Continuous quality improvement in medicine: from theory to practice

Heal thyself or heal thy system: can doctors help to improve medical care?

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Health care crisis: big picture and day to day life

Watching the twilight days of the former Soviet Union was a strange combination of feelings. On the one hand I felt captivated, impressed, deeply aware of the immensity of the change taking place, and somehow, as a citizen of the planet, involved. Yet, on the other hand, I felt completely uninvolved. These were theatrical events on some remote stage, portrayed by actors to whose lines and gestures I had absolutely no relevance. Exit Gorbachev; enter Yeltsin. I affected these events not at all and, in my detachment, could hardly force myself to believe that these events could, in the end, at all affect me.

This ambiguity – between the obvious relevance and the absolute irrelevance of social crisis to day to day life – is to me a metaphor for the more familiar, but no less disorienting, tension between the big picture and the local picture in medical care today. No week passes in the United States now without dramatic reminders of that tension. American doctors read in their morning paper about the health care crisis – as regularly as about Lebanon or ozone depletion – and then go to work, where Lebanon, ozone, *and* the health care crisis all fade into the distance, to be replaced by the daily hassles and joys of work itself. It is not that work lacks its crises; they are, of course, there. But they are micro-crises, personal crises, small frustrations: missing equipment, angry patients, risky decisions, and the wasted effort of muddling through. They are the stuff of local life.

Recently my morning paper said that American health care costs would rise another 11% in 1992, to \$817 billion (\$817 000 million), or 14% of our gross national product. It takes some time to imagine how large a figure \$817 billion is. That is more than one and a half times the gross national product of all of the nations of South America combined. If the United States could instead distribute the money it will spend on health care in 1992 to all of the American children who will be born in that year, it could purchase for each of them a full college education, two medium sized homes, and a Rolls Royce. \$817 billion

is over 1000 times the budget of the United Nations. It is 2.8 times the total profits earned by all American companies in 1989.

The increase in health care costs alone in the United States between 1991 and 1992 – that is, \$80 billion – could buy, twice, all of the goods and services made by Greece.

The newspaper dutifully reported that the US Department of Commerce thinks there are four major reasons for this increase in costs: defensive medicine (whereby doctors order unnecessary tests and procedures to protect against malpractice suits), increasing reliance on advanced technologies, innovations in treatment of chronic diseases, and the aging of the population.

That day at work I saw 15 patients in a busy morning. One parent in particular sticks in mind. He was a dignified, eloquent, tall black man, whose eyes blazed fire when I first walked into the consulting room where he was waiting with his three young children. All three had chickenpox, and, according to the receptionist's notes on my medical forms, all were there for evaluation of "sore throat."

"Before you start," fumed the father, "I want to register a complaint about how I was treated this morning on the telephone. I called to say that my children had chickenpox and that their throats were so sore that they had trouble eating. And do you know what the people on the 'phone told me here? They said, 'Whatever you do, don't come in to see the doctor.' Now what kind of medicine is that – telling patients in pain *not* to come in to see the doctor? How do *you* know what's wrong if you won't even see them?"

From one point of view his question is a good one. Patients are in pain, doctors see them, right? But from another perspective the advice to "stay away" was also quite understandable from a well trained receptionist who knows three facts: firstly, that sore throat would not be uncommon with chickenpox; secondly, that no medical treatment would help much to accelerate resolution of the symptom; and, thirdly, that there was a small but important risk that by sitting in a waiting room these boys might expose another patient with an immuno-

deficiency, for whom chickenpox could be a serious or even fatal infection. So better to stay home and wait it out.

But my explanations fell on deaf ears. The man did not see it my way. His boys hurt, and he trembled, and what did he pay his health care insurance bill for if not to be able to enter the comforting presence of a doctor when and if he needed it? If we could only reassure him that the pain and sleepless nights would soon pass, so what?

As a doctor, I knew what to do. An alliance between patient and therapist provides the basis for almost all effective care. Meet patients on their own ground; understand the reality of their world; respect that reality and work with it. "You sound very worried, sir," I said, "explain to me a little more about what frightens you." He did, and, after a time we ended the encounter as it should properly have been ended. He felt reassured and relieved. The extra costs included a peace offering of technically unnecessary throat cultures.

