who responded to our questionnaire survey, in their written comments about the changes and improvements they had made – including many impressive systems changes . These data, based on 4976 responses, identified 183 innovations over a six month period suggesting relatively low levels of innovation among the 486 clinical teams. There was little overlap between innovations discussed at board level and those mentioned by frontline staff.

The largest number of frontline staff innovations focused on enhancing quality of patient care, fewer aimed at improving administrative effectiveness, with the smallest number concerned with staff well-being. For example, primary care teams developed new processes and ways of working, largely focused on efficiency and productivity. Acute or hospital teams reported on innovations in clinical practice. Mental healthcare teams introduced measures to enhance patient confidentiality and care pathway planning. Ambulance teams largely reported on changes to working patterns. Overall, primary care teams were more likely to have listed innovations than acute or ambulance teams. Mental health teams were more likely to have done so than ambulance teams. Examples from each sector are described below.

Acute teams adopted some novel approaches to seeking patient feedback such as message walls where patients could leave comments, patient surveys aimed at identifying new ways to deliver the service, and; a call back system where surgery patients were telephoned at home to request constructive feedback. Other acute sector team innovations included nurses taking on some doctors' duties, including skin biopsies, ordering x-rays, giving analgesia; pharmacists having a 'discharge' mobile phone to speed up authorisation processes, and; referrals being graded online through a tracker system that stopped paper referrals being mislaid. Technology innovations included a methodology for implementing and sustaining evidence based practice; a patient discharge checklist, and a surgical ward screening tool that enabled staff to identify patients who required specialist care. Acute team members offered examples of ways in which team communications had been improved such as 'creative team sessions' to resolve problems and identify new and improved ways of working, and facilitating team meetings using whiteboards showing red, amber or green status towards project plan completion.

Mental health teams reported innovations such as the employment of an art therapist to work with patients; the introduction of mobile working, reflective practice processes to reduce team conflict that included sessions in which to reflect upon concerns within the team and/or organisation, and; the introduction of a ward-based inpatient consultant psychiatrist, who

reviewed each patient's care and progress, so that in-patients did not have to wait for a ward round for important care decisions.

In primary care, examples included nurse triage and doctor on reception, to identify the most appropriate appointments for patients, patient electronic self-check-in, online prescription ordering and appointment booking services, flu jab and general appointment reminders via text message; improving communications with younger patients through Facebook, web media, Twitter and blogs; and young people's champion's teams. The visibility of management was important to ambulance staff. Some teams adopted a rota system to ensure a supervisor was available on each shift, so that all staff had the same support and developmental opportunities as those working during normal office hours. In general however, the level of innovation across clinical teams was relatively low, perhaps reflecting the workload pressure many face.

Although most innovations reported by clinical teams were regarded as having moderate consequences for the quality of patient care, they were unlikely to be rated as highly radical or novel. There were few differences in these ratings between types of team, though innovations reported by primary care teams were rated as slightly more novel than those in mental health teams. There appeared to be a considerable decline in the number of innovations made by staff over the study duration. Whilst during 2011 every third team developed innovations in practices, only every 12th team still innovated in late 2011 and early 2012. This decline may be a reflection of increasing policy pressures, redundancies, funding cuts and increasing work pressure at the frontline. Any reduction in capacity for systems improvement is likely to have implications for quality and safety of care. However, this decline could also be a reflection of the methods. Fewer participants responded at the second time point, so there were fewer opportunities for an innovation to be mentioned

The implication is that NHS culture is not (with some exceptions) encouraging and empowering staff to consistently develop and implement new and improved ways of delivering patient care – to innovate. Organisational climate, clarity about goals, managerial styles and practices, and board level leadership all play a part in this. And the national context characterised by prolonged uncertainty, anxiety and conflict has almost certainly limited the extent of innovation in trusts throughout England.

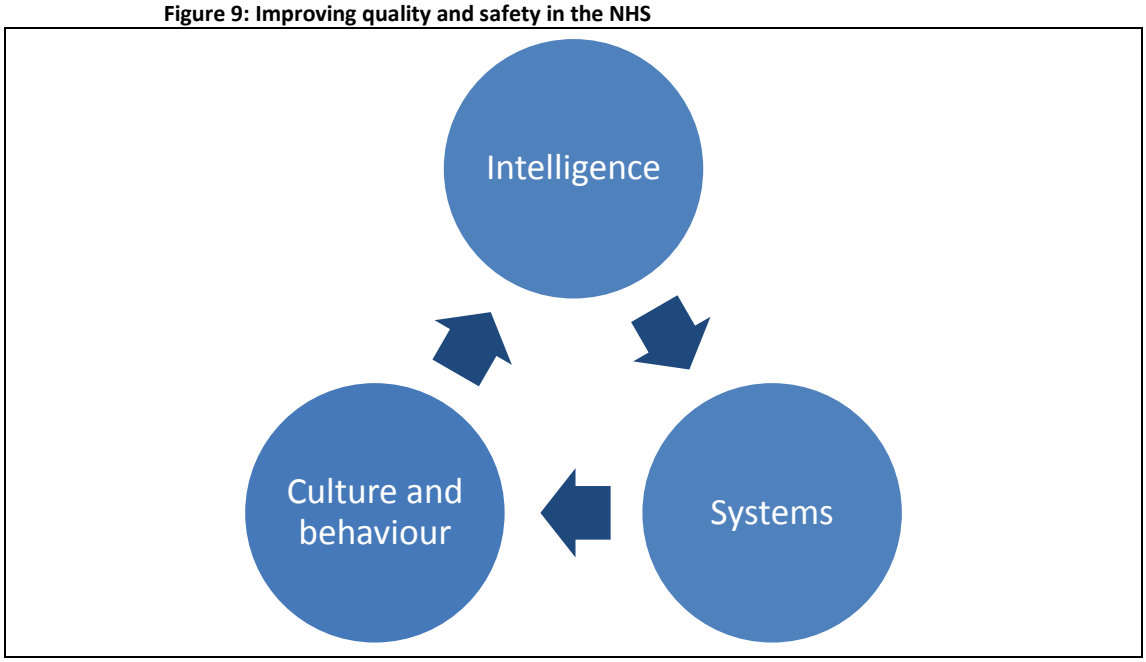
1.4 RECOMMENDATIONS FOR CULTURE CHANGE

We found many examples of excellent caring and practice and high quality innovation across the NHS. But quality of care, quality of practice and the level of innovation are all highly inconsistent. There was little confidence that most care, in most places would be good at most times. Factors that appeared to promote consistency included the following:

- A clear, sharp focus on quality and safety along with an organisational refusal to be distracted from this
- Organisational commitment to learning, with constant seeking of intelligence about performance and where it needed to be improved
- A commitment to fixing and improving systems along with strong personal responsibility
- A supportive, engaging, positive staff culture with high levels of recognition and empowerment
- Listening to patients and taking their views seriously

Overall, our findings may be summarised in the simple cybernetic model illustrated in Figure 9. All three elements of this model are interactive and mutually reinforcing.

Figure 9: Improving quality and safety in the NHS



The model suggests that NHS organisations need *intelligence* – they need to know how well they are doing as an organisation, and where they need to improve. This means actively seeking uncomfortable and challenging information from patients and staff, rather than relying solely on formal data collection against performance indicators. It is vital that NHS organisations frequently review their use of intelligence, focusing on the value of information collected, the use it is put to, and the typical reaction to the information it conveys. 'What can we learn from this?' is a key question trusts and staff should always ask of the data. The patient perspective is vital and trusts should ensure they regularly review the effectiveness of their systems for ensuring patients' perspective play a key role in the monitoring systems.

Equally important is involving frontline staff in designing, monitoring and reviewing intelligence gathering and system redesign.

