

Treating organisational illness: a practical approach to facilitating improvements in health care

DON HINDLE AND TSERENDORJ NATSAGDORJ

Don Hindle is Visiting Professor in the Centre for Clinical Governance Research,
Faculty of Medicine, University of New South Wales.

Tserendorj Natsagdorj is Consultant on health care financing to the Health Sector Development Program,
Mongolia Ministry of Health.

Abstract

The health sector contains many problems that are widely recognised and ought to be easily resolved, and yet some organisations seem to be powerless to act. We argue that this mainly reflects weaknesses in the organisational culture, and present an approach that we have been using to address them. We describe some simple analytical tools, and report our experiences in using them in organisations in several countries. We conclude that most people believe organisational weaknesses are important, are willing and eager to try to address them, and do in fact find ways of making some useful changes – at least, in the short term.

The problem of variation in organisational performance

Health care is always improving. It sometimes takes small steps backwards, but the general trend is forward – more efficiency, more quality of care, and so on.

However, health sector organisations differ in terms of how quickly they improve. In some organisations, everyone seems to be enthusiastic and hard-working, and improvements are always being made. In others, many staff seem very frustrated, changes are rare, and even the most trivial of problems may take a long time to be resolved.

There are several possible explanations. For example, it is evident that external threats sometimes encourage positive change, and that major political or social upheavals can serve as catalysts. There is less evidence that the availability of discretionary resources has a positive influence by itself, and the same may be said of new knowledge. An example is presented in this issue of AHR: the widespread distribution of clinical practice guidelines appears to have had little effect on the use of epidural injections for back pain and sciatica in Australia (Jackson, Broadhurst, and Bogduk, 2002).

However, the dominant factor may be the nature of the organisation's culture: that is, the set of shared values, beliefs, norms, and assumptions that affect actions, and which tend to be accepted without question by those who belong to the organisation (Vaughan 1996; Martin 2001). Inter alia, it is argued that individuals may begin to follow the patterns so they will be accepted by the group, the patterns may be learned by individuals often without realising this is happening, and they in turn may play a role in indoctrination of the next generation. In the language of sociology, culture is taken for granted and always emergent (Abercrombie, Hill & Turner 2000).

Cultures may be said to be strong if the patterns of thinking and acting are never questioned at the conscious level, and there are many consequent advantages including comfort and efficiency because people know what is expected. There is no need to start from first principles, because there is a basis for social order. There are also

some disadvantages. Of particular importance, culture can mean that new ways of thinking and behaving are not easily introduced. It is hard to make changes.

The idea that organisational cultures are of great importance has been widely expressed in health sector literature over several years. For example, see London 2001; Mahoney 2000; Clifford 2001; Hill & McNulty 1998; Ho 1999; Oakley 1995; Lawry 1995; Beer & Nohria 2000; Kirsch, Merck & Lightfoot 2000; Anon 1995; and Van Ess Coeling & Simms 1993.

These and other authors argue that there is a set of attributes that seem to be strongly associated with an organisation's ability continually to improve. In particular, it is important that ideas for change can be generated from anywhere in the organisation; that advice is regularly sought from outside the organisation, and from within it; that change takes place as a consequence of continual thinking at all levels of the organisation, rather than in response to external pressure; that change is continual and anticipatory, rather than a periodic response to crises; that people talk with each other, in many formal and informal settings and in different groupings of people, about possible improvements; that people feel a strong sense of belonging, share goals, and are interested in the organisation's success and not only their own; and that people look forward to change, rather than fear it.

Some models of effective organisational behaviour

Much has been written about effective organisations, and some of it concerns the use of specific diagnostic tools. For example, Mark & Scott (1991) apply domain theory, Wilkof & Ziegenfuss (1995) make use of the culture audit, and Seago (2000) discusses the organisational culture inventory. However, a large part of the literature relates to broad models of organisational behaviour of which four will be briefly summarised here.

Total quality management (TQM)

Many aspects of this model were developed primarily in the manufacturing sector in Japan. However, it later became used in all kinds of industries including health care – and in all countries (Ennis & Harrington 1999; Weber & Joshi 2000). It emerged because of dissatisfaction with aspects of the old ways of maintaining quality (quality assurance and quality control), whereby the responsibility for controlling performance was given to only a few people – inspectors or supervisors. This meant that many individuals did not take full responsibility for their own work: they knew that mistakes (and opportunities for improvement) would be found by others.

