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How do they manage?

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How do they manage?

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Scientific summary

Managers constitute 3 per cent of the NHS workforce. That figure underestimates the impact of management practice on clinical outcomes, quality of patient care, and organizational performance. The NHS has concentrated on senior leadership, and less is known about the experience and attitudes of middle and front line managers in acute care, who are the focus of this project. Exploring the realities of management work, their role in change, and links between practice and performance, this study has four aims.

The first is to contribute to the *practice and theory of healthcare management* in order to improve patient care and organizational performance. The second is to provide *evidence-based guidance* for management development, strengthening the impact of management practices on hospital performance, streamlining the implementation of changes following adverse events in the interests of patient safety.

These first two aims will be achieved with new perspectives, approaches, frameworks, diagnostics, methods, tools, and processes based on new evidence. We will identify the organizational features that support managers in contributing to clinical and corporate performance, building an 'enabling environment'.

Our third aim is to *engage stakeholders* as co-researchers through our collaborative research design. In addition to respondent validation, this approach will develop 'high impact' channels for communicating the implications of findings. Our final aim is to develop *the theory of managing*, synthesizing current models, theories of distributed leadership, and processual-contextual perspectives on change.

Our collaborative research design involves six acute trusts over six stages: (1) set up (research assistant, background information, literature review, ethical approval), (2) management focus groups, (3) management survey concentrating on the themes of realities, changes, and contributions, with 60 per cent of items common for all sites for comparison, and 40 per cent based on local trust issues and priorities, (4) management briefings to check findings, explore implications, consider diffusion mechanisms, and identify cases for the next stage, (5) case studies of change following adverse incidents, and (6) publication and knowledge transfer. We will also track changes in the management role in one primary care trust, linked to one of the

acute sites, exploring through interviews with a small number of key informants (middle and senior managers) the implications for inter-organizational relationships, and the impact on acute management roles. Research methods thus include document analysis, focus groups, self-report survey questionnaires, interviews, and case studies of 'extreme change'. Analysis methods include context profiling, content analysis, statistical analysis, visual mapping, event sequence analysis, and ideas capture from briefing groups.

Outcomes can be measured in terms of service impact. For patients and service users, this concerns management practices that will improve quality of care and clinical outcomes, and rapid changes following 'extreme' events leading to improved patient safety. For middle and front line managers, this means a better understanding of how the role is evolving, new competency requirements, methods for influencing clinical and organizational outcomes, and techniques for managing 'extreme' change. For senior managers, we will provide guidance on management development and support needs, and advice on developing an 'enabling context' for the management impact on clinical, organizational outcomes, and change. For policy makers, this research will deliver a model of management work, explaining the demands and pressures, the new competencies required, the contributions to change and performance outcomes, and the implications of extending clinical engagement in management.

Lay summary

How do hospital managers handle the pressures and demands of a constantly changing health service? What effect do managers have on the quality of patient care and the outcomes of treatment? We know little about the work experience and attitudes of hospital managers, but when things go wrong, this is the group which usually takes the blame. Patient safety is a national priority, and we particularly want to find out how changes to working practices are managed after serious incidents. This can be a problem, as the advice of enquiries, in health and elsewhere, can often sit on the shelf. This study will build on what we already know about the realities of middle and front line management work and organizational change. We will collect the information we need using focus groups, a survey, and interviews which will enable us to develop case studies of serious incidents and the changes to which they lead. We will also ask the middle and front line managers involved in this study to help us with the design of the survey, and with choosing examples of serious incidents. As participating managers are among the main users of the findings from this project, we will ask them to check our understanding of the data, and to help us to develop novel ways to communicate the implications, so that this work does have an impact on management practice. The study will do this through advice on management support and development based on a better understanding of how managers work and of the factors that are shaping their roles. We will look at how managers can contribute more effectively to the quality and outcomes of patient care as well as to overall hospital performance. And we will develop guidelines for effectively implementing changes to healthcare working practices.

Details of research proposal

introduction, aims and objectives

This project will address three related sets of questions:

1. *Realities*: What are the new pressures and demands facing middle and front line managers in healthcare? What are the implications of these trends? How do managers cope with shifting priorities and expectations?

2. *Changes*: What roles do middle and front line managers play in implementing changes? How are changes arising from adverse events implemented, and how can this process be improved?

3. *Contributions*: How does management practice affect clinical and organizational outcomes? What factors influence the management contribution to performance? How can the components of an 'enabling environment' for the management contribution be assembled and sustained?

what we don't know

The service has invested in senior management (Department of Health, 2002). We know less about the working lives of middle and front line managers; the motives and rewards, the challenges and tensions, how the job is changing, new capabilities required. But when things go wrong, here is the group which often attracts most of the criticism.

Managing realities: we don't know whether or how today's novel pressures and demands are affecting the realities of middle and front line management work in acute settings, or the nature of the attributes and competencies required in these roles. But we do seem to understand the main components of traditional general management roles (Mintzberg, 1994).

Managing change: we don't know why, following 'extreme' or adverse events, inquiry recommendations sit on a shelf, but are sometimes adopted rapidly. But implementing change is a key aspect of middle and front line management work, and we do seem to understand many aspects of 'normal' change in healthcare (Locock, 2001).