Second, organisations must constantly review, strengthen and improve their systems. System improvement and strengthening may be needed at many different levels, from smoothing clinical pathways (by reducing delays in processes), to improving communication, teamwork, and personal development, addressing equipment standardisation, and training. This requires management and leadership attention, knowledge and skills. Too often, managerial staff in the NHS appear not to deal with systems problems and do not develop the skills necessary for systems improvement because they have been continually diverted into negotiating externally created 'priority thickets' and responding to external demands for information.

Third, organisations need to focus on developing cultures supportive of quality and safety and are person centred not only task focused, building on the excellent care and commitment delivered by many staff throughout the NHS. This involves recognising that structural change is often not the solution to challenges, and that their key challenge is to require and reinforce values and behaviours that underpin high quality care, patient safety and positive patient experience.

Trusts can develop these cultures by:

- continually reinforcing an inspiring vision of the work of their organisations (not difficult given the context)
- ensuring clear, agreed, challenging, measureable goals and objectives at every level
- constantly focusing on patient benefit and patient experience, and involving patients as partners
- ensuring high quality, enlightened rather than directive people management
- promoting staff health and well-being and cultivating a positive organisational climate
- encouraging staff to be involved in decision making, problem solving and innovation at all levels
- providing staff with helpful feedback on how they are doing and in particular recognising and celebrating good performance
- taking effective, supportive action to address systems problems and other challenges when improvement is needed
- developing and modelling excellent teamwork
- making sure that staff feel safe, supported, respected and valued at work.

1.4.1 High quality leadership with clear objectives

Our analysis shows that achieving high quality and safety in NHS organisations requires a robust strategy and unifying vision. National leadership sets the tone, creates coherence, legitimates and facilitates the wider service focus and priority. The animation of the quality

agenda by national level champions is motivational, signals importance, creates accountability mechanisms and steers implementation. Coherence of national direction is essential to avoid dispersing responsibility and accountability, and creating confusing and conflicting messages for service providers. Recent attention given to structural change, cost savings, productivity and target achievement, and proliferation of standards and data-gathering exercises, has created conflicts and confusion from the blunt to the sharp end of organisations about where resources and attention should be directed. One potential suggestion here could be for national level leadership to draw clearer distinctions between centralised and localised guidelines and information gathering in order to avoid duplication of effort, confusion and waste of valuable resources.

As new bodies appear with responsibility for patient safety and quality of care, including the NHS England and the Clinical Commissioning Groups, it is important that they avoid creating further competing priorities, and instead ensure focus and coherence around the primacy of high quality care. This means prioritising patient care quality and safety as the overriding purpose of the NHS. The need for such national level leadership is underscored by our evidence that NHS trust boards are currently focusing more on productivity and efficiency than on quality and safety, apparently a reaction to prevailing policy messages and uncertainty about structural changes. Also worrying is the evidence of low and declining innovativeness, and the risk that target-chasing distracts NHS service providers from improving the service and weakens their strategic vision.

Policymakers and those commissioning and regulating care should therefore scrutinise the targets, standards, incentives and data collection systems they create to ensure that the priority is high quality patient care and ensure coherence. Financial performance is also vital but should not supersede the provision of high quality care. As quality and safety standards, including those that emphasise the patient perspective, are incorporated into commissioning criteria, the measures used must be robust, valid and reliable. There must be aligned objectives relating to quality and safety from the Commissioning Board, through Clinical Commissioning Groups, to trust board level, departments, teams and to individual clinicians and managers throughout the NHS.

National leadership needs to be matched by high quality leadership across multiple organisational levels underpinned by clear goals and objectives. The new Leadership Framework offers one such comprehensive approach.[56] Trust boards need to set clear, specific and measurable objectives both for themselves as boards and for their organisations. These should be limited in number (to identify priorities while avoiding the creation of ‘priority thickets’) and known not only by all board members but (where appropriate) more widely within their trusts. These objectives should be shaped by the need to promote quality and safety, to ensure sound financial performance, and to value dignity and respect for patients. Board and organisational objectives should provide a framework for objectives at all levels of

trusts, from senior management to clinical teams at the sharp end. They should also be framed to encourage innovation at all levels. And quality and safety of patient care must be overriding.

To respond to the huge challenges facing the service, trust boards must lead radical innovation rather than responding reactively. This will require a significant change in board processes and climates: effective board processes with positive supportive climates; a much higher level of consultation and engagement with all staff; a commitment to high quality care and patient safety; and a very high level of commitment to exploring, supporting and implementing radical innovation. Trust board leadership of innovation will become not just desirable but essential as the NHS faces the challenges ahead.

And our evidence suggests that when trust boards function well in terms of team processes, they are more likely to achieve their objectives. Where there are high levels of clarity, agreement and commitment to board objectives, objectives are more likely to be met. In addition, boards that are characterised by a trusting, safe and supportive team climate, and that encourage participation and involvement in decision making, communication and regular meetings, report being more likely to meet their objectives. Thus, in addition to ensuring that objectives are clear, challenging and specific, team processes are also implicated in board effectiveness. There was high variability in the quality of team processes in boards and this is a clear area for development.

1.4.2 Listening to and involving patients

The commitment of all NHS leaders must be towards creating and sustaining cultures of care and compassion that provide high quality patient care, safety for patients and positive patient experience. [57] The active involvement of patients and the public in matters of quality and safety is critical to this. Efforts to improve quality and safety must ensure that the patient is kept at the centre of staff's attention and that patients are valued as people, not simply seen as tasks. Quality measures should include quality defined from the patient perspective, and data collection systems must therefore use measures that matter to patients. Patients need to be truly heard, and their voices seen as the key source of valuable intelligence about quality and safety. Patients' concerns need to be addressed effectively, including those relating to courtesy, civility and competence of healthcare staff. And all NHS staff should understand that patient experience includes respect for patient centred values, preferences and experiences, coordination and integration of care across boundaries, information, communication and education, physical comfort; emotional support, the welcome involvement of family and friends; the effective management of transitions, continuity in care, and good access to care.

1.4.3 Use of intelligence

NHS organisations must get smarter with their use of intelligence. Burdensome and inefficient systems for data collection should be avoided; so too should a culture of using data as a form

of comfort-seeking behaviour. The right information needs to be gathered, interpreted correctly and fed back clearly to staff at the sharp end of care, so that they consolidate and improve their performance. NHS organisations must focus on gathering intelligence that can be made actionable. Organisations need to be especially alert to the possibility of blind spots, where they are unaware of problems. More successful organisations appear to be highly proactive in their search for weaknesses and risks, and deliberately create discomfort in so doing. They use multiple strategies to generate intelligence, and are especially attentive to hearing the patient's voice. Organisations that appear to be more problematic use limited forms of gathering data and then primarily as a means of reassurance rather than discovery.

1.4.4 Multiple strategies at multiple levels

It is essential to use multiple strategies to bring about cultural change, rather than relying on 'magic bullet' approaches. This means focusing simultaneously on systems, cultures, leaders, teams and individuals, and recognising when problems are beyond the scope of individuals or teams to solve, and require senior management intervention or support. Examples of this are when problems between senior managers are preventing staff lower down the organisation from delivering high quality care because of a lack of coordination; or when there is a need for contacts between senior leaders across health and social care organisations to ensure continuity of care; or when the level of staffing on a ward is simply inadequate given the work demands.

Multiple strategies at multiple levels means articulating clear, coherent, and focused priorities linked to streamlined data collection at all levels of the organisation; clear goals and objectives related to quality and safety at every level; intelligently combining external steers (from the Department of Health, Monitor and many others) with local innovation and local priorities; and, most important of all, encouraging consensus and coalition around shared goals.