What might the newspapers have reported, if they had known? Could they have connected my tiny story with the major landscape of the health care crisis? Yes, they could. "Medical care costs rise another notch!" they would have said. "Unnecessary testing drives visit costs skyward!" "Doctor wastes time in unwarranted encounters!" Or, perhaps, "Persistent father overcomes access barriers to care!" Under which national issue would they have classified this visit with my patient? Is it simply part of my life at work – a local story, while the front page news from Beirut, health care, and the ozone layer carries on columns and columns away? Or, am I part of the whole?

American physicians live and work today in a no man's land in the war zone between the headlines and the day to day demands of trying to do work well. They can try to stop reading the papers, but the headlines invade in other ways. American payers, simply fed up with double figure rates of increase in health care costs, are becoming more and more strident in their demands for change and in their forms of surveillance. Their stridency touches doctors. More and more, doctors must justify their decisions on insurance forms, in review procedures, and in their collective negotiations with employers and governmental agencies that buy care for large numbers of people. More and more, American payers and governments study patterns of practice and resource use, and identify "outliers" for even deeper study. They propose care protocols more and more seriously as the basis for payment and for the study of quality of care.¹⁻³

Predictably, American physicians have found this scrutiny unwelcome; they have rebelled, resisted, or withdrawn. Like most doctors, when I entered the room of that angry father of three I wanted little more than to do a good job for him and his children. I did my best. In that context, with that intention, to be watched, studied, measured, and exhorted to do better – to be judged by others for the

quality and efficiency of my work, in essence to be judged for my sincerity – wastes my time and insults me in ways that only those who know me could fully appreciate.

Pursuing safety, I withdraw to my local ground. I simply cannot change the headlines. I did not cause the trouble, and I cannot provide its solution. "Leave me alone," I wish to say to those who demand that I make peace in Lebanon, "leave me alone to relieve the pain of this angry man, and to comfort his children, and to give them all some sense of safety and caring. Take your \$817 billion problem somewhere else, and leave me alone to do the best I can. And for pity's sake, don't tell me to try harder; that only reveals how little you understand me."

System for improvement

I do not know how familiar this no man's land is to doctors in the United Kingdom. The news headlines speak of the need for reform of the NHS, primarily in terms of the quality and range of its services, with early warnings about its cost. British doctors probably face challenges in their daily work – hassles and joys – not so different from my own. But I do not know whether doctors in the United Kingdom yet feel tension between their local lives and the national concerns about the health care system. For whatever reason, the idea of medical audit has begun to catch on in Britain, and there is interest in the lessons learnt in the United States as audit has developed there as a component of its own strategy for change.⁴

Based on this little knowledge, may I offer some cautious advice as practitioners embark on a new wave of review, accountability, and measurement in British health care. *Do not rely on audit to achieve improvement. Rely, instead, on an overall system for improvement within which audit has a limited, albeit necessary, role.*

By a "system for improvement" I mean a set of guiding principles for action through which the work of individuals can contribute to the improvement of health care as a whole. A "system of improvement" tells what is necessary for improvement to occur.

Think of it this way. The greater world of health care in the United States has needs today – including a need to control costs and generally to improve the value of care. As I enter the room with the angry father of three I am a piece of that health care system and, in principle, connected to it. What I do matters, not just to the father, but to the system.

Through what method, then, is what I do in that room to be connected to the system in which that piece of work is embedded? Without such connection I will remain isolated; indeed, I will *seek* isolation, because otherwise I will feel only helpless.

In this modern, complex world only leaders can create the opportunities for connections to be made between the greater social need and the work of most individuals. Leaders make it possible for individuals to connect their work to the larger systems. For the leader who would accelerate systemic improvement, no

question is more important than this: How can I help people to see the meaning of their work in a greater whole that seems, at first, beyond them?

