The instrumental value of medical leadership

Engaging doctors in improving services

Richard Bohmer

Professor of Management Practice, Harvard Business School Visiting Fellow, The King's Fund

This paper was commissioned by The King's Fund to inform its review of leadership in the NHS.

The views expressed are those of the author and not of The King's Fund.

The Kings Fund>

Contents

1	Introduction	4
2	Why medical leadership?	6
3	Why medical leadership now?	8
4	The context of medical leadership	9
5	What do medical leaders do?	15
6	Conclusion: medical leadership for service	
	improvement	24
A	27	
References		28

1 Introduction

We are not trying to control the doctors, we are trying to get the doctors to control the system.

(Terry Clemmer, MD, Intermountain Healthcare 2002)

Calls for medical leadership have increased as delivery systems all over the developed world grapple with health care reform in response to constrained resources and increasing demand (Brook 2010; Fisher *et al* 2009). However, in spite of a well-articulated need for increased leadership, physicians have been ambivalent about taking a leadership role, either with respect to improving current operations or redesigning future services. Due in part to a sense of disenfranchisement (Edwards *et al* 2002) and a suspicion of the motivations of NHS managers (Davies and Harrison 2003), physicians have retreated to care delivery and adopted a wait-and-see attitude (Fisher *et al* 2009).

Moreover, the leadership work of frontline physicians is challenging. It is not simply that potential medical leaders face significant barriers should they decide to take a leadership role – for example, financial and status disincentives and a lack of training support (Mountford and Webb 2009). The complexity and uncertainty of medical services means that leadership requires proficiency with multiple management tools and leadership styles with which most doctors are unfamiliar (Bohmer 2010).

Discussions of the need for greater medical leadership and the mechanisms through which it can be achieved are further complicated by the existence of a number of conceptual and practical problems that can confuse and derail progress in engaging more physicians in leading their own health systems. The first of these is the very definition of leadership. In spite of voluminous writings on leadership and a veritable industry of leadership development, what we mean by leadership is often ill defined as we confuse leaders with leadership. Second, there is confusion about where in the health system we hope to promote medical leadership. Do we mean to promote leadership at the highest levels of the system – government officials, professional societies and chief executive officers (CEOs)? Or do we mean leadership at the patient care interface of delivery organisations – the consultants and primary practitioners who see patients? A third and related source of confusion concerns the purpose of medical leadership. Do we see leadership primarily in terms of change ('transformative' leadership), looking for medical leaders to take existing systems through painful and contentious change? Or do we see medical leadership as an essential component of any programme to assure the performance of existing organisations?

Yet another source of confusion relates to the question of contingency. Is leadership a generalisable skill applicable in any circumstance, or are different approaches to leadership required in different circumstances? This issue is particularly germane in health care, where the question of whether health care is like other industries (and therefore amenable to managerial and policy approaches imported from elsewhere) continues to be hotly debated. And if health care has special characteristics, then on what dimension would variation occasion a different leadership approach? One final source of conceptual confusion relates to the question of how we develop leaders. How should we focus our approaches to developing leaders? Do we concentrate on definitions of what leaders are (traits to be selected for) or what they should be capable of (competencies to be developed), or should we concentrate on teaching specific leadership behaviours? Should we focus on the upcoming generation of doctors or those currently in consultant and general practice positions?

For the purposes of stimulating debate, this paper will take a specific position on a number of these issues, framing medical leadership as a diverse set of behaviours – predicated on the nature of patients' care – by frontline clinicians intended to bring about an improvement in patients' medical outcomes. This definition echoes the definition of leadership given by last year's King's Fund Leadership Commission: *...the art of motivating a group of people to achieve a common goal* (The King's Fund Commission on Leadership and Management in the NHS 2011). But this paper will also argue that medical leadership, if it is to deliver performance improvement, needs to focus on the clinical enterprise.

This perspective is motivated by the quote by Dr Terry Clemmer which opens this paper. At the fundamental 'atomic' level in any health system is the interaction of a patient and a caregiver, either in an inpatient, outpatient, community or home setting. Current evidence confirms that individual doctor excellence is necessary but no longer sufficient to generate good patient outcomes. The nature and content of these interactions and the performance of the supporting processes and microsystems¹ of care also determine the performance of health care delivery systems and assure safe, reliable and effective care. Institutional structures or regulatory and cultural environments only act on system performance inasmuch as they influence patient-caregiver interactions. These processes and microsystems are largely under the day-to-day control of working doctors, and it is their leadership skills and behaviours that have the potential to significantly improve overall health system performance.² As Sir Roy Griffiths wrote in 1983, The nearer the management processes get to the patient, the more important it is for doctors to be seen as the natural managers (Griffiths 1983, Section 19).

Finally, this paper will concentrate on medical leadership. The paper was commissioned to contribute to The King's Fund's 2012 review of leadership and engagement. It will therefore describe models of medical leadership and predominantly refer to the medical literature. Importantly, this paper's focus on medical leadership is not intended to detract from the essential leadership role of health care professionals such as nurses, midwives, physiotherapists, and social workers. In fact, this paper will argue that what is essential is clinical leadership by all members of the care delivery team.

¹ The term 'microsystem' is used to describe the small-scale team and its local environment: *the small group of people (including health professionals and care-receiving patients and their families) who work together in a defined setting on a regular basis (or as needed) to create care for discrete subpopulations of patients (Nelson et al 2011).* Other terms for the same concept include operating system and care platform (Bohmer and Lawrence 2009).

² As Berwick noted, *if clinical front-line staff decide they do not want to make changes then no one outside the healthcare system can be powerful or clever enough to make them do so* (Berwick 1994).

2 Why medical leadership?

Before discussing how doctors can and should lead in health care organisations and systems, and how to encourage them to do so, it is worth considering the origin of a need for medical leadership. Put simply, what is the nature of the problem to which medical leadership is a solution? And why do we need *doctors* to lead?

The literature on medical leadership in the NHS commonly focuses on two underlying rationales. The first has to do with health care reform at the highest level and the inherent tension between costs and patient welfare. In this view, it is clinicians who must keep the politicians responsible for designing health delivery structures and funding mechanisms focused on patient well-being. Because changes at both of the levels at which policymakers predominantly exercise control – the organisational and industry structures in which care is delivered and the way in which care is paid for influence the amount and kind of care patients receive at the practice, the clinic, or on the ward, administrative and policy changes do have the potential to have an impact on medical outcomes. This rationale argues that doctors have the best understanding of this potential impact and thus must take a leadership role in the design of system reforms. As Lord Darzi, commenting on US health care reform in 2008, wrote: If clinicians can redefine the debate so that it focuses first and foremost on patients and health outcomes, that will provide a strong common purpose for efforts to tackle the challenges of funding structures and access to care (Darzi 2009).

A second rationale relates to the delivery of health care at the patient level, the nature of health care delivery organisations, and the complexity of modern health care treatments and processes. This argument posits that because health care delivery organisations are professional bureaucracies, and because health care processes and systems have become so complex, only those in practice and with intimate knowledge of the dayto-day workings of a hospital or consulting room can understand how to optimise organisational performance or influence clinical practice. It is the autonomous doctors - who may feel little connection to the goals of senior leadership - who exercise greatest influence over the primary activities of health care, and whose involvement is most important. Moreover, modern health care delivery organisations, be they academic medical centres, multispecialty group practices, or regional health authorities, find themselves at the nexus of a set of competing demands and increasingly difficult tradeoffs as they try to balance the allocation of scarce resources to individual patient care and the care of communities and populations (Brook 2010). This rationale argues that medical leaders are perhaps ideally suited to make these trade-offs because they understand both the medical science and the organisational imperatives - what is possible, and what is doable and affordable. In describing examples of improved performance, Mountford and Webb noted that improvements happened because clinicians (most notably doctors) played an integral part in shaping clinical services (Mountford and Webb 2009).

A third, less commonly articulated but potentially more important rationale derives from the growing literature on the specific relationship between the performance of frontline organisational sub-units (wards, teams, clinics

and practices) and medical outcomes. This literature confirms that patient outcomes are not a function of the potential of the technology or the skill of individual caregivers alone but also depend on the functioning of the systems in which these individuals apply medical technology to address patients' health problems.