Implementing culture change effectively requires that leaders and managers reinforce personal accountability so that all staff understand, accept and implement their responsibilities. Successful change efforts are founded on reaching a shared definition of problems and solutions with staff who will be affected by or who must affect change. Consultation, communication, working through divergent views and agreeing ways forward takes time but is essential to successful culture change. Particularly powerful is giving front line staff the freedom, confidence, resources and responsibility to come up with local solutions that they "own" and that put patients' needs first.

In order to engage staff and encourage an appropriate climate of support, caring and compassion, management should model supportive and positive approaches. Managers should not simply dictate what has to be achieved but agree the goals with staff, clear the path for staff to achieve these goals by providing the necessary resources and supports, and

removing obstacles to success. Managers must constantly encourage innovation, recognise success and gather data that informs good practice, providing feedback to staff on their performance, keeping values of caring and compassion – not just task achievement – to the forefront.

Communicating clear standards and holding staff to account for upholding those standards is an important part of any strategy to improve quality and safety. But on its own it is not enough. The NHS must move beyond a strategy based purely on communication-and-compliance towards using a range of strategies that ensure that systems and structures support staff in their quest to maximise care quality and safety. The NHS must be focused above all on nurturing and maintaining cultures in which quality and safety are central for all staff. Outstanding people management is required, including helpful appraisal conversations, constant recognition and reward, helpful feedback on performance, high quality training, real team working, and inspiring, values based and authentic leadership. Modelling the values that sharp at the staff end are expected to live is an important challenge for senior management.

1.4.5 Staff engagement

Staff engagement is a key predictor of a wide range of outcomes in NHS trusts. Achieving high levels of engagement is only possible in cultures that are generally positive, where staff feel valued, respected and supported and where relationships between staff, between teams and between departments are good. Engagement is highest in organisations where there is a culture of trust in leaders, managers and the system. In such cultures, leaders pay attention to, monitor, model and resource providing high quality and safe patient care. Such organisations are characterised by flatter hierarchies and by rituals and rites that reinforce and reward good practice in patient care; by celebrations of accomplishment and innovation and by rewards for proactive teams and exceptional individuals at all levels. In such organisations the focus of the organisation's systems and procedures is on meeting patients' needs first and foremost.[58]

1.4.5.1 *Inter-team working*

Teams, departments and organisations must reach out and ensure effective inter-group and inter-agency working in the service of high quality patient care. This requires frequent interaction, ensuring teams understand each other's challenges and share problem solving. Teams must be enabled to see the mutuality of interests and the importance of working to help each other, rather than seeking to dump work on others or reduce their uncertainty by creating responsibility cordons. It also requires a clearly stated commitment to high quality and safe patient care and speedy exploration and resolution of conflicts in the interest of patient care rather than recriminations and chronic and corrosive hostility. Leaders of teams, departments and organisations must incorporate responsibility for boundary spanning and effective inter-group working within their areas of responsibility across the NHS and

increasingly see their domains as extending to include relationships with social care organisations, local authorities and many others with whom they must work to deliver high quality patient care.

NHS organisations, departments and teams must have as one of their core objectives therefore, a commitment to improving the effectiveness with which they work with other teams, agencies or departments that they need to collaborate with to ensure high quality and safe patient care. The aim should be year on year improvement and collaborative innovation, in the service of patient care.

There is a particular need to enable sharing of innovations (and good practice more generally) within and between organisations. Even simple, small scale changes to improve everyday practice can have a considerable impact on how patients perceive the quality of their care.

1.4.6 Conclusions

At a time when innovations in patient care, productivity and safety are desperately needed in order to ensure continuing improvements in health care, and in a context of increasing demand and constrained finances, we believe this report offers important insights. We believe it is imperative that conversations and debates about the themes and findings reported here are stimulated and sustained at all levels of every NHS organisation. The strategies and solutions necessary for positive, proactive and effective responses to the challenges the service faces will be found as a result of extensive conversations between the blunt- and sharp-end of NHS organisations, be they trusts, national bodies, patients' organisations or policy groups; between all professional groups; and between the wide variety of organisations within and outside the NHS that are responsible for and influential over patient care.

All NHS organisations share the value of patient care and virtually all NHS staff are selflessly committed to the principle of providing safe, high quality and compassionate care to those in their communities. With these shared values and with the wealth of experience and commitment of all those involved, widespread conversations about the insights from this and other parallel research, will produce both the radical and incremental innovations that are necessary to ensure the NHS continues to fulfil its mission and offer an example to the rest of the world.

1.5 Appendix 1: Summary of elements of the research programme

Study element	Participants and scheduling	Setting	Focus of research	Analytic approach
1.Stakeholder interviews	107 semi-structured telephone interviews with those closely involved in quality and safety	Acute trusts, ambulance trusts, mental health trusts, community trusts, foundation trusts, primary care trusts, strategic health authorities, general practices and health care commissioning organisations	Understanding of vision of high quality and safe care; what is required to make it happen; their theories of change; plans to implement quality and safety improvement, enhance leadership and promote staff engagement; views on what quality improvement means, how it could best be secured, and obstacles	Analysis based on constant comparative method Use of QSR NVivo 8 software
2 (a). Ethnographic case studies: Observations and interviews	Comparative case studies across seven purposively chosen cases 650 hours of observation; 197 semi-structured interviews with executive and board level staff and frontline clinicians	Four hospital trusts; a quality improvement collaborative; a large scale quality improvement involving dozens of organisations; one primary care provider involving a chain of practices	Assessing culture and behaviour in relation to quality, staff engagement with quality, leadership for quality, quality improvement, practical actions for promoting cultures of high quality care	Analysis based on constant comparative method Coding within and across cases, systematically searching for where clusters of codes formed a pattern. Cross-case analysis, combining data from interviews across cases and stakeholders to form a single dataset
3(a). Patient and public involvement: survey	715 survey responses Cross sectional	Patient participation groups	The survey consisted of 14 statements about patient experience. Open text box provided for each statement.	Quantitative analysis – largely descriptive Open-ended responses subject to content analysis to derive themes inductively
3(b). Patient and public involvement: focus groups and interviews	Two focus groups and ten interviews	Patient and carer organisations	Interpret the findings of the survey Assessing views on obstacles to delivering improved quality safety and greater accountability in the	Qualitative analysis of key themes

			NHS	
4(a). NHS Staff and patient surveys: patient satisfaction survey data	165 acute trusts – data from 2007, 2009 2011	Acute trusts	Patient satisfaction came from the National Acute Inpatient Survey, using the data on patients' overall ratings of care [acute trusts only]	Descriptive statistics and paired samples t-tests
4(b). NHS staff and patient surveys: national staff survey data	309 NHS trusts from 2007, 2009 2011 national staff survey	Primary care, ambulance, acute care and mental health trusts	Staff engagement, organisational climate, job satisfaction, manager support, job design, errors and reporting, work pressure, bullying harassment and abuse, team working, training, appraisal, stress	Descriptive statistics and paired samples t-tests;
4(c). NHS staff and patient surveys: outcome measures	2005-2009	Primary care, ambulance, acute care and mental health trusts	Patient mortality (acute sector only) (hospital standardised mortality ratio); quality of services and use of resources (Annual Health Check ratings by Healthcare Commission between 2005/6 and 2008/9; infection rates (MRSA) infections per 10,000 bed days; staff absenteeism; staff turnover.	Detailed correlation analysis between staff survey and inpatient survey; multiple and multilevel regression analysis, using HR practice variables to predict engagement; regression and ordinal logistic regression analysis to predict patient satisfaction, patient mortality, staff absenteeism, staff turnover, infection rates, and Annual Health Check ratings, controlling for trust type, size, and location; latent growth curve modelling to predict outcomes
5. Clinical teams functioning, effectiveness and innovation	621 teams (4604 responses) Aston Team Performance Inventory Cross-sectional	Primary care, ambulance, secondary care and mental health trusts	Team functioning: Task design, team effort and skills, organisational support, resources, objectives,	Descriptive analysis, ANOVA, regression and relative importance analysis