A story is told of a man who saw two stonemasons at work in medieval times. He asked them both the same question, "What are you doing?" The first stonemason answered, "I am carving a stone." The second said, instead, "I am building a cathedral." The same work; but different meanings. What introduces meaning into work? What allows us to see the relation between the part and the whole?

Eight principles of a system for improvement

The answer is not simple, but that question of purpose is at the very heart of the methods, called "total quality management" (TQM), that have so thoroughly captured the imagination of a small, feisty group of health care leaders here and in other countries. TQM is an approach to creating and maintaining a system of improvement in a complex organisation.⁵⁻⁸ It is not possible in these remarks to spell out in detail a full theory of improvement, but some critical components are easy to describe (box). The premise is this: properly understood, and properly implemented, the principles of total quality management can offer us all in health care an opportunity to reconnect our daily work with the needs and purposes of the system as a whole.

Principles of total quality management

- 1 Intention to improve
- 2 Definition of quality
- 3 Measurement of quality
- 4 Understanding interdependence
- 5 Understanding systems
- 6 Investment in learning
- 7 Reduction in costs
- 8 Leadership commitment

1 INTENDING TO CHANGE

For improvement to occur, there must be an intention to improve. As simple as this seems, this factor is missing in most American efforts at audit to date. Sadly, most audits in the United States have been conducted for the purpose of "pass-fail" judgement. Those who use audit this way intend not really to *improve* the object of study but rather to *classify* it as acceptable or not. Professionals in quality improvement call this "reliance on inspection to improve quality," and, for obvious reasons, this approach fails to result in fundamental improvements of an entire system.

For leaders of British medicine the question, simply put, is: "Do you intend to participate actively in the continuous improvement of the British health care system?" To do so implies far more than simply finding and rooting out incompetent practices. A true commitment to

improvement requires that medical leaders and practitioners declare openly their intention to work in full partnership with others to improve care. It requires cessation of blame, through which it is asserted that *others*, and not oneself, must change. Most of all, it requires a plan through which participation in improvement is possible. You must *create* a system of improvement.

My encounter with the angry father frustrates me if I can see no way ever to change the circumstances that produced it – no way to modify the methods of telephone reception, no way to craft a better organisational response to this man's fear or to educate him before he becomes afraid, no way to reduce the waste while still meeting his deeper needs. I carve stones and see no plan for a cathedral.

2 DEFINING QUALITY

For improvement to occur, quality must be defined. In all modern forms of quality management the definition of quality is sought in the experience of the people served. The quality of my care is defined as the capability of that care to meet the needs of those who depend on my care. In other industries this is called "meeting the needs of the customer," but the word "customer" offends some in health care. In health care, quality can more comfortably be defined by listing the results and attributes of the health care system that are wanted by people who depend on that system: such as restoring function, relieving pain, prolonging useful life, answering questions, respecting dignity, and so forth.

For leaders of British medicine the question is: "Are you willing to define the quality of British health care in operational, measurable terms and, especially, in terms of the experiences of those you serve?"

Ambiguity in defining quality provides a seedbed for anger. If my encounter with the worried father were a matter of public inquiry two reactions would in all likelihood predominate, and both would involve anger. Payers would be angry about the "inappropriateness" of the encounter, and they would probably discuss the need for copayments, deductibles, and other disincentives for the father to use unnecessary medical services. Patients, on the other hand, would be angry about a different issue. "Why," they would ask, "do you place barriers of access before a worried parent? Don't you mean to help him?"

The root cause of this anger is ambiguity in purpose. We can comfortably seek quality only if we know what we mean by the term. "If you don't know where you are going," the sages say, "then any road will take you there."

In fact, from my limited observations, it seems that British medicine is far closer to a unified sense of the nature of quality than is American medicine. At least, it seems that in Britain there has been a fundamental commitment to some basic level of equity in access to care as a dimension of the quality sought. But this image of purpose – this

unequivocal adherence to constant definitions of the nature of quality itself – is surprisingly fragile and vulnerable in times of stress. It is entirely necessary in building a system of improvement for leaders to remind themselves and others, explicitly, repeatedly, and unambiguously, of the needs they intend to meet.