The main idea of TQM was that everyone in an organisation should be committed to improving the quality of their own work, and of all shared work. The term 'total' was used to emphasise that quality must involve everyone and every activity. 'Quality' meant high performance and concerned both efficiency (avoiding waste) and effectiveness (the way that the products performed).

One of the techniques associated with total quality management was called the 'quality circle'. This meant that groups of people would have regular informal meetings to discuss problems and share ideas about improvement. Each quality circle would usually involve a mix of people who would not otherwise meet to talk about improvements, have no formal structure (there would be only limited differences in status and power between members in the same circle), would be self-directing (in other words, the members could develop their own ways of having discussions, and would not have to follow the orders of any outsider), and would encourage everyone to speak about any topic (rather than restricting people to talk only about the work they did or knew best).

Continuous quality improvement (CQM)

This model was also an extension of quality assurance, which had usually involved the setting of standards by an external agent and then the rating of performance in terms of the extent to which the standards had been achieved. CQM added the idea that improvement should be continuous: workers were encouraged to set their own standards, and then set even higher standards once performance had met the current ones.

The learning organisation

This term was made popular by Senge (1990) and his ideas have been applied in many health care organisations of late (Birleson 1998). Senge proposed a model with five main elements, the first of which is promotion of personal mastery in its staff. This means that every individual in the organisation should have personal goals related to the work of the organisation, should have a plan to achieve those goals, and should be striving for those goals with passion.

Second, there are mental models: pictures that each staff member creates to explain the work that he or she does. In a learning organisation, everyone can draw these kinds of pictures when asked questions about such matters as what work they do, how they make decisions, and how they want to change their working methods in future.

Third, there are shared visions – collective pictures of the desired future. Senge stresses the difference between compliance (acceptance only because there are personal advantages in doing so) and enrolment (sharing the visions without having any personal motive, and with enthusiasm and commitment).

The fourth attribute is team learning – a process of communication among members of an organisation so that their collective knowledge and abilities become greater than the sum of the individual members' talents. Senge emphasises the difference between dialogue (generating ideas) and discussion (summarising the dialogue, and deciding what ideas should be pursued further). Finally, there is 'the fifth discipline' – systems thinking whereby the other four attributes are brought together, and there is structure and purpose overall.

Soft systems methodology

Features of SSM have been described elsewhere (see, for example, Checkland & Scholes 1990; Cavaleri 1994; Macias-Chapula 1995; and Braithwaite, Hindle, Iedema & Westbrook 2002). This model has a broader range of applications than the others, but it is relevant in several ways. For example, it makes use of the idea of the 'problem situation' rather than the 'problem', thus emphasising the idea that environmental factors such as organisational culture may be important. It incorporates the formal analysis of social and cultural aspects of problem situations by considering roles, norms, and values – and analysis of the often-related political (power) aspects.

Treating the organisational culture: one emerging approach

Much has been written about organisational problems and goals, but relatively little about the practical steps that might be taken to modify organisational culture. We have therefore assembled our own approach from mostly well-known components, and applied it in various organisations and countries over the last three or four years.

Our approach contains a wide range of interventions, and the mix and balance are variable. However, there are some elements that seem particularly useful in most circumstances, and they will be summarised in the remainder of our paper. They are presented sequentially, but the process is iterative and opportunistic in practice.

Having a shared understanding of the problems of organisational culture

It is obviously difficult to make progress on problem-solving if the problems are not acknowledged. Our experience suggests there must be an open and collective acknowledgment. We are reluctant to proceed further until there is a clear message from the group that "... we have problems in the ways we work together."

For the purpose of this stage, we have found it is much more effective to discuss concrete and local manifestations of the problems, rather than to talk at the conceptual level. The latter will be raised by the participants themselves in due course.

One approach that has worked well involves taking photographs of the organisation's workplace, and presenting them as a stimulus to discussion. An example is shown in Figure 1. It shows the back door of a hospital in a cold country. The door is propped open to provide the light that is needed because the light bulb has gone.