	data with data on team changes collected from 388 teams (1299 individuals) three months later. Team performance data from team leaders/external raters		participation, creativity, conflict, reflexivity, task focus, leadership, satisfaction, attachment, effectiveness, inter-team relationships, innovation Leaders/external raters' evaluations of effectiveness Innovations introduced by teams Sources of frustration and resilience	 Analysis and ratings from domain relevant experts Open-ended responses subject to content analysis to derive the themes
6(a). Objectives and team working of trust boards	34 boards (306 individuals) Administered processes section of Aston Team Performance Inventory Details of board objectives	Primary care, ambulance, secondary care and mental health trusts	Team processes and content: objectives, participation, reflexivity, task focus, (lack of team) conflict, creativity and innovation Clarity and challenge of board objectives	Descriptive analysis, regression and relative importance analysis Analysis and ratings from domain relevant experts
6(b). Trust board innovation	71 NHS trust boards 793 sets of minutes Minutes from 18 months of board meetings	Primary care, ambulance, secondary care and mental health trusts	Innovations introduced by boards and domain of focus (e.g., productivity, targets, organisational effectiveness, quality, safety, patient complaints, clinical effectiveness)	Analysis and ratings from domain relevant experts
6(c). Quality and safety in trust boards	Detailed analysis of minutes for 8 boards	Primary care, ambulance, secondary care and mental health trusts	Board discussions of quality and safety	Ethnographic content analysis and summative analysis

1.6 Appendix 2: NAPP Online Survey

- Questionnaire 1A

1. In the course of their care patients generally receive high quality health information from a reliable source.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

2. Patients are given the opportunity to understand and agree to treatment options.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

3. Patients are generally treated with respect in the course of their care.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

4. Staff usually have sufficient time to spend with patients.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

5. Staff have usually read a patient’s notes before seeing the patient.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

6. Staff are usually sensitive to the emotional vulnerability that may be experienced by patients in hospital.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

7. Staff usually make opportunities available to patients to express their concerns.

Answer Options

- Strongly disagree

- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

8. Staff have a good understanding of patient concerns.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

9. Concerns raised by patients are usually responded to and followed up well.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree

- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

10. Health care staff have sufficient time to do their work properly.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

11. All staff are well trained.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

12. Patients are usually given sufficient information about what to expect during the course of their care.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

13. Patients are usually given information about the benefits and risks including possible adverse drug reactions of medicines they are prescribed.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

Please use the open text box to give examples if you wish.

14. Quality of care and safety for patients have improved over the last three years.

Answer Options

- Strongly disagree
- Disagree
- Neither agree or disagree
- Agree
- Strongly agree
- Unsure or don't know

1.8 Appendix 3: Team-working questionnaires

- Questionnaire 2A (trust board questionnaire)

Our ref: QSN - DOC - TEAM - Questionnaire 2A - v2s, 2010-07-22.doc

Quality and Safety in the NHS: Evaluating Progress, Problems and Promise

Board and Top Management Team Cultural Values and Innovation

This is a questionnaire on your views **about your work team**.

This is **not a test**. There are no "right" or "wrong" answers. We are interested in your personal views on working in your team. There is a short biographical section towards the end of the questionnaire. This is used to enable us to compare the views of different groups of people across large numbers of teams in many organisations.

Who will see my answers?

The information you give is totally confidential. No one outside the research team at Aston University will see your individual answers. Results will be presented in a way that completely protects your anonymity and confidentiality.

How long will it take?

The questionnaire will take about **20 minutes** to complete.

How do I fill in this questionnaire?

Please read each question carefully, and give your immediate response by ticking the box which best matches your views. We are interested in *your views* about the team in which you work. Please answer all questions as openly and honestly as possible.

For example, a question in this survey is whether, ***in your opinion***, your team is always moving toward the development of new answers. If you believe that this is the case, most of the time, but there are occasional exceptions, you would tick the box "agree".

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
This team is always moving toward the development of new answers.	☐	☐	☐	☑	☐

Which team should I be thinking about when completing this questionnaire?

If you work in more than one team, please answer the questions in relation to the team identified in the letter enclosed with this questionnaire.

Team Code: _____

Questionnaire 2A

About the characteristics of your team

The following statements describe certain features and characteristics that may be present in a work team. Please mark the box that, in your view, most represents the situation in the Board/ management team.

Team Processes	*Strongly disagree*	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
1. In this team we know what we are trying to achieve	☐	☐	☐	☐	☐
2. Team members are generally warm and supportive to each other	☐	☐	☐	☐	☐
3. We have strong disagreements about how to perform the team's task	☐	☐	☐	☐	☐
4. Team members are committed to achieving the team's objectives	☐	☐	☐	☐	☐
5. Service user needs come first in this team	☐	☐	☐	☐	☐
6. Everyone in the team contributes to decision making	☐	☐	☐	☐	☐
7. People in the team are quick to offer help to try out new ways of doing things	☐	☐	☐	☐	☐
8. How well we communicate information is often discussed	☐	☐	☐	☐	☐
9. In this team we seek out and support ideas for new products / services	☐	☐	☐	☐	☐
10. There is little interpersonal conflict in this team	☐	☐	☐	☐	☐
11. There is often conflict over how best the team can achieve its objectives	☐	☐	☐	☐	☐
12. We are careful to keep each other informed about work issues	☐	☐	☐	☐	☐
13. We know we can rely on one another in this team	☐	☐	☐	☐	☐
14. We meet together frequently to ensure effective communication and co-operation	☐	☐	☐	☐	☐
15. We have lively debates about how best to do the work	☐	☐	☐	☐	☐
16. We all influence the final decisions made in the team	☐	☐	☐	☐	☐
17. We are committed to doing an excellent job in this team	☐	☐	☐	☐	☐
18. The team often reviews its objectives	☐	☐	☐	☐	☐
19. There is a feeling of trust and safety in this team	☐	☐	☐	☐	☐
20. We constructively discuss errors and mistakes in the team	☐	☐	☐	☐	☐

Questionnaire 2A

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
21. We make service users the top priority in this team	☐	☐	☐	☐	☐
22. There is a climate of constructive debate in this team	☐	☐	☐	☐	☐
23. We support each other about ideas for new and improved ways of doing the team's work	☐	☐	☐	☐	☐

Team Objectives

In the boxes below, please describe two of your team's main objectives. These should be objectives that your team is currently working towards. *Please be as accurate and descriptive as possible*

Team Objective 1:					
To what extent has the team met Objective 1? *(please circle)*	**Not at all**	**Somewhat**	**A moderate amount**	**Quite a bit**	**Very much**

Team Objective 2:					
To what extent has the team met Objective 2? *(please circle)*	**Not at all**	**Somewhat**	**A moderate amount**	**Quite a bit**	**Very much**

Questionnaire 2A

About the team you work in

The questions on this page aim to give us a broad view of the type of team in which you work.

1.How many teams do you work in?

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ More than 5 ☐

2.How many people are there in your team (the core members)?

3-5 ☐
6-9 ☐
10-15 ☐
More than 15 ☐

Which other teams within the trust do you personally have to communicate/liaise with in the course of your work? (*Please list the team names*)

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

If you work as part of other teams within this trust, please indicate which these are below

_____

_____

_____

_____

Questionnaire 2A

Biographical Details

This part of the questionnaire asks for details about you and your work.
This information will be used to enable us to compare the views of different groups of people – it will not be used to identify you personally.