3 MEASURING QUALITY

Consequent on the second principle is that *the pursuit of improvement requires measurement*. To improve continuously the attainment of longer life, restored function, and lower levels of pain it is necessary to measure survival, function, and pain regularly and systematically. It is also necessary to use appropriate statistical methods to interpret the results of that measurement.

In fact, the proper agenda of measurement in pursuit of improvement is extremely broad and goes far beyond the measurement of results alone. To improve systems of care requires also information on the processes of care; on the needs of patients, families, and others; on the qualities of the supplies and equipment used; on the levels of skills among doctors and others in the system; and on the degree to which overall organisational purposes are defined, understood, agreed to, and supported. In the United States doctors today resist measurement. Measurement frightens them, even though they must admit logically that measuring the health status of patients and populations is a precondition to improving care in the long run.

What if my encounter with the angry father of three became an element in some grand database of health care effectiveness? Could it possibly help? Or would it merely increase the threat that *my* inappropriate care would now be known by others? This is exactly the type of question facing the American doctor in an era of growing “accountability.” The answer depends much less on whether measurement occurs than on how measurement is used. So far, there is stalemate. Payers and others who would increase accountability demand more measurement; doctors and producers of care who would increase autonomy try to avoid measurement.

You face a choice in the United Kingdom. Which approach to measurement will you choose? Will the leaders of medicine embrace measurement in the service of improvement or fight it as a threat to their safety and sovereignty? The choice of the better path – measurement to serve improvement – cannot be made by any agent alone – not by doctors alone, nor by government, nor by managers, nor by communities. You must choose *together* to use measurement wisely in a plan for improvement, or the processes and uses of measurement will inevitably degrade into a costly and demeaning game of cat and mouse.

4 UNDERSTANDING INTERDEPENDENCE

Effective improvement requires knowledge of and work within systems of interdependency. My

meeting with the angry father of three feels private. But it is not. We are brought there by systems of care and service that involve many others, and, when we separate at the end of our encounter, what follows will be equally determined by others. Our actions are shaped by systems of scheduling, communication, training, architecture, job design, and policy making that neither of us could name, let alone control. That is, in part, why we feel so helpless.

If we define medical improvement only in terms of what transpires when the consulting room door closes, then we remain impotent relative to what we could accomplish if we can affect the system as a whole, along with all of its support processes.

Doctors, unused to seeing themselves as bound in interdependencies at work, sometimes try to manage systemic improvement by breaking the system into parts and assigning responsibility for the parts. I recall one colleague who, when informed at a meeting that patients were complaining about her untidy clinic waiting area, said angrily, “The waiting area is none of *my* business. *My* work begins when the patient enters the consulting room. Tell the clinic manager. I don’t even want to *hear* about the waiting area.” What she meant, of course, was probably, “I haven’t a clue about *how* to affect the tidiness of the waiting area. And therefore I cannot afford to participate in its correction.”

Such fragmentation of responsibility produces what our industrial colleagues call “suboptimisation.” Parts can work well, even while the whole fails. Imagine that we tried to build a car by selecting the best of each type of separate part – the carburettor of a Mercedes, the door handle of a Jaguar, the seats of a Lexus, the brake pads of a Honda, and so forth. Such a car would never work properly because it, like any other system, is more than a collection of parts organised in a certain way, with certain interconnections, that is designed to serve a purpose that no one part alone could ever serve.⁹

In my meeting with the father of three, I suboptimised, if I may say so immodestly, very well. The patient left happy; and I left a bit weary, but proud of my craftsmanship. And yet, by more general measures, the system failed. A technically unnecessary encounter occurred, with wasted tests, time, and equipment. Somewhere, a receptionist, trying her best, suffered the assault of an angry patient who did not understand her, just as she did not seem to understand him. There was duplication of effort in this faulty system as we repeated instructions, duplicated telephone calls, and created records that benefited no one. We produced local excellence and systemic scrap.