Leaders at the lowest levels of delivery organisations, where clinicians and patients interact, have control over a set of organisational levers that have been shown to have a meaningful impact on both intermediate medical outcomes (eg, error rates) and terminal outcomes (eg, readmission and mortality rates). Better teamwork (Neily *et al* 2010) and inter-professional communication (Haynes *et al* 2009), standardised care processes (Chen *et al* 1999) and process compliance (Dean *et al* 2006), and organisational (Curry *et al* 2011) and team-level (Edmondson 1996) culture have all been shown to have a positive impact on outcomes in both surgical and medical settings. Better management of the care itself, as well as management of the organisational setting in which the care takes place, leads to better outcomes.

Hence, medical leadership has value at three distinct levels in the health care system, not only at the highest political level and in the context of occasional system reforms, or more cynically in shoring up doctors' social position and pay. It is also essential at the organisational and sub-system levels as an instrumental mechanism for better realising the goals that are the defining purpose of any health care delivery system – improved health outcomes for patients.³ And it is an essential component of any reform of these systems.

There is growing evidence that organisations in which doctors are more engaged with *maintaining and enhancing the performance of the organisation* perform better financially and clinically (Spurgeon *et al* 2011). But engagement is more than doing what the organisation wants the doctor to do; it is doctors taking a leadership role in the doing (Clark 2012).

All three rationales make the focus of medical leadership the clinical enterprise, judged primarily by its success in improving patient health rather than the finances of the delivery organisation. This has historically been a point of tension between doctors and managers. A survey of health care leaders, administrative and clinical, documented a significant difference in perspective between the two roles; only 24 per cent of clinical directors reported they believed that management was driven more by clinical rather than financial priorities (Davies and Harrison 2003). Moreover, the perception of managers' motivations consistently worsened deeper into the organisation – that is, the closer those surveyed were to the front lines of patient care.

³ The concept of three embedded layers – macro (whole system), meso (organisational) and micro (team, clinical microsystem) – has been used by others, for example with respect to health care delivery (Nelson *et al* 2011) and clinical integration (Curry and Ham 2010).

3 Why medical leadership now?

Several factors have brought the issue of medical leadership to the fore recently. First, the role of doctors in the leadership of the NHS has been a long-running discussion in the UK, and doctors' involvement has ebbed and flowed over the years. Histories of medical leadership in the United Kingdom (see, for example, Stanton et al 2010; Spurgeon et al 2011) pinpoint several defining events, in particular the creation of the NHS in 1948, the 1967 Cogwheel Report, the Griffiths Report in 1983 and the Darzi Report of 2008. These reports all emphasised the need for doctors to take a greater role in leading and managing their organisations, although in the case of the first two of these, the intervening years saw a dissipation of advances in clinical involvement in system leadership. For example, the call in the Griffiths Report for greater management of delivery organisations was interpreted in practice as a call for non-clinical management. In fact, Griffiths (who famously wrote that If Florence Nightingale were carrying her lamp through the corridors of the NHS today she would almost certainly be searching for *the people in charge*) envisaged clinical as well as non-clinical leadership.

A second factor has been the increasing complexity of care. With the Darzi Next Stage Review of 2008, the issue of medical leadership came once again to the fore of the policy discussion, and this was made more germane by changes in the context of health delivery: rising patient demand as the 'baby boomers' aged and patients with multiple chronic disease became more common; increasing pressure as more complex care became technically possible and costs inexorably rose; and increasing pace as health care organisations tried to maintain access to services through faster patient processing. Recent legislation – creating clinical commissioning groups that put doctors at the forefront of purchasing care – has once again focused attention on the need for clinical leadership.

Finally, at the same time as the importance of medical leadership is being given more and more attention, and the need for medical leadership is growing – especially the need for frontline leadership as a response to increasing operational and organisational complexity – doctors in the UK have become demonstrably disengaged from the systems of which they are a key part. Clinicians' disaffection with non-clinical management, strained doctor–manager relationships, and an associated sense of disenfranchisement have been documented for at least a decade in both the USA and the UK (Davies and Harrison 2003; Edwards *et al* 2002; Rundall *et al* 2004). Some have argued that past government focus on standards and targets, intended to respond to the above pressures and the need for improved health service productivity, in fact served to disengage doctors (*see* below).

4 The context of medical leadership

The previous section of this paper argued that the need for doctors to be leaders derives in part from the complex science and operations that characterise modern health care. Doctors are ideally placed, it is reasoned, to both understand and influence the production function of health care. But what exactly is it about health care that requires medical leadership?

One possibility is that hospitals and medical practices are professional bureaucracies. These are characterised by a loose connection between the key workers (clinicians) and senior management. Even if they are salaried by a hospital, doctors do not perceive of themselves as reporting to the hospital leadership. The structures and processes of performance control and improvement largely come from the profession, not the organisation (Mintzberg 1998). Hence, senior management in health care organisations do not really direct the key workers in the way that a leader in an industrial production setting might. They often lack the positional power enjoyed by leaders in other settings, inasmuch as they may not be able to easily sanction or fire a doctor for poor performance; nor can they, in many jurisdictions, financially reward high performance.

Workers in professional bureaucracies are already 'empowered' (by their professional affiliation) and do not necessarily need to be so by their leaders. Among such skilled and independent workers, a leader's status depends on their perceived competence in the professional domain. Hence, a member of the profession typically leads a professional service firm – for example, a lawyer at the helm of a law partnership. One argument for medical leadership of doctors is thus that we need a doctor to lead doctors. Only a doctor has the stature among his or her colleagues to influence the behaviour of their peers.

A second possible argument for medical leadership in health care systems and organisations relates to the sheer complexity and dynamism of medical science and its impact on the context in which medical leaders operate.

Three modes of care

Typically, when we think of medical leadership, it is with reference to the familiar organisational components in a health care delivery system: the doctor leading a ward, a service, a hospital, a practice, or sometimes a whole system made up of many of these units. Although organisations can be specialised – usually by site of care (inpatient/outpatient), patient demographics (women's or children's hospitals) or disease class (breast cancer or stroke units) – we do not usually make a distinction between the leadership of these different structures or in different contexts. Similarly, while the leadership literature is replete with distinctions (for example, in leadership style, goal, level or primary activity), it too says less about the specifics of the context that would lead to the adoption of one leadership model over another.

In fact, the leadership literature is polarised on the issue of contingency in leadership, with some arguing for a single dominant model of leadership and others arguing that one model of leadership cannot fit all situations (Lorsch 2010). The contingent view of leadership argues that leaders do not all act the same way and that differences in their leadership are not

simply differences in personal style but result from leaders determining that different approaches suit different contexts and circumstances. In sum, what it is you are leading will determine how you lead. Although one implication of this is that – given that personal behaviour is hard to change – it is best to match the leader to the context, frontline doctors have no such luxury. They are the doctors of record.

So, are the circumstances of medical care so different as to require differences in leadership? In fact, the clinical care delivered in each of the above settings differs in important ways that may indeed affect medical leadership. Several different types of process exist within any one organisational structure or setting, and although researchers in health care delivery parse health care in different ways,⁴ they all make the same basic point: from an operational point of view, not all care is the same. Simplistically, vaccination against the communicable diseases of childhood in primary care, isolated knee replacement in an otherwise well patient, and the community-based management of frail elderly patients suffering from multiple co-morbid conditions require different clinical processes and operations and, potentially, organisational structures.

Clinical processes can differ on several operational dimensions. These include the extent to which activities are repeated, the propensity for standardisation, and the number of iterations. These operational dimensions are usually reflective of the underlying uncertainty in causes of patients' conditions and the appropriate therapy and the tightness of cause and effect relationships.⁵

In broad terms, delivery organisations are responsible for delivering one or more of three fairly distinct modes of care (*see* Table 1 below). The first of these is *repetitive care*. In this mode, health problems are well characterised and diseases and treatments are well understood. Diagnosis often involves a dichotomous decision; if the single test is positive, then the patient has the disease. And the outcomes of interventions are highly predictable; the therapy is either effective in all patients or we are able to identify a subpopulation in which the treatment will have its desired effect. This level of diagnostic and therapeutic certainty allows processes to be quite linear – highly standardised and specified – and microsystems to be specifically configured to support the care process. Instructions to caregivers can be specified in great detail and prescribed and, because the connection between process and outcome is tight, quality can be assured by ensuring and measuring adherence to the process.