1. *Sex*

- ☐ Female
- ☐ Male

2. *Age*

- ☐ Under 30
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60+

3. *Ethnic group*

Please tick one box only

White

- ☐ British
- ☐ Irish
- ☐ Other White background

Asian / Asian British

- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Any other Asian background

Mixed

- ☐ White and Black Caribbean
- ☐ White and Black African
- ☐ White and Asian
- ☐ Any other mixed background

Black / Black British

- ☐ Caribbean
- ☐ African
- ☐ Any other Black background

Chinese

- ☐ Chinese

Other ethnic group

- ☐ Any other ethnic group *(Please specify)* _____

4. *I have worked in my present position for:* _____ Years _____ Months

5. *I have worked in this team for:* _____ Years _____ Months

6. What is your occupational group?

Please tick one box only

Allied Health Professionals / Healthcare Scientists / Scientific and Technical

- ☐ Occupational Therapy
- ☐ Physiotherapy
- ☐ Radiography
- ☐ Pharmacy
- ☐ Clinical Psychology
- ☐ Other qualified Allied Health Professionals (*e.g. Chiropody / podiatry, dietetics, orthoptics, arts therapy)*
- ☐ Other qualified Scientific and Technical or Healthcare Scientists (*e.g. haematology, clinical biochemistry, microbiology*)
- ☐ Support to Allied Health Professionals (*e.g. support worker, therapy helper, therapy assistant or student*)
- ☐ Support to Scientific and Technical or Healthcare Scientists (*e.g. technicians, assistants or students*)

Medical and Dental

- ☐ Medical / Dental – Consultant
- ☐ Medical / Dental – In Training (e.g. *Foundation Y1 & Y2, StRs (inc FTSTAs & LATs), SHOs, SpRs / SpTs / GPRs)*
- ☐ Medical / Dental – Other (*e.g. Staff and Associate Specialists / Non-consultant career grade*)

Registered Nurses

- ☐ Adult / General
- ☐ Children
- ☐ Midwives
- ☐ Other Registered Nurses (*e.g. mental health, learning disabilities, and district / community nurses, and health visitors)*

Nursing or Healthcare Assistants

- ☐ Nursing auxiliary / Nursing assistant / Healthcare assistant (*including Health / Clinical / Nursing Support Worker / assistant practitioner*)

Wider Healthcare Team

- ☐ Admin & Clerical (*including Medical Secretary*)
- ☐ Central Functions / Corporate Services (*e.g. HR, Finance, Information Systems, Information Technology*)
- ☐ Maintenance / Ancillary (*e.g. housekeeping, domestic staff, maintenance, facilities, estates)*

General Management

- ☐ General Management (*N.B. If you are a manager and can choose a group from elsewhere in the list, please select that other occupational group*)
- ☐ Other occupational group(*please specify*) ☐

END OF QUESTIONNAIRE

Thank you for your time and effort in completing this questionnaire.
Now please return it, as instructed, to the research team at Aston University.

- Questionnaire 2B (clinical team questionnaire)

Our ref: QSN - DOC - TEAM - Questionnaire 2B - v2s, 2010-07-22.doc

Quality and Safety in the NHS: Evaluating Progress, Problems and Promise

Effective Team and Inter-Team Working

This is a questionnaire on your views **about your work team**.

This is **not a test**. There are no "right" or "wrong" answers. We are interested in your personal views on working in your team. There is a short biographical section towards the end of the questionnaire. This is used to enable us to compare the views of different groups of people across large numbers of teams in many organisations.

Who will see my answers?

The information you give is totally confidential. No one outside the research team at Aston University will see your individual answers. Results will be presented in a way that completely protects your anonymity and confidentiality.

How long will it take?

The questionnaire will take about 25 - 30 **minutes** to complete.

How do I fill in this questionnaire?

Please read each question carefully, and give your immediate response by ticking the box which best matches your views. We are interested in *your views* about the team in which you work. Please answer all questions as openly and honestly as possible.

For example, a question in this survey is whether, ***in your opinion***, the team keeps in regular contact with each other. If you believe that this is the case, most of the time, but there are occasional exceptions, you would tick the box "agree".

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
We keep in touch with each other as a team.	☐	☐	☐	☑	☐

Which team should I be thinking about when completing this questionnaire?

If you work in more than one team, please answer the questions in relation to the team identified in the letter enclosed with this questionnaire.

Team Code: _____

About the team you work in

The questions on this page aim to give us a broad view of the type of team in which you work.

How many teams do you work in?

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ More than 5 ☐

How many people are there in your team (the core members)?

3-5 ☐
6-9 ☐
10-15 ☐
More than 15 ☐

Which other teams within the trust do you personally have to communicate/liaise with in the course of your work? (*Please list the team names*)

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

If you work as part of other teams within this trust, please indicate which these are below

_____
_____
_____
_____
_____

About the characteristics of your team

The following statements describe certain features and characteristics that may be present in a work team. Please mark the box that, in your view, most represents the situation in the team that is taking part in the Clinical Teams Programme.

Team Inputs	*Strongly disagree*	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
1. The team has a complete and challenging task to perform	☐	☐	☐	☐	☐
2. Members of my team have to communicate closely with each other to get the job done	☐	☐	☐	☐	☐
3. Communication of information to the team by the organization is excellent	☐	☐	☐	☐	☐
4. The team is given the resources it needs to do the work	☐	☐	☐	☐	☐
5. This organization strongly believes in the importance of training for team working	☐	☐	☐	☐	☐
6. The team is given a task to perform but not the material resources it needs to do the job	☐	☐	☐	☐	☐
7. People in this organization are enthusiastic about the idea of working in teams	☐	☐	☐	☐	☐
8. Enough effort is made by the organization to understand the opinions and thinking of our team	☐	☐	☐	☐	☐
9. Our team members have the right skills needed to do the team's work	☐	☐	☐	☐	☐
10. Team members are strongly encouraged to develop their team working skills in this organization	☐	☐	☐	☐	☐
11. The team is kept well informed about any change in organizational policy and the reasons behind such changes	☐	☐	☐	☐	☐
12. This organization only gives people the minimum training needed to work in a team	☐	☐	☐	☐	☐
13. Team working is seen in this organization as a gimmick or fad	☐	☐	☐	☐	☐
14. There is a genuine spirit of co-operation in this organization	☐	☐	☐	☐	☐
15. The team is given the financial, technical and material resources it needs to achieve its objectives	☐	☐	☐	☐	☐
16. We have to coordinate our work tightly in this team	☐	☐	☐	☐	☐
17. As a team, we believe in our ability to perform the team's task well	☐	☐	☐	☐	☐
18. The team's task is important for the organisation's success	☐	☐	☐	☐	☐

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
19. In this team we set our own goals	☐	☐	☐	☐	☐
20. We usually know how well we are achieving the team goals	☐	☐	☐	☐	☐
21. Every team member puts in sufficient effort to get the job done	☐	☐	☐	☐	☐
22. All team members are strongly motivated to perform well	☐	☐	☐	☐	☐
23. The team does not get the information it needs from the organization so it can plan its work	☐	☐	☐	☐	☐
24. The team has the right mix of people	☐	☐	☐	☐	☐
25. We decide as a team who will do what in the team	☐	☐	☐	☐	☐
26. The team task cannot be achieved without the contribution of every team member	☐	☐	☐	☐	☐
27. The team gets clear feedback on its performance	☐	☐	☐	☐	☐
28. We are free to decide how to carry out the team's task	☐	☐	☐	☐	☐
29. The team has all the skills we need to do the team's task	☐	☐	☐	☐	☐
30. Team members believe we can achieve the team goals	☐	☐	☐	☐	☐
31. Everyone in the team works hard to achieve the team goals	☐	☐	☐	☐	☐
32. In this team we set our own goals	☐	☐	☐	☐	☐
33. We are formally recognised as a team within our organisation	☐	☐	☐	☐	☐
34. It is clear who the members of our team are	☐	☐	☐	☐	☐
35. Members are clear about their own role within the team.	☐	☐	☐	☐	☐
36. Members are clear about the roles of other team members.	☐	☐	☐	☐	☐