Managing contribution: we don't know how middle and front line managers influence organizational and clinical outcomes, through change implementation and other dimensions of the role, or what would reinforce that contribution. But we assume that management practice is fundamental (Christian and Anderson, 2007).

We will thus follow 'the chain of evidence' from management realities, through change, to outcomes, focusing on middle and front line managers in acute care. 'Middle and front line' refers to management posts below trust board level, including career managers, clinical staff in 'hybrid' managerial roles, and medical staff who perform management and leadership functions (Department of Health, 2008). This embraces ward sisters, consultants, general managers, and clinical directors. While management in primary care is important, this is not a major theme in this project. PCT managers now focus on commissioning rather than delivering care, and SDO is funding separate research into commissioning. However, we are considering a PCT case study, proposed by a participating acute trust, focusing on changes in the primary care management role, implications for inter-organizational relationships, and the impact on management in acute settings.

objective and aims

Our overarching objective is to make a difference, contributing to the practice and theory of healthcare management to improve patient care and organizational performance. Our first aim is to generate fresh evidence, concerning managing realities, changes, and contributions. Our second aim is to develop evidence-based guidance (tools, perspectives, frameworks, diagnostics, methods, approaches, processes), informing management development, identifying factors jeopardizing and facilitating change, and enhancing the links from management practice to organizational and clinical outcomes. Our third aim is to engage stakeholders in the development of actionable knowledge, through our collaborative research design, disseminating implications by using our advisory board structure and participants to

develop innovative communication modes and channels. Our fourth aim is to contribute to the theory of managing, by synthesizing and building on current thinking with regard to models of the management role, theories of distributed leadership and change agency, and processual-contextual perspectives on organizational change and service improvement.

Managing realities

Middle and front line managers face new pressures and demands; what are the implications? Managers, the textbook says, keep things running as they are, while leaders drive change; administrators versus innovators. Managers at all levels in the NHS may be excused a cynical response to this distinction, having implemented a series of major changes affecting all aspects of the service - culture, structures, priorities, governance, working practices - and more. The *NHS Operating Framework* for 2008/09 and the *Next Stage Review* continue the theme of transformation (Department of Health 2007; 2008). Following *Next Stage*, medical training will include management and leadership skills as a matter of routine. How do healthcare managers - professional and clinical - cope with a broad, diverse, and shifting agenda of competing priorities and expectations, and serial change generating 'reform fatigue' (Leatherman and Sutherland, 2008)? How do middle and front line managers cope with this challenging and sometimes contradictory context?

Managing changes

There is a perception that healthcare is 'different', and that the management of change is problematic (Øvretveit and Aslaksen, 1999). This has led to a renewed emphasis on medical engagement in leadership and change (NHS Institute, 2008; Hamilton et al., 2008). Nevertheless, many of the goals of *The NHS Plan* have been achieved, switching priorities away from finance and waiting times to quality of care, access, patient and public involvement, and patient safety (Department of Health, 2007). Recent studies show that many radical changes are implemented, not by small groups of senior managers and doctors, but by middle managers and other staff. With the emphasis on patient safety (a core standard; Healthcare Commission, 2007), we will explore the processes of change which follow extreme, adverse, or 'sentinel' events, such as accidents, misconduct, and other serious untoward incidents. Considerable efforts are often expended to learn the lessons from such incidents, but those lessons are not always implemented (Donaldson, 2000; Healthcare Commission, 2008). These issues have rarely been investigated from a change management perspective. We will remedy this oversight, linked to a separate cross-sectoral Cranfield project in this area. This is an area in which improved understanding will significantly benefit practice and patients (Shortell et al., 2007).

Managing contributions

How does management practice influence clinical and organizational outcomes? Managerial effectiveness is a slippery concept, stakeholders have competing views (Micheli and Neely, 2006), and assessing the impact of single practices on specific results is problematic. Nevertheless, research suggests a *systemic* link to outcomes (West et al., 2002; Boyne et al., 2006). While management competencies and practices are key, organizational context is also crucial, in determining receptiveness (Pettigrew et al., 1992), setting priorities and incentives, focusing attention and energy, and establishing an environment that either enables or stifles service improvement. What does an 'enabling environment' look like, and how can the components of this environment be assembled and sustained?

Relevance to SDO call for proposals

Our project focuses on the 'realities of management' theme (iii); 'work life, roles and behaviours', addressing priorities identified by Christian and Anderson (2007, p.19) who concluded that, 'Management issues were seen as a fundamental determinant of organizational performance: in particular the importance of different management practices; the competency of managers to fulfil their roles; the ability to link in with front-line staff; and involving key figures in proposed changes'. We will explore related themes, such as clinical-managerial relationships, decision making, and knowledge utilization (Rousseau, Manning and Denyer, 2008; David Denyer, is a member of the American evidence-based management collaborative established by Denise Rousseau). But a better understanding of managing realities, changes, and contributions are where this research will have the most significant impact on organizational performance, and quality and outcomes of patient care.

A second intent of this call for proposals is to promote exchange between academic and practitioner communities. Our project engages participating managers throughout the research process, from developing this proposal, through advising on the collection and interpretation of data, to developing implications for practice, and disseminating findings.