⁴ For instance, Glouberman and Mintzberg (2001) distinguish care from cure and more intrusive from more interpretive interventions. Bohmer (2009) distinguishes care processes that tend to be linear and sequential from those that are more experimental and iterative. Christensen *et al* (2009) distinguish organisations that are 'value added processing units' from those that are 'solution shops'. And Edmondson (2012) distinguishes operations that are routine from those that are problem solving or innovative.

⁵ The concept of a 'process-knowledge spectrum' (Edmondson 2012) dates to work by Jaikumar and Bohn (1994) who characterised eight stages of process knowledge. The core concept is that the more that is known about how to create a particular outcome, the more highly specified instructions to caregivers can be (Bohmer 2009; Edmondson 2012).

Table 1: Three modes of care

	Repetitive	<i>Constrained problem- solving</i>	<i>Unconstrained</i> <i>experimental problem</i> <i>solving</i>
Decisions and tasks of care	 Dichotomous decisions (if-then statements) Standardised repetitive tasks 	members of a defined	 Decisions based on personal experience and untested heuristics Tasks customised
Example	Diabetes care pathCentral line insertion	Breast cancer	Long-term care
Nature of medical knowledge and cause-effect relationships	 Predictable outcomes: Well-understood cause and effect relationships Tight cause-effect linkages 		Unpredictable outcomes:Poorly understoodLoose cause-effect links
Nature of care process	 Standardised processes Unexpected events uncommon 	 Standard processes with custom sub- routines Known 'unexpected' events 	 Emergent, highly customised processes Unexpected events unpredictable in nature and timing
Leader's goals	Minimise variation	Optimise selection	• Discover unique solution
Leader's focus of attention	System designAggregate data and performance reports	Systems and patientsSentinel events	Individual patients

Many aspects of modern medical care fall into this category – even some diseases we would consider complex and dangerous. For example, in many patients suffering an acute heart attack, the diagnosis can be made rapidly and with great precision; their urgent care is described by a well-defined pathway; the key determinants of a positive outcome – such as rapid transfer to catheterisation – are well known; and we even know a lot about how to organise urgent care teams and systems to reduce the wait for definitive treatment. Similarly, many interventions which are not specific to a particular disease, such as the placement of a central line, can be standardised and routinised to improve outcomes and reduce risk. In short, there is a single best way of doing things, and processes and systems can be structured in advance of the patient's arrival to reliably deliver this best practice.

A second mode of care is *constrained problem solving*. Here, the patient's problem or what to do about it is not so obvious. Several possible diagnoses or viable treatments exist and the patient and caregivers must choose among them. Problem solving is 'constrained', however, because the possibilities are both limited and known; there is a finite solution set and there may even be well-validated criteria for choosing one diagnosis or treatment over another. However, diagnostic or treatment choices are not so well characterised, or the association between an action and an outcome is not so tight that the 'right thing to do' can be exactly specified in advance. Hence, care processes

cannot be standardised (even though components of a care process such as the placement of a central line can be) and processes involve many iterations and feedback loops. Nonetheless, patient pathways or clinical approaches can be broadly defined. Unexpected events have been previously described and can, therefore, be planned for.

The absence of a single dominant treatment makes patient values and preferences paramount. Where each treatment may involve a trade-off on such dimensions as experience of care, short and long-term outcome, or side effects, it is the patient who ultimately must be allowed and supported to choose for themselves. Many problems and diseases fall into this category, the most commonly written about being breast cancer. Unlike repetitive care, where process or outcome variation often represents a failure of system design or control, in constrained problem solving, much variation is, in fact, warranted, inasmuch as it represents patients' legitimate differences in their preferences (Wennberg 2002).

The final mode of care is *unconstrained problem solving*. Less common in modern medicine, these are situations where either the diagnosis or the treatment choice is truly opaque – for example, rare diseases or orphan conditions without an effective therapy. Here, there is no well-defined solution set to draw from and clinicians must search for an explanation and craft a solution one patient at a time. Hence, the care process here is truly customised (although, again, it may draw upon standardised components) and each intervention (either diagnostic test or therapy) is effectively an experiment. Unexpected events are truly unexpected.

Although there are fewer and fewer individual diseases that fall into this category, there are a growing number of situations where clinicians find themselves facing this kind of uncertainty: either with patients who have so many interacting diseases and drugs that although any one is well characterised, the combination of many is ill-understood and therapy–outcome relationships are loose and unpredictable; or with local care systems and resources that are confused, fragmented and poorly linked. The behaviour of complex systems is often in this category.

In essence, where uncertainty is low, care revolves around the execution of known (and pre-specified) tests and treatments; where uncertainty is medium, care tends to involve a structured search through a fairly wellcharacterised solution set for an optimal diagnosis or treatment; and where uncertainty is high, care tends to be highly experimental, emergent and customised. To further increase this complexity, as medical science advances, diseases or patient health problems shift columns over time. The heart attack used as an example above was once so ill-understood that it required care in the unconstrained problem solving mode. Hence, a compelling argument for medical leadership is the need for clinical training to understand the nuances of the scientific context in which leaders operate.

Implications of three modes of care

Why make so much of the well-known complexity of care? Is it simply to excuse a lack of medical leadership on the grounds that clinical care is a complicated and difficult environment in which to lead?

Health care delivery organisations in the modern era sit uncomfortably between two metaphors: as a production-engineering firm and a human

enterprise. Production flows, process specifications, targets, and deadlines characterise the former while compassion, uncertainty, preferences, and warranted variation define the latter. Clinical leaders skilled in management are needed to navigate the inherent contradictions between these two metaphors. The point of distinguishing three distinct modes of care is to distinguish different aspects of medical leadership in the different situations.

To begin, the goals of leadership differ in the three modes. In the case of repetitive care, the doctor's two key roles are to establish the standardised processes and their supporting systems so as to ensure that known best care is reliably carried out for all eligible patients (a system design role) and to minimise variation in these processes (a system management role). Here, the leader's focus is the system of care. Leading effectively at this level requires the leader to understand how this system works and how it may be influenced – an operational understanding.

In constrained problem solving, by contrast, the key leadership task is to focus a diverse and occasionally distributed team on selecting the best among the known options (that which most effectively meets the needs and values of the patient), effectively co-producing an optimal process and outcome for and with an individual patient, and making plans for the management of unexpected eventualities. In this mode, the leader's focus is the intimate team caring for the patient. To be effective in this mode, leaders must understand how teams function, what conditions favour high-level team functioning, and what they can do to create these conditions - an interpersonal understanding. And in unconstrained problem solving, the leader's task is to create a team environment that fosters experimentation and rapid discovery of the diagnosis and the treatment. Here, medical leaders must help teams and individuals cope with the high levels of uncertainty and the possibility of failure that are ever present in the management of patients with complex conditions. In effect, they must lead learning.

Thus, although the foundational elements of medical leadership are shared (setting goals, empowering others, etc), the leader's focus is subtly different for each of the three modes of care. In the first mode, the focus is the system and the aggregate data that describe its performance; in the second, it is the team and their defining relationships; and in the third, it is the uncertainty, and the rigorous approach to reducing that uncertainty. Moreover, the extent to which the medical leader gets directly involved in individual patient care increases from the first mode to the third mode (from left to right in Table 1). But this is not to say that medical leaders lead more by example in one mode or another; rather, that the behaviours the leader exemplifies differ. Hence, in repetitive care, a leader models a focus on systems thinking and the data; in constrained problem solving, a focus on relationships, teamwork and dependencies; and in unconstrained problem solving, a focus on rigour in experimental practice.