Team Processes	*Strongly disagree*	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
37. In this team we know what we are trying to achieve	☐	☐	☐	☐	☐
38. Team members are generally warm and supportive to each other	☐	☐	☐	☐	☐
39. We have strong disagreements about how to perform the team's task	☐	☐	☐	☐	☐
40. Team members are committed to achieving the team's objectives	☐	☐	☐	☐	☐

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
41. Service user needs come first in this team	☐	☐	☐	☐	☐
42. Everyone in the team contributes to decision making	☐	☐	☐	☐	☐
43. People in the team are quick to offer help to try out new ways of doing things	☐	☐	☐	☐	☐
44. How well we communicate information is often discussed	☐	☐	☐	☐	☐
45. In this team we seek out and support ideas for new products / services	☐	☐	☐	☐	☐
46. There is little interpersonal conflict in this team	☐	☐	☐	☐	☐
47. There is often conflict over how best the team can achieve its objectives	☐	☐	☐	☐	☐
48. We are careful to keep each other informed about work issues	☐	☐	☐	☐	☐
49. We know we can rely on one another in this team	☐	☐	☐	☐	☐
50. We meet together frequently to ensure effective communication and co-operation	☐	☐	☐	☐	☐
51. We have lively debates about how best to do the work	☐	☐	☐	☐	☐
52. We all influence the final decisions made in the team	☐	☐	☐	☐	☐
53. We are committed to doing an excellent job in this team	☐	☐	☐	☐	☐
54. The team often reviews its objectives	☐	☐	☐	☐	☐
55. There is a feeling of trust and safety in this team	☐	☐	☐	☐	☐
56. We constructively discuss errors and mistakes in the team	☐	☐	☐	☐	☐
57. We make service users the top priority in this team	☐	☐	☐	☐	☐
58. There is a climate of constructive debate in this team	☐	☐	☐	☐	☐
59. We support each other about ideas for new and improved ways of doing the team's work	☐	☐	☐	☐	☐

Team Outputs	*Strongly disagree*	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
60. We develop new and improved ways of working	☐	☐	☐	☐	☐
61. We never have disagreements with members of other teams or departments about tasks or projects we are working on	☐	☐	☐	☐	☐
62. Managers often praise the quality of our work	☐	☐	☐	☐	☐
63. We find new ways of meeting patient / service user needs	☐	☐	☐	☐	☐
64. The team is often told by others that it is performing well	☐	☐	☐	☐	☐
65. We work closely with other teams and departments to achieve high quality care	☐	☐	☐	☐	☐
66. We rarely have conflicts with other teams or departments about who should do what when we work with them	☐	☐	☐	☐	☐
67. This team consistently achieves or exceeds its goals	☐	☐	☐	☐	☐
68. There is no friction between our team and other teams or departments that we work with	☐	☐	☐	☐	☐
69. We develop new products or services	☐	☐	☐	☐	☐
70. We develop innovative ways of accomplishing targets and objectives	☐	☐	☐	☐	☐
71. There is a high level of co-operation and trust between our team and other teams and departments with which we work	☐	☐	☐	☐	☐

Leadership

The following section asks about the leader of your team.

The leader of my team…
(please mark the box most applicable to your opinion)

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
72. …is available to team members to discuss a problem or particular issue.	☐	☐	☐	☐	☐
73. …treats each team member as an individual with different needs, abilities and aspirations.	☐	☐	☐	☐	☐
74. …encourages us to work cooperatively with other teams and departments.	☐	☐	☐	☐	☐
75. …ensures we have all the resources we need to do the team's work effectively.	☐	☐	☐	☐	☐
76. …makes clear to the team what results are required.	☐	☐	☐	☐	☐
77. …helps the team with acquiring the resources that are needed to carry out its work.	☐	☐	☐	☐	☐
78. …helps the team organise and co-ordinate work activities to avoid delays, duplication of effort and wasted resources.	☐	☐	☐	☐	☐
79. …checks the team's work progress against plans to see if it is on target.	☐	☐	☐	☐	☐
80. …provides encouragement and support when the team has a difficult or stressful task.	☐	☐	☐	☐	☐
81. …encourages the team to look at problems from a different perspective.	☐	☐	☐	☐	☐
82. …recognises good performance or extra effort made by team members.	☐	☐	☐	☐	☐
83. …supports team members' ideas for new and improved ways of doing things.	☐	☐	☐	☐	☐
84. …checks on the quality of the work carried out by the team.	☐	☐	☐	☐	☐
85. …encourages the team to learn from mistakes.	☐	☐	☐	☐	☐
86. …presents feedback to the team in a helpful manner and helps them to develop a workable plan for improvement.	☐	☐	☐	☐	☐
87. …encourages the team to work collaboratively with other teams.	☐	☐	☐	☐	☐
88. …ensures that all team members can contribute their knowledge and expertise to the decisions made by the team.	☐	☐	☐	☐	☐

Satisfaction

This section asks you some questions about how satisfied you feel while working in your team.

I am satisfied with...
(please mark the box most applicable to your opinion)

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
89. ...the recognition I receive from team colleagues for my contribution to the team.	☐	☐	☐	☐	☐
90. ...the amount of responsibility I am given in the team.	☐	☐	☐	☐	☐
91. ...the support I receive from team colleagues.	☐	☐	☐	☐	☐
92. ...the way in which conflicts are resolved.	☐	☐	☐	☐	☐
93. ...the attention paid to the suggestions I make in the team.	☐	☐	☐	☐	☐
94. ...the opportunities I have to influence decision making.	☐	☐	☐	☐	☐
95. ...the opportunities to discuss work-related problems in an open manner in the team.	☐	☐	☐	☐	☐

Viability

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
96. I would be sad if I had to leave this team	☐	☐	☐	☐	☐
97. I have a strong attachment to my colleagues in this team	☐	☐	☐	☐	☐
98. I would like to keep working in this team	☐	☐	☐	☐	☐

Well-being

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
99. In general, my job is good for my health	☐	☐	☐	☐	☐

Quality	*Very poor*	*Poor*	*Satisfactory*	*Good*	*Excellent*
100. How do you rate the knowledge and skills of your team to deliver a quality healthcare service?	☐	☐	☐	☐	☐
101. How do you rate the efforts to measure and track the quality of service in your team?	☐	☐	☐	☐	☐
102. How do you rate the recognition and rewards your team receives for the delivery of high quality healthcare?	☐	☐	☐	☐	☐
103. How do you rate the overall quality of service provided by your team?	☐	☐	☐	☐	☐
104. How do you rate the quality of the leadership in your team in supporting high quality healthcare?	☐	☐	☐	☐	☐
105. How do you rate the effectiveness of communications to both team members and service users?	☐	☐	☐	☐	☐
106. How do you rate the technology and resources provided to your team to support the delivery of high quality healthcare?	☐	☐	☐	☐	☐

Biographical Details

This part of the questionnaire asks for details about you and your work.
This information will be used to enable us to compare the views of different groups of people – it will not be used to identify you personally.