Background; NHS context and relevant literature

Of the 1.3 million employees in the NHS in England, there are approximately 36,500 managers, less than 3 per cent of the total (The Information Centre, 2007). That probably underestimates the number of staff who as part of their role perform management functions. And that percentage understates the significance of management contributions to performance. The desire to engage medical staff in management and leadership dates from the 1980s, and has achieved new urgency in current proposals, such as the 'medical leadership competency framework' approved by the Academy of Medical Royal Colleges (NHS Institute, 2008; Hamilton et al., 2008). In the context of the theoretical underpinning explained shortly, it is interesting to note that John Clark (Clark et al., 2008, p.33), director of the Enhancing Engagement in Medical Leadership project observes that, 'Enhanced clinical engagement should work towards a model of *diffused leadership,* where influence is exercised across a complex set of relationships, systems and cultures. It is a set of behaviours that should apply to all rather than a few'.

Although the *Next Stage Review* promises 'no new targets', the change agenda is sustained. Lord Darzi focuses management attention on *accelerating* the pace of change with regard to quality of care (linked to funding), patient choice, personalized budgets and care plans, and integrated care, complemented by clinical and board leadership programmes (Department of Health, 2008). The *Operating Framework for 2008/09,* noting a shift in emphasis away from finance and waiting times, declares an 'ambitious new chapter' in the transformation of the NHS, focusing on other issues including patient safety, access, better health and reduced inequalities, improving the patient experience and staff satisfaction, and enhanced emergency preparedness; not a recipe for stability (Department of Health, 2007). These aspirations will be achieved by empowering local management and staff to deliver with less central direction.

The *Operating Framework* also makes clear (p.32) that the status of Foundation Trust is no longer an aspiration, but an expectation for all. The governance arrangements of Foundation Trusts, particularly with service line reporting, mean that trusts, and their clinical services, run like businesses. Plans and decisions are now commonly couched in commercial discourse; business units, customers, competitors, marketing ('promotion of services'), cost allocations, profitability, portfolio analysis, mergers and acquisitions, business development (e.g., Shepherd, 2008). This reflects values different from those that have inspired a publicly-funded

healthcare system for the past 60 years. Our anecdotal evidence indicates that managers generally welcome these developments, but that many clinical staff remain sceptical. There is evidence to suggest that these changes are creating new tensions (Sambrook, 2005). It is in this dynamic context of the ongoing - accelerating - transformation of healthcare that this study is positioned.

Realities

Broadly, we think we understand what managers do; roles (Mintzberg, 1973; 1994), realities (Stewart, 1997), rewards and pains (Watson, 1994), how they spend their time (Kotter, 1999). But is that knowledge relevant to healthcare management today? Previous research into management roles is mainly ethnographic, using observational methods. Hales (1999) criticizes work which describes management without a theory of managing. Our aim is to understand the links between the realities and the contributions of management work. This will take the form of a multilevel perspective synthesizing three theoretical lenses (Watson, 1997). First, *frameworks* such as Mintzberg (1994) are a useful starting point, highlighting the interaction between values, competencies and style, role purpose, managing information, people and action, and the wider context. This model assumes a manager responsible for a single unit, a situation that does not always apply in the collaborative, process-driven, network organizational forms common in healthcare, where managing *across* internal and external boundaries is increasingly important. This model is silent concerning the links from management practices to outcomes; the 'well rounded' manager is presumably effective. Second, theories of *distributed leadership* (Gronn, 2002) draw attention to the fluid contributions to change at all levels (Bailey and Burr, 2005; Buchanan et al., 2007a). Third, *process explanations* consider how factors at different levels of analysis interact over time to shape outcomes (Langley, 2009). This perspective views 'context' not as a neutral stage on which action unfolds, but as shaping conditions, events, interactions, and outcomes by enabling, constraining, and predisposing (Fitzgerald et al., 2002).

Changes

Recent studies undermine the distinction between leaders who drive change and managers who maintain order, portraying middle management roles in strategy, and in change 'by stealth' and 'under the radar' (Floyd and Wooldridge, 1996; Huy, 2002; Badaracco, 2002). The development of distributed change leadership, based on the spontaneous concertive action of staff at all levels, is evident in healthcare (Brooks, 1996; Lüscher and Lewis, 2008). From a recent SDO project, Buchanan et al. (2007b) describe a distributed approach to service improvement in the treatment of prostate cancer involving large numbers of staff across the cancer network organizations. Contradictory anecdotal evidence suggests that middle managers follow directions, and have little input into the design of change, focusing on the immediate and the tactical, but there is no robust evidence concerning middle and front line management experience and perceptions. Implementing change following extreme, adverse or 'sentinel' events, such as accidents, misconduct, and other serious incidents, is often problematic. We don't know why this is so, although this affects patient safety. Consequently, we will focus on these events, rather than develop yet another 'n-step guide' to 'normal' change (Collins, 1998). Donaldson (2000) recognized the gap between passive learning (establishing the lessons) and active learning (embedding new practices). But in a recent report, he observes that 'the pace of change has been too slow' and that 'we need to redouble our efforts to implement systems and interventions that actively and continuously reduce risk to patients' (Department of Health, 2006, p.4).