Of course, the real challenge for medical leaders is the co-existence of all three modes of care in any practice, ward or clinic. A nuanced leadership approach – one that is sensitive to these differences in care – is better achieved by medical leaders working at the patient care interface than by more senior leaders in the organisation's corporate offices. This implies that senior leaders need to distribute the authority to reconfigure clinical microsystems – as well as accountability for these systems' performance – down the organisation to the frontline medical leaders. Frontline medical leaders, even those not in a formal unit or divisional leadership role, must operate at multiple levels: the individual patient and a population of patients, and the microsystem that supports their care. These two levels – the patient and the population – are typically cast as conflicting; a doctor cannot care for an individual and consider the system at the same time. However, in practice, medical leaders need to focus on both, if only because the performance of the latter shapes the experience of, and outcomes from, the former.

In sum, as we think about advising current medical leaders or developing the physician leaders of the future, we will have to articulate a very flexible model of medical leadership that is rooted in the subtle differences of clinical care. Given this operational and contextual diversity, how do doctors lead? What is it that they do?

5 What do medical leaders do?

Although calls for medical leadership and a focus on engaging physicians in leading their organisations have both become more prominent in recent years, there is often little discussion about what doctors need to do in order to lead. Most efforts in the UK and USA have concentrated on *structural changes that integrate doctors into administrative structures* (Clark 2012), which have, in fact, had less impact than hoped for (Burns and Muller 2008); and much of the literature has focused on enumerating the dimensions and skill sets of medical leadership. Recent work (discussed by Clark 2012) has described the organisational conditions that can promote physician engagement. Less attention has been paid to the behaviours of medical leadership.

For many, an answer to the simple question 'How do I lead?' is not so clear. As already noted, most leaders control relatively few levers. Frontline medical practitioners in particular – consultants on a ward, GPs in a practice – usually have no budget, no status to make demands on the IT department, no power to hire and fire, no discretion to invest, and no power to raise capital. Yet this paper has argued that it is exactly these doctors' leadership – of other clinicians – that is required to improve patient care outcomes. So what can rank-and-file doctors do to lead? How does a medical leader lead in these circumstances?

The question of what leaders actually do is often asked as a cynical critique of the value of leadership and management (Hales 1986), even more so during a debate about executive compensation ('How can we possibly justify the money paid to leaders or managers when they don't really do anything?'). And the recent literature on medical leadership has more often focused on the competencies required to lead (Stanton *et al* 2010) rather than the specific activities of leadership. However, what medical leaders can specifically do to improve the outcomes of the care modes described above is important for two reasons: because in advance of delivering leadership training to a new generation of doctors (Blumenthal *et al* 2012) it may be easier to teach large numbers of frontline doctors new behaviours than somewhat less specific competencies; and because the current generation of doctors helps create the leadership culture into which a new generation of trainees will be integrated.

One problem in the discussion of what leaders do is the potential confusion caused by making a dichotomous distinction between the roles of leadership and management – the former a more political role associated with creating a transformative vision and the setting of direction, and motivating and inspiring others, and the latter a more practical role associated with budgets, plans, targets, staffing, task allocations and operational problem solving. In fact, the distinction is not so clear. Some note the interdependencies between the two roles (*see*, for instance, The King's Fund Commission on Leadership and Management in the NHS 2011). Others go so far as to argue that [*This dichotomy*] *is false in the sense that most effective leaders turn out to be very good managers as well – at least in my experience* (Lorsch 2010, p 414). Moreover, in the NHS, non-clinical managers have been demonised. Zollinger-Reid notes:

Those [delivery organisations] that are high performing, they will have clinicians and executives meshed together. [In] those that are problematic, [you get]... conversations along the lines them and us, it would be OK if it wasn't for them up there in the corporate offices.⁶

Doctors are not alone, however, in facing a need to lead but a paucity of positional power. Many leaders count on few resources other than themselves, yet are able to exercise tremendous influence. At a very practical level, they lead by speaking and behaving (*see* Figure 1⁷). In health care, what medical leaders communicate and how they behave is very much shaped by the fact that they are leading other professionals who are themselves experts.

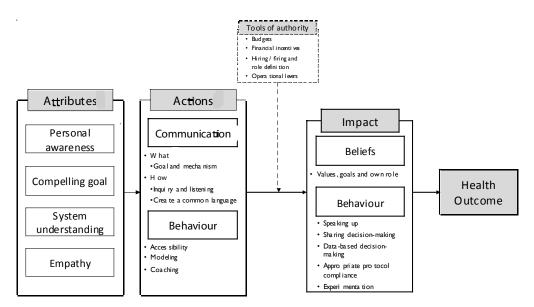


Figure 1: A simple model of medical leadership

Leading by communicating

In contrast to the popular image of a leader rallying a large group or in a crowded boardroom, studies of how leaders actually spend their time show leadership to be an intimate activity. For example, 81 per cent of CEO communication is face to face, 21 per cent one-on-one, and 29 per cent in

⁶ Dr Paul Zollinger-Read CBE set up and became CEO of one of the first primary care trusts in England in 2002 and is currently Director of Commissioning Development at Midlands and East Strategic Health Authority and Medical Adviser to The King's Fund. Interview, 27 January 2012.

⁷ In Figure 1, the 'tools of authority' – budgetary control or the ability to hire and fire or set financial incentives – are represented in a dotted line relationship to leadership behaviours. This is because so many practising doctors lack access to these tools and must lead in the absence of positional power and formal authority. Or at least, they feel they must. In fact, the doctor on the ward or in the clinic has more tools of authority than he or she might think. Non-financial incentives such as recognition can be powerful motivators and 'in-kind' incentives are usually more effective than a financial incentive of the same monetary value (Mehrotra *et al* 2010). Similarly, although a charge nurse may not be able to hire and fire, she or he may be able to use a desirable schedule to reward staff and to motivate higher performance.

groups less than 10 (Porter and Nohria 2010). And much of it (48 per cent) is focused internally on subordinates (Mintzberg 1998). Leaders predominantly talk to people inside their immediate organisations one-on-one or in intimate settings, and doctors can influence their local microsystems by talking to and modelling behaviour to the people around them. Thus, the central questions are: what do leaders speak about and how do they speak?

What leaders communicate: First and foremost, leaders communicate the values that guide the organisation or team (Lee 2010). The importance of focusing on values is that they guide individual and team decision-making in the absence of a clearly defined decision rule. This is Darzi's (2008) point; in an era of efficiency and austerity, it is the values of patient benefit, patient autonomy and professional excellence that must serve as the compass of health care reform.

From these values are derived the specific goals of an organisation, team or individual. Hence, one of the most important topics a leader communicates is the organisation's goals. Nowhere is this more urgent than when multiple professionals come together to care for a patient with complex conditions. Doctors, nurses, dietitians, social workers, physiotherapists and community workers each have their own perspectives, languages, professional norms and models of practice.⁸ Their different professional viewpoints potentially conflict (something that patients are aware of, and distressed by (Donabedian 2001)) and must be reconciled and integrated – a need that has become more acute as both the degree of sub-specialisation and the diversity of care team members increase.

Of course, leaders must have goals to communicate. People follow leaders because they see something in it for themselves. As Lorsch points out, followers follow leaders when the leader and the follower have shared values and goals. This is most obvious in the political context. Clearly, we vote for and follow leaders with whom we agree. However, it is also important in organizations (Lorsch 2010, p 418). Hence, medical leaders need to identify goals that are not only compelling and aspirational (for example, zero central line infections) but can unify a diverse team by being something that each professional group, with its own perspective, sees as worthy. That is, goals need to be congruent; they link the aspirations of the organisation with the aspirations of the individual team members. Identifying such goals is particularly important and challenging when a medical leader aims to lead across organisational boundaries – the defining work of integrating care. In the UK, achieving 'joined-up' care (Curry and Ham 2010) means unifying the goals and activities of multiple organisations - acute care and inpatient institutions, primary care, community services, etc – each of which has its own budgets, statutory requirements, incentives and perspectives.

Goals are not only motivating, in that they express people's values; they can motivate by challenging individuals and organisations to make a quantum improvement in performance. A 'stretch goal', something perhaps possible but not immediately thought of as attainable, can inspire individuals and

⁸ The death, in 1994, of a patient from cyclophosphamide overdose illustrates the dangers of competing perspectives and languages. The error resulted in part from confusion in the meaning of the word 'dose'. Whereas nursing staff interpreted the term to mean a single dose delivered during a shift, medical staff used the term to mean the total course dose to be delivered over four days. The patient received the course dose daily for four days.

teams to be highly creative (Kerr and Landauer 2004). However, if the 'stretch' in question is considered impossible, this kind of goal can have the opposite effect and cause people to withdraw (Sitkin *et al* 2011).