1. Sex

- ☐ Female
- ☐ Male

2. Age

- ☐ Under 30
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60+

3. Ethnic group

Please tick one box only

White

- ☐ British
- ☐ Irish
- ☐ Other White background

Asian / Asian British

- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Any other Asian background

Mixed

- ☐ White and Black Caribbean
- ☐ White and Black African
- ☐ White and Asian
- ☐ Any other mixed background

Black / Black British

- ☐ Caribbean
- ☐ African
- ☐ Any other Black background

Chinese

- ☐ Chinese

Other ethnic group

- ☐ Any other ethnic group *(Please specify)* _____

4. I have worked in my present position for: _____ Years _____ Months

5. I have worked in this team for: _____ Years _____ Months

6. What is your occupational group?

Please tick one box only

Allied Health Professionals / Healthcare Scientists / Scientific and Technical

- ☐ Occupational Therapy
- ☐ Physiotherapy
- ☐ Radiography
- ☐ Pharmacy
- ☐ Clinical Psychology
- ☐ Other qualified Allied Health Professionals (*e.g. Chiropody / podiatry, dietetics, orthoptics, arts therapy*)
- ☐ Other qualified Scientific and Technical or Healthcare Scientists (*e.g. haematology, clinical biochemistry, microbiology*)
- ☐ Support to Allied Health Professionals (*e.g. support worker, therapy helper, therapy assistant or student*)
- ☐ Support to Scientific and Technical or Healthcare Scientists (*e.g. technicians, assistants or students*)

Medical and Dental

- ☐ Medical / Dental – Consultant
- ☐ Medical / Dental – In Training (e.g. *Foundation Y1 & Y2, StRs (inc FTSTAs & LATs), SHOs, SpRs / SpTs / GPRs)*
- ☐ Medical / Dental – Other (*e.g. Staff and Associate Specialists / Non-consultant career grade*)

Registered Nurses

- ☐ Adult / General
- ☐ Children
- ☐ Midwives
- ☐ Other Registered Nurses (*e.g. mental health, learning disabilities, and district / community nurses, and health visitors)*

Nursing or Healthcare Assistants

- ☐ Nursing auxiliary / Nursing assistant / Healthcare assistant (*including Health / Clinical / Nursing Support Worker / assistant practitioner*)

Wider Healthcare Team

- ☐ Admin & Clerical (*including Medical Secretary*)
- ☐ Central Functions / Corporate Services (*e.g. HR, Finance, Information Systems, Information Technology*)
- ☐ Maintenance / Ancillary (*e.g. housekeeping, domestic staff, maintenance, facilities, estates)*

General Management

- ☐ General Management (*N.B. If you are a manager and can choose a group from elsewhere in the list, please select that other occupational group*)
- ☐ Other occupational group (*please specify*) ☐

7. Will you be willing to be contacted in 12 months time to complete a much shorter follow-up questionnaire?

Yes ☐ No ☐

END OF QUESTIONNAIRE

Thank you for your time and effort in completing this questionnaire.
Now please return it, as instructed, to the research team at Aston University.

- Questionnaire 2C (external rater questionnaire)

Our ref: QSN - DOC - TEAM - Questionnaire 2C - v2s, 2010-07-22.doc

Quality and Safety in the NHS: Evaluating Progress, Problems and Promise

Effective Team and Inter-Team Working

This is a questionnaire about your views about (*name of the specific healthcare team*) with which we understand you are familiar. Please think about this team when answering this questionnaire.

This is **not a test** and there are no "right" or "wrong" answers. The survey consists of questions about how the team works together. Please think carefully and objectively about the topics raised.

Participation in this project is entirely voluntary and you have the right to withdraw at any time.

Who will see my answers?

The information you give is totally confidential. No one outside the research team at Aston University will see your individual answers. Results will be presented in a way that completely protects your anonymity and confidentiality.

How long will it take?

The questionnaire will take about **10 minutes** to complete.

How do I fill in this questionnaire?

Please read each question carefully, and give your immediate response by ticking the box which best matches your views. We are interested in *your views* about the team in which you work. Please answer all questions as openly and honestly as possible.

For example, a question in this survey is whether, *in your opinion*, the team meets or exceeds it goals. If you believe that this is the case, most of the time, but there are occasional exceptions, you would tick the box "agree".

	Strongly disagree	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
The team meets or exceeds it goals	☐	☐	☐	☑	☐

Which team should I be thinking about when completing this questionnaire?

Please answer the questions in relation to the team identified in the letter enclosed with this questionnaire.

Ratings of team effectiveness

Team Productivity	*Strongly disagree*	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
1. The team meets or exceeds it goals	☐	☐	☐	☐	☐
2. The team completes its tasks on time	☐	☐	☐	☐	☐
3. The team makes sure that products and services meet or exceed quality standards	☐	☐	☐	☐	☐
4. The team responds quickly when problems come up	☐	☐	☐	☐	☐
5. The team is a productive team	☐	☐	☐	☐	☐
6. The team successfully solves problems that slow down their work	☐	☐	☐	☐	☐

Team Performance **During the past 6 months, to what extent do you feel that the team has…**	*Not at all*	*A little*	*Somewhat*	*Considerably*	*Completely*
7. …met the *standards of quality* expected by the Trust?	☐	☐	☐	☐	☐
8. …met the *standards of quantity* expected by the Trust?	☐	☐	☐	☐	☐
9. …met the *standards of timeliness* expected by the Trust?	☐	☐	☐	☐	☐
10. …met the *standards of implementation* expected by Trust?	☐	☐	☐	☐	☐
11. …had a *reputation for work excellence* within the Trust?	☐	☐	☐	☐	☐
12. …met the *standards of quality* expected by the Trust?	☐	☐	☐	☐	☐

Team Innovation	*Strongly disagree*	*Disagree*	*Somewhat Agree*	*Agree*	*Strongly Agree*
13. Using skills they already possess, this team learns new ways to apply those skills to develop new methods of delivering care that meet the needs of patients.	☐	☐	☐	☐	☐
14. The team seeks out information about new methods of delivering care and providing treatment from sources outside the Trust.	☐	☐	☐	☐	☐
15. This team identifies and develops skills that can improve their ability to serve patient needs.	☐	☐	☐	☐	☐
16. This team identifies and develops skills that can help attract and serve new patient needs.	☐	☐	☐	☐	☐
17. This team learns new ways to apply their knowledge of familiar healthcare delivery methods and techniques to develop new and unusual solutions to familiar, routine problems.	☐	☐	☐	☐	☐
18. This team seeks out information on treatments and methods that are new to the delivery of healthcare and learns how to apply them to develop new solutions to routine problems.	☐	☐	☐	☐	☐
19. This team seeks out and acquires information that may be useful in developing multiple solutions to problems.	☐	☐	☐	☐	☐
20. This team seeks out and acquires knowledge that may be useful in satisfying unforeseen needs.	☐	☐	☐	☐	☐

Will you be willing to be contacted in 12 months time to re-complete this questionnaire?

Yes ☐ No ☐

END OF QUESTIONNAIRE

Thank you for your time and effort in completing this questionnaire.
Now please return it, as instructed, to the research team at Aston University.

References

1. Francis R. *Independent Inquiry into care provided by Mid Staffordshire NHS Foundation Trust January 2005-March 2009.* Stationery Office; 2010.

2. Francis R. Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry http://cdn.midstaffspublicinquiry.com/sites/default/files/report/Executive%20summary.pdf. London: Stationery Officer; 2013.

3. Woods DD, Dekker S, Cook R, Johannesen L, Carter N. *Behind human error.* 2nd ed. Farnham, Surrey: Ashgate; 2010.

4. Reason J. Managing the Risks of Organizational Accidents.

5. Mannion R, Davies H. Will prescriptions for cultural change improve the NHS?*. Br Med J* 2013;346.

6. Francis R. Robert Francis Inquiry report into Mid-Staffordshire NHS Foundation Trust. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_113018. London: Department of Health; 2010.

7. Department of Health. Equity and excellence: liberating the NHS. London: Department of Health; 2010.

8. Cook RI, Woods D. Operating at the sharp end: the complexity of human error. *Human Error in Medicine* 1994;13:255-310.

9. Bryman A. *Social research methods.* 2nd ed. Oxford: Oxford University Press; 2004.

10. Glaser B, Strauss A. *The discovery of grounded theory.* Hawthorne, NY: Aldine Publishing Company; 1967.

11. Gerring J. What Is a Case Study and What Is It Good for?*. The American Political Science Review* 2004; May;98(2):pp. 341-354.