Our preliminary working definition of an 'extreme event' is an incident that suggests the need for significant organizational changes in order to prevent or to reduce the probability of a recurrence. When extreme events occur, the focus tends to lie with establishing cause, attributing blame, and remedy. Once recommendations from an enquiry are published,

attention fades. Research has mirrored this profile of concern. There are studies of the 'incubation phase', (Turner and Pidgeon, 1997), the causes of 'normal accidents' (Perrow, 1999; Vaughan, 1999), the 'critical period' (Stein, 2004), sensemaking in crises (Weick, 1993), crisis management (Lagadec, 1997; Lalonde, 2007), 'high reliability organizations' (Weick and Roberts, 2003), and the role of public inquiries (Brown, 2000; 2003). The implementation phase has attracted less attention, and studies of extreme events from a change management perspective are lacking (although much can be learned from outliers; Pettigrew, 1990). Research on avoiding wrong site surgery is instructive, Rogers et al. (2004) noting that guidelines are inconsistently implemented because of the failure to account for the complex operating theatre environment. Linked to a separately-funded cross-sectoral study with overlapping project team membership, we will explore the conditions that respectively block and promote 'active learning' and change in such contexts.

Contributions

Building on the concept of the 'receptive context' for change (Pettigrew et al., 2002), we will identify the clusters of factors that respectively stifle and strengthen the contributions of middle and front line managers to clinical and organizational outcomes. We will identify the features of an 'enabling environment', and explore how these differ within and across acute care settings. Identifying the impact of management practices and changes on organizational performance is problematic (Iles and Sutherland, 2001). This is due to the systemic nature of the links between actions and outcomes (West et al., 2002), to the multiplicity of stakeholders, and to the socially constructed nature of 'effectiveness'. Understanding these links requires a process perspective, in contrast with traditional variance explanations (Mohr, 1982; Langley 1999 and 2009; Van de Ven and Poole, 2002; Buchanan and Dawson, 2007). Process explanations demonstrate how antecedents lead, in particular contexts, to outcomes over time. The concept of 'conjunctural causality' involves identifying the clusters, combinations, or configurations of factors that explain the consequences of interest (Armenakis and Bedeian, 1999; Goldstone, 2003; Walker et al., 2007; Fitzgerald and Buchanan, 2007). A recent review of research concerning contributions to service improvement through medical engagement in management revealed little positive impact, but demonstrated how *lack* of such engagement is problematic (Ham and Dickinson, 2007).

Plan of investigation

research design

Collaborative research designs, although not without problems, have been shown to be effective in translating research into practice in healthcare (Denis and Lomas, 2003), and allow for local tailoring of data collection. User engagement contributes to the development and dissemination of findings, and to building research capacity among those involved. This design combines quantitative and rich idiographic data, enabling within-organization, cross-organization, cross-occupation and other comparisons. Outputs will be generated at each stage, not just at the end of the project. This is a six-stage multi-methods collaborative design involving six hospitals and one primary care trust. The acute sites display geographical spread, including Foundation and non-Foundation Trusts. We may add trusts with wider variance in financial challenge, population characteristics, and local competition, for the survey described in the methods section.

advisory groups

We require a sounding board involving concerned and passionate individuals who will learn with us while contributing their ideas and insights. So, we will establish a two-tier advisory

group. Tier one includes four healthcare managers and two independent academics, meeting quarterly. Tier two is a virtual group, with 20 managers and clinical staff drawn from our national, regional, and local networks, and with whom contact will be maintained by telephone, email, WebEx, and our project website. These two groups will advise on project methods and focus, access to stakeholder networks, interpretation of findings, applications, and dissemination. The combination of *Operating Framework* priorities, SHA visions, Local Area Agreements, *Next Stage Review*, and other national initiatives implies that management structures and roles in place as this research unfolds may differ from configurations at the proposal stage. Management practice in healthcare is a moving target, and our sounding board will ensure that this study sits at the cutting edge of practice and theory.

research methods

This is a multi-methods collaborative project using local participation, focus groups, surveys, documentation, performance data, case exemplars based on documentation and interviews, and management briefings. We will engage participants as co-researchers, in survey questionnaire design, case selection, data analysis and interpretation, exploring implications for management practice, and developing innovative methods for disseminating findings.

Stage 1a (3 months) pre-research administration activity

The first three months of this project will involve:

i. obtaining multi-centre and trust ethical approvals - we will seek approval for the study as a whole, then submit the questionnaire design as an amendment;

ii. recruiting, orienting, and equipping our research assistant;

iii. conducting a systematic review of the literature on middle and front line healthcare management, the management of 'extreme' change in healthcare, and models of management contributions to healthcare organization outcomes;

iv. recruiting members of our advisory groups;

v. establishing links with other research teams working on similar questions;

vi. designing and establishing the project website.

Stage 1b (three months) site briefing and set-up processes

The second three months of this project will involve:

i. the collection of background information on our research sites through internet downloads and informal meetings;

ii. acute trust liaison and briefing meetings with senior management to establish working contacts along with administrative and logistical arrangements;

iii. setting up the primary care case study, identifying up to five key informants (middle and senior managers), collating background documentation, arranging site visits (four to six over two and a half years), linking with other SDO research in this domain.