An important consideration in leading professional organisations is the source of the goal. In many production and service environments, goals are exogenous; they come top-down from senior management who are, in turn, responding to the market and their competitors. But in professional organisations, goals can be endogenous – developed by the professional workers themselves. Some organisations and leaders, therefore, emphasise bottom-up development of goals as a response to both the professional nature of their organisations and the complexity of medical care. The argument is two-fold: first, that modern health care is so complex that only clinicians can identify realistic care goals; and second, that the only way to align goals throughout a care delivery organisation is to have professional staff develop those goals. Of course, this view conflicts directly with centralised approaches to goal setting – something that predominates in the NHS. Robert Naylor, Chief Executive of University College London Hospitals (UCLH), notes that:

I have always believed that the most successful organisations are ones where there is the greatest degree of alignment of objectives, values and culture across the organisation. Unless you engage clinicians throughout the organisation, it is unlikely that you will achieve that alignment... So I have always believed... it was important to get clinicians involved in the setting of the culture, the values, the objectives of an organisation...

(Robert Naylor 2012)9

Unfortunately for medical leaders, communicating a compelling goal is usually not enough. In a professional organisation, those being led are as expert as those leading (Mintzberg 1998) and so other clinicians will have an opinion on both the goal and the most appropriate mechanism of attaining it. The classical model of change driven from the top – an inevitable consequence of setting a new and far-reaching goal – has less relevance in science-based professional health care organisations, where the development of new and improved ways of providing care and realising health outcomes requires substantial testing and experimentation. Hence, leaders, who certainly will have their own preferred approach to improving performance, need to consult with those they are leading on both the goals and the methods they should use to get better results.

In one sense, medical leadership in a health care delivery organisation, as in other professional organisations, has a certain 'fractal' nature. Values, goals and objectives, along with authority and accountability (individual performance expectations) are communicated and transferred from one layer in the organisation to the next; but these goals and the understanding of the operational demands of achieving them have, in fact, been generated by the experts deeper in the organisation (as illustrated in Figure 2, *below*). This occurs at every level: individual clinicians jointly develop patient care goals with the patient and family; team leaders jointly develop goals with the other clinicians and staff in the clinic or on the ward; divisional chiefs

⁹ Sir Robert Naylor has been Chief Executive of University College London Hospitals (UCLH) NHS Foundation Trust since 2000 and a chief executive in the NHS for 24 years. Interview, 27 January 2012.

undertake the same process with the physicians in their departments; and so on.

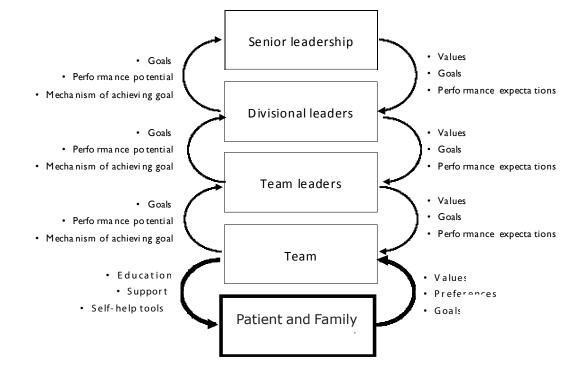


Figure 2: The 'fractal' nature of medical leadership

Consulting medical staff helps achieve what is commonly called 'alignment' in two ways: by having doctors help define the goals and values of the organisation of which they are a part; and by aligning the methods to achieve the goals to the goals themselves. However, in spite of its appeal as an effective way to engage professionals, this consultative model of leadership, and the devolution of organisational control to the operational front line it implies, is not only an atypical approach to the management of UK health delivery organisations, it is also at odds with the current move to central control in the NHS. A study of 800 senior leaders in the NHS Top Leaders programme found that the majority used a 'pace setting' style and created a demotivating culture (Santry 2011).

The more competent clinical leaders become, the easier it is for them to in turn devolve responsibilities down within the organisation. I believe complex organisations like hospitals... need to continually force decisionmaking down into the organisation as far as possible. The people who have direct interface with patients... are much more capable of making the right decisions at that level than someone coming down from the top of the organisation.

(Robert Naylor, Chief Executive, UCLH)

The above – selecting and articulating a compelling goal and identifying the activities that will get the team or organisation to that goal – implies one important requirement for a medical leader: systems thinking. Medical leaders need to understand the local delivery system, inside and outside their local organisational units (the ward, clinic or practice) in sufficient detail as to be able to understand the perspectives and needs of other professions and delivery organisations and to be able to frame goals that, although aspirational, are possible. Similarly, leaders need to know both how to make change in a complex system and how to account for unexpected system dynamic effects. For example, in the United States, the Society of Hospital Medicine has identified performance improvement as one of the hospitalist's key roles and emphasises systems evaluation in its professional training (Wachter 2011).

How leaders communicate: How leaders speak is as important as what they speak about. The 'how' of communication encompasses both choice of language and the style of speech. As already noted, the very notions of leadership and management are associated with the commercial world, which doctors have traditionally viewed with suspicion. Indeed, the language of health care reform and system redesign is pervaded with such terms of economic efficiency as 'cost', 'resource allocation' or 'value'. For many doctors, such terms are an anathema – a direct challenge to their commitment to quality above all else - and can impede productive conversations about improving system performance (Beckman 2011). Reframing the imperative of cost control in terms of an evidence-based reduction of overuse and underuse can make the worlds of system reform and performance improvement less distasteful for doctors (Beckman 2011). The tone of communication is equally important. Team members listen to their leader's tone and take their cue from it. For example, surgeons whose tone of voice during office visits with patients was rated as higher on a scale of 'dominance' and lower on a scale of 'concern/anxiety' were more likely to be sued by their patients (Ambady et al 2002).

Finally, medical leaders will find it difficult to establish a compelling goal that resonates with the many stakeholders in a delivery system or the broader caregiving community without asking each what their needs are. That is, leaders lead by asking. This goes beyond simply outlining a proposal or consulting stakeholders. The management literature describes the effectiveness of an inquiry rather than an advocacy orientation (for example, Argyris 1991). Doctors, trained to search for a right answer in the context of individual clinical care, are often inclined to advocate for a particular approach to a problem or solution when working in groups or with organisations. However, as already noted, medical leaders lead groups comprising experts in their own domains. Hence, in seeking a direction or common goal, or in searching for a workable solution, leaders need to inquire and listen more than advocate and push.

If you want to take people forward, you really needed to spend almost a third of your time listening... It is almost back to the medical model of the consultation; what are your ideas, concerns, what are your expectations. Let's get these out, let's surface as a team what it is we are trying to do.

(Paul Zollinger-Reid 2012)

The sort of rules I work on are that you share all relevant information, that you test out assumptions so that you don't leave the room thinking different things, that you focus on need and not necessarily on what you feel the solution is, and fundamentally you jointly design... where you are going.

(Paul Zollinger-Reid 2012)

Leading by behaving

A second, closely related tool for medical leaders is their own personal behaviour. As discussed above, asking and listening are important leadership behaviours. But others are also important. In fact, people in organisations scrutinise their leaders' behaviours for clues to organisational priorities and values. The data a leader requests, the topics he or she chooses to discuss, and the parts of the organisation he or she visits all send signals about what is important in the organisation, and by exclusion, what is not. That is, the leader's behaviours wield enormous symbolic power (Porter and Nohria 2010, p 459).

To the extent that much performance improvement in health care delivery requires some measure of experimentation - not only with new technology but also new organisational arrangements – medical leaders need to create an environment that fosters experimentation and learning; what Edmondson calls a psychologically safe climate (Edmondson 1996). One of the most powerful ways they can do this is by demonstrating their own fallibility and the way that they too have learned from mistakes (Edmondson et al 2001). Even the most senior leaders are fallible, and publicly admitting this fact can create a climate that enables people to speak up about actual or impending failures that can be the warning that prevents patient harm. Kevin Sharer, then CEO of Amgen, famously had teaching cases written about his errors and taught in the company's Emerging Leaders programme (Hemp 2004). Leading by asking depends on the leader having first created a climate that not only allows, but in fact encourages, lower level and lower status members of the care team to 'speak truth to power'. As Nembhard and Edmondson note, words and deeds by a leader or leaders that indicate an invitation and appreciation for others' contributions can help create just such an environment (Nembhard and Edmondson 2006). Before you can ask, you need to facilitate an answer.