To cease this we must find ways to work better together, not just in the instance of care but in the design and redesign of the system of care. Doctors may not opt out of this interdependency and count on successful change. If they do not participate in the continuous design and redesign of care processes then

those processes can never link together properly. We will continue to work well as pieces of something that overall works not well at all.

5 UNDERSTANDING SYSTEMS

Underlying this new sense of the centrality of interdependency in the quest for quality is an ever deeper principle about the nature of cause itself – namely, that *effective improvement depends far more on better systems than on better incentives*. Put otherwise, when things go wrong it is usually not the fault of the people within the system. Flaws in quality tend to be a property of systems, not of people. This is a premise which is difficult to swallow in health care at first, since so much reliance has been placed on people – especially physicians – as the cause of both excellence and failure.

The implications of this shift from people to systems are profound. It means that organisations that wish to foster improvement must develop and support mechanisms both to cease blaming individuals, and to understand themselves in terms of systems, not simply as a collection of functions. It is not enough to ask what is the role of a doctor, or a nurse, or a manager; instead, the key questions become, “How exactly do we carry out the processes of surgery?” Or “What are the key processes in an emergency ward, and how is each conducted?”

Anger so thoroughly coloured my encounter with the father of three! The patient was angry at the telephone receptionist, and, I assure you, *vice versa*. My own anger flashed at the patient’s initial attack as I entered the room, and I then joined the patient in anger at the insensitiveness of others who had failed to understand his fears.

This anger has its source in a theory of motivation and in a theory of cause. If people cause defects, then motivation can yield improvement, and anger at people feels just. But what if a different theory applies: the theory that people are already trying hard to do their best and that the causes of failure lie in processes of work that those people do not control? Well, then, anger seems less just. In fact, it seems silly.

6 INVESTING IN LEARNING

In the pursuit of quality, processes of learning are essential. To improve processes of work we must first understand the causal systems in those processes. This requires learning. Yet, in stressed organisations, learning can decrease at exactly the time when new learnings are most badly needed. People cease to learn when they feel afraid, and fear develops rapidly in environments of surveillance and cost cutting. Organisations focused on bottom line performance can become obsessed with productivity, and they rarely define learning as part of production.⁹

What do I mean by learning? I mean primarily “discovering causes and experimenting with remedies.” When processes fail and bad results occur systems underlie the cause just as surely as causes underlie the

symptoms of disease. Proper improvement involves the systematic elucidation of root causes of failures and systematic, scientific investigation of remedies in much the same way that a scientist tests a hypothesis.

Why did the worried father not accept the advice of the receptionist on the telephone? What needs did he have that we failed to meet at that time, which resulted in more work and wasted effort subsequently? What lies behind those needs? What are our current processes for addressing such needs, and how best might we modify those processes methodically, experimentally, and scientifically so as to achieve better and better outcomes and lower and lower total costs? These questions do have answers. But first, we must find them. To so do requires forms of organisation and investment unfamiliar in most work settings.

A nurse in a quality management course several years ago captured the idea best of all. “I get it,” she said as her face brightened, “if we used quality management in our hospital, everyone would have *two* jobs. The first job would be their job as they now know it, and the second job would be the job of helping to make their own job better.” Exit anger; enter science.

7 REDUCING COSTS

Effective improvement efforts seek systematically to reduce waste, duplication, unnecessary complexity, and unwanted variation. Because of the extraordinary levels of waste, duplication, complexity, and variation in most organisations, practitioners of quality management can save money and improve quality (that is, better meet customers’ needs) *at the same time*. Health care organisations can achieve similar results as long as they focus on the unnecessary costs *in systems* and not on *people* as the causes of cost.