Stage 2 (6 months) Management focus groups

We will run three or four focus groups at each of the six acute trusts. Aiming for attendance of around 8 at each focus group meeting, this procedure will involve between 150 and 200 managers who will help us to understand new and emerging themes, pressures, trends and developments affecting middle and front line management in general, and in particular with regard to local management needs, issues, and priorities. The findings from these focus groups, at each site, in aggregate, and considering cross-site comparisons, will thus inform the subsequent survey design, and will constitute data in their own right, on the changing nature of middle and front line management work.

Stage 3 (9 months) The 60-40 Survey

This survey questionnaire will generate evidence on the nature of new and emerging management pressures and demands, and the implications for management practice, for management development and support, and for a theory of managing. Capturing experiences and attitudes, we will survey the middle and front line management populations (around 1,500 total) in our participating acute trusts. We will use a '60-40' design, in which approximately 60 per cent of survey items will be common to all sites, for comparison and benchmarking purposes, and 40 per cent will be tailored to local priorities following the advice of the management focus groups. As well as the content, the percentages of common and tailored items are likely to vary between sites, and these variations will in turn provide further useful insights. The time allocated to this stage of the project reflects the workload involved in administering the survey, and then collecting, coding, and analysing the data. Subject to participant input and local tailoring, indicative themes are likely to include:

biodata

- survey responses will be anonymous and the data confidential
- standard biodata to permit a range of within-sample comparisons
- background; healthcare, other public sector, commercial, clinical, armed forces
- and current role; managerial, hybrid, clinical with management duties

managing realities

- values, attitudes, motives, priorities
- new pressures, demands, patterns of activity, and fresh emphases shaping the work
- changing personal attributes and competency requirements
- the management support and development implications of current trends

managing changes

- effect of professional barriers and multidisciplinary teams on service improvement
- management attitudes to innovation, growth, and risk
- what factors block effective implementation of service improvement
- change issues arising in implementing the lessons from extreme events

managing contributions

- is there a medical-managerial divide over what constitutes 'performance'
- which practices, methods, perspectives make a difference
- what barriers must be removed to strengthen the impact of management practices
- does an 'audit and compliance' context stifle innovation

These themes will be elaborated through participant collaboration in focus groups, to ensure that the survey addresses local needs and priorities as well as the overall research objectives.

Stage 4 (3 months) Management briefings

It is important that research participants have an early opportunity to assess the findings and their implications. At this stage, findings will be presented to volunteer management focus groups at each site, with five objectives. First, for respondent validation. Second, to check interpretations. Third, to develop practical implications. Fourth, to explore innovative modes of dissemination. Fifth, to identify exemplars case studies for stage 5.

Stage 5 (6 months) Managing extreme events

These case examples will improve our understanding of change processes following adverse or 'extreme' incidents, and help develop practical diagnostics and frameworks. We will ask briefing groups to identify six incidents, nominally one in each acute trust. The main case selection criterion concerns opportunity to learn about the conditions in which changes following an extreme incident are either straightforward, or problematic, respectively. Through interviews and documentation, we will identify factors contributing to the outcomes. Although a small sample, we will develop *moderatum* generalizations (Williams, 2000), and contribute to theory through analytical refinement (Tsoukas, 2009). Recognizing the sensitivities and emotions potentially surrounding such events, discussions with potential study sites suggest that research in this area is less problematic than might appear, for several reasons. First, significant relevant information is often already in the public domain. Second, our focus lies with the subsequent management of change, and not with conducting fresh investigations. Third, the desire for individual and organizational learning is often strong and unmet. Fourth, those who have been involved often welcome an opportunity confidentially and anonymously to share their thoughts and experiences. Fifth, we will include successful examples of change following extreme incidents, as equally valuable learning opportunities. Finally, events may have occurred in the past, allowing emotions and sensitivities to subside.

Stage 6 (6 months) publication and knowledge transfer

We will engage our advisory groups and the management participants in this project - the end users of the results - in a series of informal exchanges and where possible face to face meetings, to help develop innovative modes of dissemination (beyond professional journals, academic articles, and lengthy reports). We recognize the need to develop high impact, readily accessible modes of communication, which retain the integrity, and where appropriate the complexity, of the issues at stake and the implications for practice. The main analytical approaches and techniques that we will deploy at each stage, what we will be looking for, and the anticipated contributions to each of the project's three main themes - realities, changes, and contributions - are summarized in Table 1. In addition to this structured approach, we will be looking for the surprising, the unexpected, the 'outliers' in these data streams, and we will be considering what fresh insights - practical and theoretical - these are likely to reveal.

Data collection and management procedures

This section explains the project data collection and handling arrangements, explaining how ethical issues arising from this study will be addressed.

informed consent, confidentiality, and right to withdraw

The methods used for data collection in this study involve a combination of focus groups, self-report survey, and qualitative case studies based on interviews and document analysis. These are standard organizational research methods, which are appropriate to the research aims,

organizational context, and participants. The participants are all middle and front line hospital managers, with a small number of senior managers serving as gatekeepers to the study in their respective organizations. There is no direct or indirect patient involvement. The primary ethical issues thus concern informed consent, anonymity and confidentiality, and the right to withdraw from the study at any time without question.