For doctors with a more formal leadership role in the delivery organisation, the need for this transparency extends beyond their own fallibility to the unit or organisation's performance as a whole. As Lee puts it, '*show them the data'* (Lee 2010). Although doctors reliably quibble with the data, they are also enormously influenced and endlessly fascinated by it. After all, doctors are trained scientists. Many managers report significant behaviour change after the private sharing of unblinded peer comparison of utilisation data (*see*, for example, Hall 2010), especially when the focus of the subsequent discussion is an analysis of the care process rather than the attribution of blame to an individual physician (James and Savitz 2011).

Sharing data requires some subtlety. In the case of financial data, standard report formats are uncontroversial. For example, senior leaders at Milan's Istituto Clinico Humanitas share the hospital's financial performance reports with the medical staff monthly. In the case of clinical performance, however, the kind of data and the nature of its analysis depends on the mode of care (above) being considered: aggregate process data and large sample sizes in repetitive care; smaller samples and qualitative and quantitative outcomes of care data in constrained problem solving; and qualitative and often single observations in unconstrained experimental problem solving. By taking care with how conversations about clinical performance are had, medical leaders can maintain a commitment to evidence-based medicine while at the same time accommodating variation in the quality of medical evidence. In an

attempt to redress variation deriving from individual doctor preference and anecdote-based decision-making, the 'scientific-bureaucratic' management model that has predominated in the NHS emphasised compliance with invariant externally derived standard clinical practices (Davies and Harrison 2003) with little or no accommodation of the uncertainty that remains a constant feature of daily practice. The challenge of reducing unwarranted variation has, in part, arisen from the difficulties of differentiating warranted from unwarranted variation in the context of daily medical work.

Practising physicians daily reconcile evidence from the literature with their own experience and patients' preferences. Test and treatment choices are constrained by protocols, while patient care plans and even the decision to intervene in the first place depend on a unique and unconstrained interaction between doctor and patient (Sullivan and MacNaughton 1996). Hence, although professionals' clinical autonomy has been reduced over the years (Edwards *et al* 2002), it cannot be so constrained as to limit their ability to effectively do their jobs. Leaders in professional organisations bound autonomy, but do not eliminate it. Herein lies the need for medical leaders operating in a distributed leadership model – professionals who can move seamlessly between the two metaphors described above, and balance empowerment with control. Leadership by doctors, who are able to distinguish robust from inadequate or inclusive evidence and adjust their approaches accordingly, has something unique to offer health care delivery organisations.

Through the actions described above – open discussion of actual or impending failures or the data-based discussion of process performance – medical leaders model behaviours for other to emulate. But the leader's behaviour also lends credibility to his or her words. Congruence between espoused values and observable behaviours is essential; without it, leaders will simply not be believable to their teams. For example, solicitation of employee suggestions for improvement is a central tenet of the Toyota Production System principle of Kaizen, continuous improvement. Toyota reports not only that it receives over a million employee-generated ideas for improvement, but also that the majority of these (95 per cent) were put to practical use (Kaizen 1986, pp 14–15). In contrast, a recent survey of junior doctors in the United Kingdom found that only 10.7 per cent reported that they had had their ideas for change implemented (Gilbert *et al* 2012), sending a strong message that their involvement in system improvement is not really valued, irrespective of any rhetoric to the contrary.

Leaders have to be credible. And as leaders, we only do two things, don't we? We say things and we do things, and you must make sure that what you say and what you do don't conflict.

(Paul Zollinger-Reid 2012)

The model of distributed control described above depends on another leadership behaviour: coaching. Placing both control and accountability in the hands of those lower down the organisational chart is only feasible if those being handed the control have the abilities needed to exercise it effectively in the pursuit of optimal patient outcomes. Yet many medical leaders describe themselves as 'accidental leaders' who stumbled into the role with no formal training (Blumenthal *et al* 2012). And junior doctors consistently report a lack of skills and training in management and leadership and few opportunities to develop such expertise (*see*, for example, Brouns

et al 2010; Gilbert *et al* 2012). Moreover, they report an environment that is intolerant of failure (Wu *et al* 1991). Yet failure is an essential component of learning (Edmondson 2004).

I used to feel that I had to have my finger on the pulse of everything in the organisation to ensure that nothing went out of line... but I think nowadays, with the development of clinical leadership at every level, I have learned to place a lot more trust in those leaders and give them greater discretion in the decisions that they make. Clearly, they are not always going to make the right decision in my opinion and therefore where they do make errors or mistakes occur then it is my job to help them understand how they can perform better next time rather than criticise them for mistakes that they might have made. So my role now is much more of a coaching role...

(Robert Naylor)

Finally, all of the above – the face-to-face communication, the coaching, the modelling of preferred behaviours – depend on the leader being present. Leaders need to be visible and available. Setting a team or organisation's direction, shaping its culture and establishing its essential operational routines all require the leader to be on hand. The opposite is also true. Aloof leaders and leadership teams can generate suspicion and reinforce the 'us and them' divide that has been a concern in the NHS. Several management writers have recommended what has come to be known as 'management by wandering around' (for instance, Tom Peters in *A Passion for Excellence*, 1985). Deming noted: *If you wait for people to come to you, you'll only get small problems. You must go and find them. The big problems are where people don't realise they have one in the first place.*

Leading improvement in complex systems also requires time. Other authors have noted that the tenure of senior leaders in the NHS is relatively short (Santry 2007). In comparison, senior leaders of some of the most well-respected organisations – Intermountain Healthcare in Utah, Jönköping County Council in Sweden, or University College Hospital in the UK – have been in their positions for many years (Baker 2011). Moreover, when they do leave their posts, a long-term leader from within the organisation often replaces them. Put simply, a model of medical leadership based on a set of core behaviours demands presence; one cannot lead from afar.

6 Conclusion: medical leadership for service improvement

This paper has argued that the basic tools for leadership are easily at hand. Indeed, there is nothing mystical about medical leadership. Although the focus and some of the tasks of leaders differ up and down the delivery organisation, and more senior leaders have greater positional authority and access to other tools such as budgets and financial incentives, the basic tools described above are the same. Speaking clearly, inquiring respectfully, acting decisively, demonstrating humility and fallibility – these are the simple and essential elements of leadership in a clinical setting. Moreover, all this – the talking and behaving – is in the service of developing the trust of, and a relationship with, those being led. For frontline doctors, this is primarily with the patient and their family and the patient care team. For more senior doctors, the relationships are both within the organisation and across organisational boundaries to those other organisations that contribute to the long-term and community-based care of the patient.

For me, one of the most important leadership lessons is that you don't need to know all the transactional stuff... If there is one thing you need to know, it is how to develop constructive relationships. Constructive relationships are the currency of delivery...

(Paul Zollinger-Reid 2012)

And it all begins with the defining value set that frames the goals and unifies the actions of the myriad individuals that contribute to resolution of a patient's health problem. Unlike other industries, in which potential conflicts between shareholder and investor, employee and self-interests can confuse a company's moral compass, health care benefits from a clear and unifying purpose: patient well-being. Medical leaders have the luxury of a clear moral imperative – what is best for the patient – and by keeping this at the forefront (Lee 2010), they can greatly simplify their task.

However, this paper has also argued that to be effective, these explicit words and actions must be underpinned by a sophisticated understanding of the care delivery system, its connections, feedback loops and counterintuitive behaviours, and the ways these interact with the various modes of clinical care. To be truly effective, medical leaders need to modulate what they say and how they behave in the face of subtle differences in clinical context and practice, and integrate the improvement of service performance one patient at a time through team leadership with improving the performance of the clinical microsystem through better design and oversight. Medical leaders are defined not only by what they do, but also by what they understand; a knowledge base that bridges clinical medicine and managerial practice.