This requires a difficult change in perspective in medical organisations. Because the decisions and skill of the doctor *seem* to determine the costs and results of health care reformers too often use the word “waste” to refer to imprudence or inappropriate choices by doctors. In this form, the myth of “people as cause” appears again in disguise. Of course, some decisions waste resources, and much care is inappropriate. But the scientific question of cause remains: What flawed processes and systems create and maintain such forms of waste and inappropriateness? Ample experience now suggests that doctors, once unafraid, enjoy and readily participate in efforts to review the appropriateness and effectiveness of health care practices if those efforts engage them without blame. They become curious about the causes of flaws, and seek better ways of working.¹⁰

8 LEADERSHIP COMMITMENT

The final principle of quality is related to the first: *improvement requires action by leaders*. It would be comforting if the reform of health care could arise out of a swell of good spirit and rebirth among those who work in the system – a grass roots theory of quality. But

that does not happen often, if at all. The improvement of quality requires leaders to redefine their own role. They must see themselves as custodians of the methods of improvement, as teachers and practitioners of those methods, and as supporters to workers who already have the motivation to do well but who lack the resources, time, and method to be involved in overall betterment of the systems in which they work. As much as I might care to invent a better way to handle the worried father of three, it turns out that I must be *invited* to try to do so. My leaders – the chief of my department, the director of my clinic, the executive of my organisation – must invite me to do so by erecting and maintaining systems and methods for my involvement in improving work. Through all means at their disposal – compensation, the allocation of time, information systems, suggestion programmes, team building, education, strategic priorities, and communication, for example – these organisational leaders must send a message, consistently, repeatedly, building trust and following through when trust is threatened. The message, as the nurse mentioned earlier, must be that “everyone here has two jobs. Their job as they usually know it, and the job of helping to make their own job better.” If they mean it, I will know it because they will back it up with action. And if they do not mean it, I will know that, too.

Sometimes, doctors in the United States misunderstand their relationship to this issue of leadership by claiming either that they are not led or that they do not lead anyone. This is incorrect. Those who lead doctors may not occupy a formal chain of command, nor do doctors lead others usually through strict reporting relationships. But there is no doubt at all that doctors both affect and are affected by leaders. Doctors are led by those who teach them, or who provide role models, or who administer their professional societies, or who purport to speak for organised medicine. And doctors lead those who depend on them for example and for signals about what is proper and important to do. They include students, office staff, patients, colleagues, our partners in helping, and the communities who rely on doctors’ judgement. The leaders among doctors and doctors themselves, when they lead, speak very loudly about intention to improve, or not. If we mean to improve, others will know it. If we do not mean to improve, they will know that, too.

Plausible fairy tale

Let us imagine how my day went in an organisation fully committed to improvement. An angry patient told me that he was discouraged from coming in to have his worries treated. I helped him, of course, as best I could. And then I followed the usual method to engage our overall system of improvement.

Firstly, I reported the event in our regular cross functional quality planning meeting that week. Several other doctors in the meeting, along with nurses and receptionists, related

the experience to their own observations, and plans were set in motion to discover the extent of the matter.

We formed a quality improvement team⁷ on methods of managing what we called “the worried well” in our clinic. The team received a formal charter from the organisation’s “quality improvement council,” which the chief executive chairs. I served on the team, which also included another doctor, a nurse, two receptionists, a representative from the information services department of the clinic, and the assistant clinic manager. We budgeted six months of weekly meetings for the team, which would have been more difficult to do in times past, before we defined quality improvement participation as part of everyone’s regular work – about 20% of their work, to be exact.

The team collected data from patients and clinicians for several weeks and also sent a delegation to several other organisations that had reputations for innovation in this dimension of care. One team member visited a series of other types of organisation to learn how people outside health care dealt with similar matters. She visited a highly respected law firm, a vehicle repair shop, and an educational testing service. Each of these organisations had experience with its version of “worried well” clients.

The team needed training, which was readily available from the regional quality improvement support centre. We spent four days in courses, reviewing process improvement methods and tools, group process skills, and quality planning. As usual, our team also had the services of a “facilitator” with special skills to help us when our efforts slowed.

Over four months of meetings and investigation the team developed a rich database on processes to manage the worried well and stratified the issue into numerous subtypes. One such subtype referred to my original patient – namely, parents of mildly ill children requesting reassurance about prolonged symptoms.