Informed consent will be addressed in two ways. First, all potential participants will be given detailed participant information sheets. Given the duration of the project, and the different methods that will be used, separate information sheets will be distributed prior to the different stages of the project, explaining both the aims and methods of the project as a whole, and the specific purpose and nature of the focus groups, survey, briefing groups, and case interviews respectively (appended). Where possible and appropriate, distribution of information sheets will be prefaced by a question-and-answer briefing, organized by the management gatekeepers at each site, and delivered by a member of the research team, explaining the aims and methods of the study, guaranteeing anonymity and confidentiality, and explaining the right to withdraw. Second, participation in this study is voluntary, at the discretion of individual managers. The time that will elapse between receipt of the participant information and the scheduling of the corresponding data collection will be a minimum of one week.

Individuals taking part in focus and briefing groups and in interviews in the course of this project will sign consent forms; appropriately amended versions of these consent forms will be used (appended). Signed consent will be obtained by the research team member on the day of each meeting, prior to which potential participants will have already seen the project participant information sheet. The first question that members of the research team will always ask will concern further questions about the project which participants may have before data collection begins. As consent forms will disclose individual identities, these will be stored in a locked drawer in an administrative office which is permanently staffed during working hours (two staff members take breaks in turn), and which is locked outside working hours (and is also locked if for some reason both members of staff need to be absent at the same time). Consent forms will be destroyed at the end of the project.

Anonymity and confidentiality will be guaranteed in two ways. First, data will be reported in aggregate. The organizations involved in the study will be give pseudonyms (‘Loamshire NHS Trust’) unless permission is granted in writing to use the organization’s real name. Where verbatim quotes from individuals are used to illustrate findings, these will be anonymized (‘a manager said’) and identity cues will be omitted. Second, project data will be stored on password-protected Cranfield University computers, and individual comments will not be stored in electronic files with attributable names. Transcripts of group meetings and interviews, and files containing other sensitive information, will be stored in a password-secured project folder on the School of Management server, which itself can only be accessed (locally or remotely) with a separate username and password. There will therefore be no need for research team members to exchange files by email or to store files on usb memory, both of which pose potential data security risks.

Cranfield School of Management carries professional indemnity insurance for research staff, giving participants in this study a legal remedy should breach of confidence occur. The right to withdraw is explained clearly and unambiguously in the participant information sheets, and decisions to withdraw will be respected without question.

participants’ time commitment

Focus group meetings will each last around one hour. Self-report survey questionnaire completion will take approximately thirty minutes. Briefing group meetings will each last around one hour. Case study interviews will each last around one hour; depending on how each case study develops, we may ask a small number of participants for a follow-up

interview (conducted under the same conditions as the first interview), again lasting for up to an hour. Interviews for the primary care study will last from half an hour to one hour each. A small number of participants may be involved in focus groups, survey, briefing groups, and case study interviews; for those participants, the total time commitment to this project over three years would be approximately three and a half hours (four and a half hours if a re-interview were requested and consent given). For most participants, however, participation in this study is likely to involve one procedure only, lasting from half an hour to one hour. For the primary care study, the time commitments of interviewees will total six hours over three years.

sensitive topics

As this project will explore a range of different aspects of middle and front line management roles, it is possible that some participants may find themselves being sharing information about work experiences that they may have found difficult and/or distressing. Such disclosure, which will be voluntary, could nevertheless lead to personal discomfort. This might include, for example, management plans and actions that were not successful, or serious incidents affecting staff and/or patients where the participant was involved in some manner. This possibility will be addressed in the first instance through paragraphs in the participant information sheets for focus and briefing groups and case interviews indicating that this situation could arise, and that participants should take this into account when deciding whether or not to contribute to this project. Should this situation then arise during a group discussion or interview, the researcher present will terminate the conversation immediately. If the participant would find it helpful, the research team member will then offer the participant an opportunity to discuss the matter further, in a private debriefing, off the record. Should such a situation arise, the associated information will not be recorded, will not be discussed with other members of the research team, and will not be added to the data stream for this project.

participant identification

We will rely on senior management gatekeepers to identify the middle and front line management population at each acute trust, to communicate the project information to them, and to invite them to consider attending our focus group meetings in stage 2, to take part in the survey in stage 3, to attend the briefing sessions in stage 4, and to contact us for interview in stage 5. As the criterion for inclusion in this study concerns holding a middle or front line management position in an acute trust, potential participants will be screened by job title, and where necessary by job description (job titles do not always clearly indicate whether or not a particular role is a managerial one, or has a managerial component). There is, however, no requirement for members of the research team to have sight of any personal records of the staff involved. For the primary care case study, we will again rely on a senior management gatekeeper to identify potential informants, to communicate the project to them, and to ask them to consider contacting the research team either for interview, and/or to discuss the project further before making a final decision with regard to participation.

Members of the research team will not have sight of any personal records relating to any trust management staff, the identification of participants and direct communication with potential participants being facilitated by a senior management gatekeeper nominated by the chief executive in each participating trust. Where it may be necessary to inspect a job description, a generic description for a post of that kind will suffice, and there will be no need for members of the research team to see job descriptions for specific individuals. For the purposes of this study, only job titles will be used as identifiers for data storage and analysis purposes.