My view... is that any leader... of any professional bureaucracy... can only succeed if they have a really strong diagnosis of how those organisations tick, where does the power and influence lie to do good or to do ill, and how do you harness that power in pursuit of the corporate good...

(Chris Ham, Chief Executive, The King's Fund)¹⁰

¹⁰ Professor Chris Ham CBE was Professor of Health Policy and Management at the University of Birmingham, England, since 1992, and was named Chief Executive of

Doctors in the UK have bridled at what they rightly or wrongly perceived to be leadership without this understanding and subtlety. Managers' pursuit of corporate-level efficiency objectives has made doctors feel disrespected and disempowered. In particular, centrally mandated targets – predominantly relating to operational efficiency measures such as delays and waiting times – have been the focus of much medical concern. Although such targets have been credited with significantly improving service performance (Bevan 2009), they have also been held responsible for patient harm by reducing patient focus and care integration (Spicer 2009; Gubb 2009).

In contrast, organisations such as Utah's Intermountain Healthcare or London's University College Hospital have developed a managerial model based on consultation with and support of divisional and frontline medical leaders coupled with explicit expectations of their performance. Moreover, in organisations such as Intermountain, these performance expectation targets are in the context of a culture that accepts the over-ride of standard procedures or targets where the over-ride is in the demonstrated best interests of the patient (Bohmer 2009). That is, driving organisations to high levels of performance, in terms of both efficiency and health outcomes, is not necessarily in conflict with distributed leadership power. In fact, Intermountain and UCH's success may indicate exactly the opposite: that improving performance can be realised through diffusion of operational target setting and control to frontline medical leaders.

So there is this constant tension from the centre, from government, to keep control over health expenditure and therefore tendency to centralise, and that is in conflict with pressure from people such as myself to push for greater devolution and decentralisation.

(Robert Naylor)

Of the many impediments to medical leadership discussed elsewhere (Spurgeon *et al* 2011; Mountford and Webb 2009), two are particularly germane here. One is simply that doctors have often not been asked to lead. Senior leaders have been unable or unwilling to pass power on down to the medical front line. The prevailing model of the delivery organisation as a repository of key resources and primarily responsible for providing those resources through services has led to a focus on operational administration and management (Bohmer and Lee 2009). As already noted, current national targets are largely operational – waits and delays, resource utilisation rates, intervention rates – and focus on the transactions of care delivery. However, as the focus in health care systems increasingly shifts to 'value' and outcomes in health care delivery (Lee 2010; Porter 2009), clinical leadership becomes more important. Doctors unwilling to lead in organisations focused on efficiency of resource allocation may be more willing to take a role in those focused on clinical outcomes.

The second is a mirror image of the first. Frontline doctors may not have been asked to lead, but neither have they necessarily thought of themselves as leaders. Heifetz's definition of leadership, *accepting responsibility to create conditions that enable others to achieve shared purpose in the face of uncertainty* (Heifetz 1994) begins with the important words. But for many doctors, accepting this responsibility and acting as a leader requires, as it does for most leaders, a personal transformation – a change in their self-

The King's Fund in 2010. Interview, 6 March 2012.

concept (Ibarra *et al* 2010). Doctors are recruited for (Emmanuel 2006) and schooled in individual, not collective, action (Stoller 2009); efficacy through self, not others. Although leadership is becoming a part of medical curricula, team or organisational leadership is still not thought of as a necessary tool for improving health (as opposed to financial) outcomes. Moreover, curricula in both the United States and the United Kingdom emphasise general competencies rather than specific connections between doctors' leadership behaviours, team processes and clinical outcomes.

In summary, creating, improving and maintaining safe, effective and efficient health care services requires a distributed model of leadership: the diffusion of leadership authority, accountability and capability to the front lines of medical care where subtle differences in care microsystems can be appreciated and accommodated. It also requires appreciation of and respect for the work of managers, whose role has been demonised and ranks thinned (Ham 2012). Yet frontline doctors are unprepared and unschooled for a leadership role, often unsupported in this work. In a climate of central control exercised through standards and targets, there are few encouragements and opportunities to lead. Recent NHS reforms aimed at increasing doctors' control through the creation of clinical commissioning groups do little to address this need because, by design, they act at a distance from patient care. It falls to individual CEOs to create leadership opportunities for working doctors within their organisations.

What is crucial is... having clear clinical leadership at every level, at board level, at divisional directorate level, at operational level...

(Robert Naylor)

We need to focus on changing the culture, we need to make these roles valued and respected, we need to make sure the incentives are properly lined up, otherwise the default position of autonomous clinical practice with very limited leadership and engagement will continue.

(Chris Ham)

Acknowledgements

The research for this paper was supported by the Harvard Business School Division of Research and The King's Fund.

References

Ambady N, LaPlante D, Nguyen T, Rosenthal R, Chaumeton N, Levinson W (2002). 'Surgeons' tone of voice: a clue to malpractice history'. *Surgery*, vol 132, no 1, pp 5–9.

Argyris C (1991). 'Teaching smart people how to learn'. *Harvard Business Review*, May.

Baker RG (2011). *The Roles of Leaders in High-Performing Health Care Systems* [online]. Available at: www.kingsfund.org.uk/leadershipsummit

Beckman HB (2011). 'Lost in translation: physicians' struggle with cost-reduction programs'. *Annals of Internal Medicine*, vol 154, no 6, pp 430–33.

Berwick DM (1994). 'Eleven worthy aims for clinical leadership of health system reform'. *Journal of the American Medical Association*, vol 272, no 10, pp 797–802.

Bevan G (2009). 'Have targets done more harm than good in the English NHS? No'. *British Medical Journal*, vol 338, a3129.

Blumenthal D, Bernard K, Bohnen J, Bohmer R (forthcoming). 'Addressing the leadership gap in medicine: residents' need for systematic leadership development training'. *Academic Medicine*.

Bohmer R (2010). 'Managing the new primary care: the new skills that will be needed'. *Health Affairs*, vol 29, issue 5, pp 1010–14.

Bohmer R (2009). *Designing Care: Aligning the nature and management of health care*. Boston: Harvard Business Press.

Bohmer RMJ, Lawrence DM (2008). 'Care platforms: a basic building block for care delivery'. *Health Affairs*, vol 27, no 5, pp 1336–40.

Bohmer RMJ, Lee TH (2009). 'The shifting mission of health care delivery organizations'. *The New England Journal of Medicine*, vol 361, pp 551–53.

Bohn RE (1994). 'Measuring and managing technological knowledge'. *Sloan Management Review*, vol 36, no 1, pp 61–73.

Brook RH (2010). 'Medical leadership in an increasingly complex world'. *JAMA*, vol 304, no 4, pp 465–6.

Brouns JW, Berkenbosch L, Ploemen-Suijker FD, Heyligers I, Busan JO (2010). 'Medical residents' perceptions of the need for management education in the postgraduate curriculum: a preliminary study'. *International Journal of Medical Education*, vol 1, pp 76–82.

Burns LR, Muller RW (2008). 'Hospital-physician collaboration: landscape of economic integration and impact on clinical integration'. *Milbank Quarterly*, vol 86, no 3, pp 375–434.

Chen J, Radford MJ, Wang Y, Marciniak TA, Krumholz HM (1999). 'Do "America's bet hospitals" perform better for myocardial infarction?' *New England Journal of Medicine*, vol 340, pp 286–92.

Christensen CM, Grossman JH, Hwang J (2009). *The Innovator's Prescription: A disruptive solution for health care*. New York: McGraw-Hill.

Clark J (2012). *Medical engagement: Too important to be left to chance* [online]. Available at: www.kingsfund.org.uk/leadershipreview

Curry LA, Spatz E, Cherlin E, Thompson JW, Berg D, Ting HH, Decker C, Krumholz HM, Bradley EH (2011). 'What distinguishes top-performing hospitals in acute myocardial infarction mortality rates?' *Ann Intern Med*, vol 154, pp 384–90.

Curry N, Ham C (2010). *Clinical and Service Integration: The route to improved outcomes*. London: The King's Fund.

Darzi A (2009). 'A time for revolutions: the role of clinicians in health care reform'. *The New England Journal of Medicine*, vol 361, no 6, e8.