The organisation’s guarantee to these patients, based on its quality credo, was clear from the start: our purpose was to allay concern and restore a sense of wellbeing. No one questioned it. What the team questioned was the processes through which we sought this quality. What was the underlying need of the patient? How could we define “reassurance” in operational terms? What were our current processes for delivering that reassurance, and how well did they work? What were the key steps in those processes, and how could they be improved? The team used many tools in its work: surveys, data collection forms, histograms, cause and effect diagrams, control charts, and scatterplots. They reported on their progress regularly to the quality council.

In the end, the team settled on three “root causes” of failures to reassure patients effectively. Most commonly, they found, patients’ worries were aggravated by inconsistency in information provided by

people within the same clinical unit. Secondly, patients' worries were often overestimated by both staff and doctors; many patients felt that it was the *doctor* who was worried, and it turned out that the idea of "worry" had never been clearly defined in the clinical area. Thirdly, a large proportion of "worried well" visits derived from failures to make initial telephone contact with *anyone*. Almost a fifth of all worried parent visitors arrived in person because their initial telephone call had ended with a disconnection or a failure of transfer.

Armed with scientific data on root causes, the team designed and implemented a series of remedies that, by the year's end, had reduced visit rates by worried parents of well children by 32%, with an almost equal *increase* in measured scores of wellbeing and "questions answered" among the same customer population. The clinic spent \$22 000 on the work of the team and on remedies the team suggested. Savings in visit costs, testing costs, return telephone calls, and decreased letters of complaint, alone, totalled \$72 000 a year – a financial return of 3.3 to 1.

This is only one story about my organisation committed to improvement. In fact, my clinic of 100 doctors, 50 nurses, and 400 employees overall now maintains about 125 improvement teams each year. But that is only the tip of the iceberg of good news. Because my organisation now understands, supports, and focuses on planning and improving the quality of its work in the service of its customers, the knowledge needed for improvement is everywhere. It is in daily work life. I showed a guest the other day through our centre, and we happened to overhear the chief of surgery asking a clinic nurse the following question: "Is there anything I could have done differently last week that would have made your work easier?" My guest nearly swallowed his tongue in amazement.

Of course, I have just told you a fairy tale. The organisation I describe does not exist in health care; not yet. On the other hand, some very sophisticated leaders in some very sophisticated companies outside health care would find my story quite familiar and no fairy tale at all. They wonder when we will wake up and make it a reality.

British medicine at the crossroads

Is British medicine ready for this? It is very much at a crossroad. Down one path lies the world of inspection as a cure for what ails you. It is a world in which those whose job it is to read and respond to the headlines try to increase the level of control and surveillance over those who do the work, and who, by their behaviour, seem to show a persistent inability to understand that the headlines must be heard and answered. In this world, incentives

seem crucial, and measurement is the handmaiden of control. Fear grows, and accusations lie just beneath the surface of civil discussions about "assessment." The doctors resist, the managers salute, the government puts it foot down, and the patients tremble. It is not a happy world, and, though assessment makes stability feasible, improvement there does not thrive. "But," say the followers of this pathway, "life is tough," and they cannot think of a better way.

Down the other path is the world of systematic improvement – of *knowledge* for improvement. In that world the watchwords of control, inspection, incentive, and judgement yield to the vocabulary of improvement: purpose, learning, scientific thinking, and involvement. Measurement and audit, in this world, are the handmaidens of learning, and the object of it all is not stability but breakthroughs. Fear does not characterise this world, and accusation is of little use. Harmony – constancy of purpose throughout the system – thought impossible at the crossroads, is a fact.

Choose the first path if you want to. I urge the second. But make that choice with full knowledge, most especially among doctors, that change, thereby, is inevitable. To engage improvement fully doctors will need to enhance their sense of the need for overall improvement; their commitment to a customer centred definition of quality and to the measurement of quality; their willingness and skill to work as partners in interdependencies both among doctors and between doctors and others; their investment in training and learning about quality related issues; and their commitment to reducing waste, duplication, and unsupported variation in the processes of care. Like all leaders, doctors who want quality to progress must make their commitments visibly, without equivocation, and for the long haul.¹¹

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