For stage 5 of the project, interviewees will be identified on a ‘key informant’ basis depending on their roles in relation to the incidents chosen for study. As these incidents will be identified by participants in briefing groups in stage 4, these key informants cannot be identified until

the case incidents have been determined. We anticipate that some key informants will be briefing group participants who will thus be self-nominating, but whose informed consent to participate in this stage of the project will still be sought.

contacting participants

Participants at each participating trust will first be informed of this study through a general internal mailing to all potential participants from the trust chief executive, or from her or his nominee. This will be accompanied by the focus group participant information sheet describing the aims and methods of the study, and the nature of the participation required at this stage. This information sheet explains our procedures for guaranteeing anonymity and confidentiality, and also explains the right to withdraw from the study at any time without question. The information sheet carries contact information for the research team members who can be contacted directly by potential participants who may have questions or concerns about the study. Following circulation of the information sheet, focus group meetings will be scheduled in each participating trust, and middle and front line managers will be invited to attend these, again through an internal mailing circulated by the chief executive's nominee. Similar central mailing procedures will then be deployed at subsequent stages of the project for the purposes of the self-report survey and briefing groups.

With regard to the case study incidents that will form the focus of stage 5 of this project, these will be nominated by participants in the briefing group discussions during stage 4. We will therefore also ask participants to identify the colleagues who are likely to be key informants in relation to those incidents - which in many cases will probably include themselves - and to speak to them on behalf of the research team, inviting them to approach us for interview. Given the project timescale, it may be appropriate at the start of this stage to circulate the project information sheet again to potential informants.

For stage 5 we will ask briefing group participants who suggest particular incidents for further study, or the appropriate senior management gatekeeper at each site, to pass the relevant participant information sheet to potential key informants, asking them to contact the designated member of the research team if they would be willing to share their experience of that incident. Should key informants in relation to a nominated incident not be forthcoming, we will not pursue that case further, but instead seek identify a substitute incident. (Experience in other sectors with similar issues suggests that we are likely to be presented with more such incidents than it will be possible to follow up given the time and resources available to the project.)

data storage and retention

Survey and interview data will be stored electronically in appropriate computer files. All Cranfield computers, PCs and laptops, are configured with password protected access. Data will be stored on the School of Management server which can only be accessed by users with assigned usernames and passwords, and in a project folder that can only be accessed with a further password. This procedure restricts access to project data to member of the research team, and obviates the need to exchange files by email or to store files on usb memory. No data from this project will be stored on NHS computers or on computers belonging to any other organizations. We will use digital recorders to record interviews - where permission is granted - and digital files (which can take up considerable disk storage space) will be deleted following transcription. Files recording focus group discussions and interview transcripts will be labelled anonymously to avoid disclosing identities. Direct quotations from participants may be used in a fully anonymized manner in reports and publications, and this usage is explained in the project participant information sheet. We will not, without permission, use the actual name of any of the Trusts involved in this study; given the research aims and objectives, this will not be necessary. For reporting purposes, therefore, trusts will be allocated

pseudonyms (e.g., 'Norwood NHS Trust', 'Grange NHS Trust'). Senior managers who have acted as gatekeepers for this project will be asked to check reports prior to submission for publication in order to ensure that identity cues have been omitted.

Only members of the research team will have access to participant data relating to this study. These data will relate only to what participants have said in conversation (focus and briefing groups and interviews) and to self-report survey responses, and will not include any other personal data beyond the basic biodata requested in the survey instrument. Data will be analysed by members of the research team, either on the Cranfield campus, or in researchers' home offices. Computer files including transcripts of group discussions and interviews will contain no personal identifiers.

This study will generate a significant amount of quantitative and qualitative data, which can be analysed and written up in a range of different ways, for different purposes. In order to maximize the contribution of this study, to theory and to NHS management practice, our aim is to disseminate the findings and their implications widely, in a range of traditional and innovative styles (publications and teaching materials, for example). That process is unlikely to be completed within twelve months following the official end-date of the project. However, there will be no need to store data for more than five years as we expect that our aims in this regard will have been accomplished by then. Data will continue to be stored after the project in the same manner as during the project, on password protected Cranfield University computers to which only members of the research team have access. If the data custodian, Professor David Buchanan, were to leave the institution during this period, this responsibility will pass to another member of the research team, in the first instance to Dr Catherine Bailey, then if necessary to other team members in alphabetical sequence.

Benefits to the NHS

For *patients and service users*, although not involved directly in project fieldwork, this research will deliver:

- management practices and organizational features that have been demonstrated to contribute to improved quality of care and clinical outcomes;
- rapid changes to working practices following 'extreme' events, thus leading to improved patient safety.

For *middle and front line managers,* this research will deliver:

- knowledge of how middle and front line management work is evolving, and why;
- new competency requirements, and how these are acquired and can be best supported;
- new practices, tools, diagnostics, and frameworks for influencing clinical outcomes, care quality, and organizational performance;
- approaches and techniques for managing both 'extreme' and 'normal' organizational change.

For *senior managers,* this research will deliver new information on management development priorities and support needs, and a practical guide to the construction and maintenance of an 'enabling context' for maximizing the impact of management practices on clinical, care-related, organizational, and change-related outcomes.