Darzi A (2008). *High Quality Care For All: NHS Next Stage Review final report*. Cm 7432. London: The Stationery Office.

Davies H, Harrison S (2003). 'Trends in doctor–manager relationships'. *British Medical Journal*, vol 326, no 7390, pp 646–9.

Dean NC, Bateman KA, Donnelly SM, Silver MP, Snow GL, Hale D (2006). 'Improved clinical outcomes with utilization of a community-acquired pneumonia guideline. *Chest*, vol 130, pp 794–9.

Donabedian A (2001) in Mullin FA 'Founder of quality assessment encounters a troubled system firsthand'. *Health Affairs*, vol 20, no 1, pp 137–41.

Dorgan S, Layton D, Bloom N, Homkes R, Sadun R, Van Reenen J (2010). *Management in Healthcare: Why good practice really matters*. McKinsey & Company.

Edmondson A (1996). 'Learning from mistakes is easier said than done: group and organization influences on the detection and correction of human error'. *Journal of Applied Behavioral Science*, vol 32, no 1, pp 5–28.

Edmondson AC (2012). *Teaming: How organizations learn, innovate and compete in the knowledge economy*. San Francisco: Jossey-Bass.

Edmondson AC (2004). 'Learning from failure in health care: frequent opportunities, pervasive barriers'. *Quality & Safety in Health Care*, vol 13, pp ii3–ii9.

Edmondson AC, Bohmer R, Pisano GP (2001). 'Speeding up team learning'. *Harvard Business Review*, October.

Edwards N, Kornacki MJ, Silversin J (2002). 'Unhappy doctors: what are the causes and what can be done?' *British Medical Journal*, vol 324, p 835.

Emanuel EJ (2006). 'Changing premed requirements and the medical curriculum'. *JAMA*, vol 296, no 9, pp 1128–31.

Fisher ES, Berwick DM, Davis K (2009). 'Achieving health care reform – how physicians can help. *N Engl J Med*, 2009, vol 360, no 24, pp 2495–7.

Gilbert A, Hockey P, Vaithianathan R, Curzen N, Lees P (2012). 'Perceptions of junior doctors in the NHS about their training: results of a regional questionnaire'. *BMJ Qual Saf*, vol 21, no 5, pp 234–8.

Glouberman S, Mintzberg H (2001). 'Managing the care of health and the cure of disease: Part I – differentiation'. *Health Care Management Review*, vol 26, no 1, pp 56–69.

Griffiths R (1983). *NHS Management Inquiry Report* (The Griffiths Report). London: HMSO.

Gubb J (2009). 'Have targets done more harm than good in the English NHS? Yes'. *British Medical Journal*, vol 338, a3130.

Hales CP (1986). 'What do managers do? A critical review of the evidence'. *Journal of Management Studies*, vol 23, no 1, pp 88–115.

Hall KW (2010). 'Using peer pressure to improve performance'. *HBR*, pp 54–5.

Ham C (2012). 'The management of the NHS in England'. BMJ, vol 344: e928

Haynes AL, Weiser TG, Berry WR, Lipsitz SR, Breizat AS, Dellinger EP, Herbosa T, Joseph S, Kibatala PL, Lapitan MCM, Merry AF, Moorthy K, Reznick RK, Taylor B, Gawande AA (2009). 'A surgical safety checklist to reduce morbidity and mortality in a global population'. *N Engl J Med*, vol 360, pp 491–9.

Heifetz R (1994). *Leadership without Easy Answers*. Cambridge, MA: The Belknap Press of Harvard University Press.

Hemp P (2004). 'A time for growth: an interview with Amgen CEO Kevin Sharer'. *Harvard Business Review*, vol 82, issue 7–8, pp 66–74.

Ibarra H, Snook S, Guillén Ramo L (2010). 'Identity-based leader development' in Nohria N, Khurana R (eds), *Handbook of Leadership Theory and Practice*, pp 657–78. Boston: Harvard Business Press.

James BC, Savitz LA (2011). 'How Intermountain trimmed health care costs through robust quality improvement efforts'. *Health Affairs*, vol 30, no 6, pp 1–7.

Kaizen IM (1986). *The Key to Japan's Competitive Success*. New York: McGraw-Hill/Irwin.

Kerr S, Landauer S (2004). 'Using stretch goals to promote organizational effectiveness and personal growth: General Electric and Goldman Sachs'. *Academy of Management Executive*, vol 18, no 4, pp 134–8.

Lee TH (2010). 'Turning doctors into leaders'. HBR, pp 50-8.

Lorsch J (2010). 'A contingency theory of leadership' in Nohria N, Khurana R (eds), *Handbook of Leadership Theory and Practice*, chapter 15. Boston: Harvard Business Press.

Mehrotra A, Sorbero MES, Damberg CL (2010). 'Using the lessons of behavioral economics to design more effective pay-for-performance programs'. *American Journal of Managed Care*, vol 16, no 7, pp 497–503.

Mintzberg H (1998). 'Covert leadership: notes on managing professionals'. *HBR*, pp 140–7.

Mountford J, Webb C (2009). 'When clinicians lead'. *McKinsey Quarterly*, February.

Neily J, Mills PD, Young-Xu Y, Carney BT, West P, Berger DH, Mazzia LM, Paull DE, Bagian JP. (2010). 'Association between implementation of a medical team training program and surgical mortality'. *JAMA*, vol 304, no 15, pp 1693–700.

Nembhard IM, Edmondson AC (2006). 'Making it safe: the effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams'. *Journal of Organizational Behavior*, vol 27, no 7, pp 941–66.

Nelson EC, Batalden PB, Godfrey MM, Lazar JS (Eds) (2011). *Value by Design: Developing clinical microsystems to achieve organizational excellence*. San Francisco: Jossey-Bass.

Porter ME (2009). 'A strategy for health care reform — toward a value-based system'. *N Engl J Med*, vol 361, pp 109–12.

Porter ME, Nohria N (2010). 'What is leadership? The CEO's role in large complex organizations' in Nohria N, Khurana R (eds), *Handbook of Leadership Theory and Practice*. Boston: Harvard Business Press.

Rundall TG, Daview HTO, Hodges C (2004). 'Doctor-manager relationships in the United States and the United Kingdom'. *Journal of Healthcare Management*, vol 49, no 4, pp 251–68.

Santry C (2007). 'Clinicians should be groomed for top jobs, says Nicholson', *Health Service Journal*, 1 January. Available at: www.hsj.co.uk/news/ clinicians-should-be-groomed-for-top-jobs-says-nicholson/57488.article (accessed 2 April 2012).

Santry C (2011). 'Resilient NHS managers lack required leadership skills, DH research says'. *Health Service Journal*, 6 July.

Sitkin SB, See KE, Miller CC, Lawless MW, Carton AM (2011). 'The paradox of stretch goals: organizations in pursuit of the seemingly impossible'. *The Academy of Management Review*, vol 36, no 3, pp 544–66.

Spicer R (2009). 'Targets harm patients and are destroying the English NHS'. *International Journal of Clinical Practice*, vol 63, no 9, pp 1278–81.

Spurgeon P, Clark J, Ham C (2011). *Medical Leadership: From the dark side to centre stage*. Radcliffe Publishing.

Stanton E, Lemer C, Mountford J (eds) (2010). *Clinical Leadership: Bridging the divide*. London: Quay Books.

Stoller JK (2009). 'Developing physician-leaders: a call to action'. J Gen Intern Med, vol 24, no 7, pp 876–8.

Sullivan FM, MacNaughton RJ (1996). 'Evidence in consultations: interpreted and individualised'. *Lancet*, vol 348, pp 941–43.

The King's Fund (2011). *The Future of Leadership and Management in the NHS: No more heroes*. London: The King's Fund.

Wachter R (2011). Chief of the Division of Hospital Medicine, UCSF Medical Center, personal communication.

Wennberg JE (2002). 'Unwarranted variations in healthcare delivery: implications for academic medical centres'. *BMJ*, vol 325, pp 961–4.

Wu AW, Folkman S, McPhee SJ, Lo B (1991). 'Do house officers learn from their mistakes?' *Journal of the American Medical Association*, vol 265, no 16, pp 2089–94.