12. Yin RK. *Case study research: Design and methods.* 4th ed. London: Sage Publications; 2009.

13. Baker GR. The contribution of case study research to knowledge of how to improve quality of care*. BMJ Quality & Safety* 2011; April 01;20(Suppl 1):i30-5.

14. Dixon-Woods M. Why is patient safety so hard? A selective review of ethnographic studies. *J Health Serv Res Policy* 2010;15 Suppl 1:11-6.

15. Dixon-Woods M, Suokas A, Pitchforth E, Tarrant C. An ethnographic study of classifying and accounting for risk at the sharp end of medical wards*. Soc Sci Med* 2009; Aug;69(3):362-9.

16. Dixon-Woods M, Bosk C. Learning through observation: the role of ethnography in improving critical care*. Curr Opin Crit Care* 2010; Aug 31;16(6):639-42.

17. Dixon-Woods M. What can ethnography do for quality and safety in health care?*. Quality and Safety in Health Care* 2003;12(5):326-7.

18. Waring J, Harrison S, McDonald R. A culture of safety or coping? Ritualistic behaviours in the operating theatre*. J Health Serv Res Policy* 2007; Apr;12 Suppl 1:S1,3-9.

19. Lingard L, Espin S, Rubin B, Whyte S, Colmenares M, Baker GR, et al. Getting teams to talk: development and pilot implementation of a checklist to promote interprofessional communication in the OR*. Quality and Safety in Health Care* 2005; October 01;14(5):340-6.

20. Øvretveit J, Klazinga N. Learning from large-scale quality improvement through comparisons*. International Journal for Quality in Health Care* 2012;24(5):463-9.

21. Hogan H, Healey F, Neale G, Thomson R, Vincent C, Black N. Preventable deaths due to problems in care in English acute hospitals: a retrospective case record review study*. BMJ Qual Saf* 2012; Sep;21(9):737-45.

22. Vincent C. *Patient Safety.* Sussex: Wiley-Blackwell; 2010.

23. Pronovost PJ, Lilford R. Analysis & commentary: A road map for improving the performance of performance measures. *Health Aff (Millwood)* 2011; Apr;30(4):569-73.

24. Aswani MS, Reagan J, Jin L, Pronovost PJ, Goeschel C. Variation in Public Reporting of Central Line–Associated Bloodstream Infections by State. *American Journal of Medical Quality* September/October 2011; September/October 2011;26(5):387-95.

25. Dixon-Woods M, Leslie M, Bion J, Tarrant C. What Counts? An ethnographic study of infection data reported to a patient safety program. *Milbank Quarterly* in press,2012;.

26. Dixon-Woods M, Leslie M, Bion J, Tarrant C. What counts? An ethnographic study of infection data reported to a patient safety program. *Milbank Q* 2012; Sep;90(3):548-91.

27. Vincent C, Benn J, Hanna GB. High reliability in health care. *BMJ* 2010;340.

28. Charmaz K. *Constructing grounded theory: A practical guide through qualitative analysis.* London: Sage; 2006.

29. Yin RK. *Applications of case study research.* 2nd ed. Thousand Oaks ; London: Sage Publications; 2003.

30. INVOLVE. Public involvement in NHS, public health and social care research. ; 2012.

31. The Health Foundation. Evidence scan: Involving patients in improving safety 2013;.

32. Care Quality Commission. National NHS Staff Survey Coordination Centre. ; 2013.

33. Department of Health. The GP Patient Survey. ; 2013.

34. Altheide DL. Consuming terrorism. *Symbolic Interaction* 2004;27(3):289-308.

35. Bloom N, Propper C, Seiler S, Van Reenen J. The impact of competition on management quality: evidence from public hospitals. *NBER* 2010;(Paper No. 16032).

36. West MA, Alimo-Metcalfe B, Dawson JF, El Ansari W, Glasby J, Hardy G, et al. Effectiveness of Multi-Professional Team Working. Mental Health Care. Final Report ed.NIHR Service Delivery and Organisation programme; 2011.

37. West M, Markiewicz L, Dawson J. Aston Team Performance Inventory, Management Set. ; 2005.

38. West MA, Dawson JF, Admasachew L, Topakas A. NHS Staff Management and Health Service Quality: Results from the NHS Staff Survey and Related Data. London: Department of Health; 2011.

39. Borrill CS, Carletta J, Carter A, Dawson JF, Garrod S, Rees A, et al. *The effectiveness of health care teams in the National Health Service.* Birmingham: University of Aston; 2000.

40. Vinokur-Kaplan D. Treatment teams that work (and those that don't): An application of Hackman's group effectiveness model to interdisciplinary teams in psychiatric hospitals*. J Appl Behav Sci* 1995;31(3):303-27.

41. Burpitt WJ, Bigoness WJ. Leadership and innovation among teams: The impact of empowerment*. Small Group Research* 1997;28(3):414-23.

42. West MA, Borrill CS, Dawson JF, Brodbeck F, Shapiro DA, Haward B. Leadership clarity and team innovation in health care*. The Leadership Quarterly* 2003;14(4):393-410.

43. Cohen J, Cohen P, West S, Aiken L. Applied multiple regression/correlation analysis for the behavioral sciencesErlbaum*. Hillsdale, NJ* 1983;.

44. Johnson JW, LeBreton JM. History and use of relative importance indices in organizational research*. Organ Res Methods* 2004;7(3):238-57.

45. Department of Health. NHS Next Stage Review. Our vision for primary and community care. Department of Health; 2008.

46. Altheide DL. Ethnographic content analysis. In: Lewis Beck MS, Bryman A, Liao TF, editors. The Sage Enclycopaedia of Social Science Research Methods Thousand Oaks, Ca: Sage; 2004.

47. Rapport F, Jerzembek G, Seagrove A, Hutchings H, Russell I, Cheung WY, et al. Evaluating innovations in the delivery and organization of endoscopy services in England and Wales. *Qual Health Res* 2010;20(7):922-30.

48. Rapport F, Doel MA, Greaves D, Elwyn G. From manila to monitor: biographies of general practitioner workspaces. *Health:* 2006;10(2):233-51.

49. Iredale R, Rapport F, Sivell S, Jones W, Edwards A, Gray J, et al. Exploring the requirements for a decision aid on familial breast cancer in the UK context: a qualitative study with patients referred to a cancer genetics service. *J Eval Clin Pract* 2008;14(1):110-5.

50. Rapport F. Summative Analysis: A New Qualitative Method for Social Science and Health Research. *International Journal of Qualitative Methods* 2010;9(3):270-90.

51. Robson C. *Real world research: a resource for social scientists and practitioner-researchers.* Blackwell Oxford; 2002.

52. Department of Health. The NHS Outcomes Framework 2011/12. London: Department of Health; 2010.

53. The King's Fund. Leadership and engagement for improvement in the NHS. Together we can. ; Review 2012.

54. Widmer PS, Schippers MC, West MA. Recent developments in reflexivity research: A review. *Psychology of Everyday Activity* 2009;2(2):2-11.

55. Team reflexivity and innovation: The moderating role of team context. Academy of Management 2010 Annual Meeting - Dare to Care: Passion and Compassion in Management Practice and Research, AOM 2010; 2010.

56. NHS Leadership Framework. Available at: http://www.leadershipacademy.nhs.uk/discover/leadership-framework/.

57. A framework for NHS patient experience. Available at: https://www.gov.uk/government/news/a-framework-for-nhs-patient-experience.

58. Preuss GA. High performance work systems and organizational outcomes: The mediating role of information quality. *Industrial and Labor Relations Review* 2003;56(4):590-605.

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[i] Howitt D, Cramer D. *An introduction to statistics in psychology.* 2nd edn. Essex, England: Pearson Education Limited, 2000.