For *policy makers,* this research will deliver a model of healthcare management work, explaining the demands and pressures which these roles generate, the competencies required, the contributions of management practices to change and performance outcomes, and the implications for extending clinical engagement in management and leadership roles.

This project will thus deliver fresh evidence about the realities of middle and front line management work, new perspectives on the implementation of change in atypical circumstances, and a better understanding of the effects of management practices. While evidence, perspectives, and understanding are intangible outcomes, they are nevertheless valuable to the extent that they redirect attention and energy, shape our understanding of problems and the settings in which they arise, and help to guide practical action.

The involvement of stakeholders

Our research design has the advantage of involving significant numbers of individuals with experience of and commitment to the service. Stakeholders will have multiple opportunities to contribute insights and to challenge. This project has several national, regional, and local stakeholders including policy makers, managers, clinical staff, and patients. These groups are not remote entities to be considered when the study is over. On the contrary, one role of our virtual advisory group is to help us to capture the views of those groups from the start.

Cranfield's mission is to improve management practice through research that generates 'near to market' actionable knowledge. Our collaborative design, advisory groups, the involvement of management participants, focus and briefing groups, and dissemination mechanisms, are intended to ensure continuing stakeholder involvement, particularly in the co-production of implications for practice, and innovative ideas for dissemination.

Dissemination plans

Researcher: 'In what form would you like to see our findings presented?' *Chief executive*: 'Not another report.' Our staged and collaborative research design means that outputs will develop throughout the project, and data streams will be ultimately combined into a series of publications, including academic journals and a book. Our final report will be complemented by briefs summarizing practical guidance, and we will publish in practitioner journals. We will also use Cranfield open and customized programmes, and our Public Sector Performance Roundtable. The project will feature on our School website, and WebEx will be used as an interactive dissemination tool. We will also contribute to practitioner workshops and conferences. But those are all relatively conventional outcomes. We are sensitive to the need to develop 'high impact' communication and dissemination media and channels for this project. To help us to develop more innovative methods for disseminating findings, propelling the research-into-practice process, we will be driven by ideas from our project advisory and management briefing groups. We will be seeking their ideas in this respect throughout the project, and not just towards the end.

Project timetable*

This project will run over 42 months, from 1 January 2009 to 30 June 2012:

Stage 1a Pre-research administration activity: January to October 2009

Stage 1b Site briefing and set-up processes: April to December 2009

Stage 2 Management focus groups: January 2010 to December 2010

Stage 3 The 60-40 survey: January to September 2011

Stage 4 Management briefings: June to December 2011

Stage 5 Managing extreme events: January 2010 to December 2011

Stage 6 Publication and dissemination: ongoing

* these timings are approximate, affected by delays generated by ethical approvals process, and pressures on service managers

Interim reports

We will submit interim reports during the first month following the completion of each stage of the project - in July 2009, January 2010, October 2010, January 2011, July 2011, and January 2012. These reports will summarize progress, key findings, theoretical developments, practical implications, problems arising and how these will be addressed, and will highlight any unusual, unanticipated, and particularly significant issues and outcomes.

Table 1: Analytical strategies and outcomes

stage **link to themes**	**analysis** **what will this tell us**
1. set-up	*context profiling*, of participating trusts based on background documentation, key organizational and environmental factors
managing realities	*outcomes*: identify local priorities, dimensions of within- and cross-site variations, factors potentially shaping management realities
primary care case	*thematic case report* documenting two-year period
	outcomes: changes in management role in primary care, implications for inter-organizational relationships, impact on acute management
2. focus groups	*content analysis*, of discussion and key themes
managing realities	*outcomes*: identify recurring patterns of emerging themes, pressures, trends, emphases, and developments affecting middle and front line management; deeper understanding of local needs

managing change	and priorities, identify idiosyncratic, unexpected, 'outlier' themes
3. 60-40 survey *managing realities* *managing change* *managing contribution*	*statistical analysis*, frequency distributions and crosstabs (ordinal and nominal data); coding and content analysis of open responses *outcomes*: sample characteristics, motives and values, incidence and experience of new challenges and trends, factors and practices impacting effectiveness, components of 'enabling' and 'disabling' environments for management work, changing patterns of management activity, comparisons of attitudes and experience controlling for age, experience, gender, current role, background, service area and/or function, cross-site comparisons, cross-occupational (e.g., medical-managerial) perceptions and relationships, site-specific findings, unexpected 'outlier' results
4. briefing groups *managing contribution*	*content analysis*, of discussion and key themes *outcomes*: respondent validation, practitioner check on analysis and interpretations, explore management implications, capture dissemination ideas, identify case exemplars for next stage
5. extreme events *managing change* *managing contribution*	*visual mapping* and *event sequence analysis*, of incident narratives *outcomes*: identify recurring success and problem patterns in extreme change processes, development of conjunctural explanations, contingency management framework based on cross-case comparisons of incidents and following contexts
6. knowledge transfer *managing contribution*	*ideas capture* *outcomes*: clarify and strengthen implications for management practice, develop high impact communications methods, range of publications, briefing seminars and documents, management development and support programmes

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