In this and other cases, the participants are simply asked whether they can see any problems; if so, what solutions might they suggest; whether there are sufficient resources to implement their solutions; and whom they consider should solve the problems.

In almost all settings, participants have no difficulty in rapidly pointing out that the problems and solutions are obvious, and require no additional resources. Indeed, fixing the problems will save money, improve performance, or both.

There is much more debate (and finger-pointing) with regard to responsibilities. However, a consensus emerges: that the problem rests with the organisation, rather than with any one individual at any level. A common idea expressed at this stage is that "... we are all prisoners, aren't we?"

Figure 1. Example of a picture used to start talking about problems



Having a shared understanding of attributes that promote success

It usually helps to ask participants to diagnose their own organisation in terms of practical manifestations of desirable and undesirable thinking and behaving. We have therefore made use of a questionnaire of the style shown in Figure 2, which we ask each participant to complete individually. Note that our questionnaire has some redundancy (for example, items 1 and 3 are antitheses). The intention was to allow for internal consistency checks, but we have found this to be largely unnecessary.

Again, the act of doing something (in this case, ticking boxes) seems to be important. It is usually less effective to talk through the items in the questionnaire, or to attempt to present and then discuss a generalised conceptual model.

Once the questionnaire has been completed, it is easy to stimulate useful discussion of a wide range of matters. For example, participants may choose to discuss whether their answers are honest (and the implications if they are not), whether senior and junior people (or doctors and nurses) in their organisation are likely to give different answers, and whether they know any organisations that might rate quite differently from their own – and if so, why.

Assessment of teams

Few tasks in health care can be handled well by individuals, and therefore it is important to look at attributes of teams. In the context of this paper, a team is defined as any group of people who are committed to common goals, are sharing the effort of attaining those goals, and who are mutually accountable for achieving them.

Figure 2. A diagnostic questionnaire about an organisation's culture

Tick one box to show your opinions on how your organisation works, for the most part		Yes	Maybe or sometimes	No
1	Ideas for change are very welcome, especially from junior staff.			
2	The most senior staff usually arrive first at meetings.			
3	All staff wait for change to be suggested by the most senior staff.			
4	It is easy to make change: if you have a good idea, you do not have to wait for lots of formal approvals. You can go ahead immediately.			
5	Powerful people often go to meet junior staff where they work, and have an informal chat.			
6	People are often praised for their work.			
7	Supervisors encourage junior staff to talk about their problems.			
8	Senior staff decide when a topic has been debated enough, and invite closure (such as a decision or adjournment).			
9	Most of the work is done in teams. We prefer to produce work as a team.			
10	There are too many routine statistics. We count everything, even though it is unclear why the statistics are useful.			
11	Senior staff always have their doors open. Other staff can go to talk to them any time.			
12	Senior staff often take the praise, even if they did not do the work.			
13	Senior staff pass down the blame for mistakes to their junior staff, even when the junior staff were not at fault.			
14	Senior staff do not share information. Other staff seldom know what's going on, unless senior staff choose to tell them.			
15	We are always trying out new ways of working.			
16	We always evaluate changes, so that we can learn how to make more improvements.			
17	We speak openly about mistakes, and we see them as opportunities to make improvements.			
18	Most staff are embarrassed to admit they do not know or they do not understand.			
19	If anyone sees a problem, he or she fixes it - rather than thinking it's somebody else's problem.			
20	If you ask for help, people are happy to give it.			
21	We often get together in our organisation, to think about different ways of doing things.			
22	New knowledge quickly spreads throughout the organisation.			
23	Most of our problems are caused by people outside our own organisation.			

Our sessions may begin by talking about why teams are important, and particularly why they are important in the participants' specific contexts. Participants often raise such factors as the need for patient care to be multidisciplinary; why a mix of social, economic, and physiological knowledge is required; the importance of improving the co-ordination of care across different settings (place of work, health centre, hospital, home, school, etc) over long periods of time; and so on. They also present many examples of ways in which their teams fail their patients.

It may be useful to stimulate discussion of the reasons why teams add value, if this is raised. Common remarks by participants are that teams can generate more ideas, solve more difficult problems, help individuals to grow (to develop their own knowledge, skills, and attitudes) by learning from others, allow team members become more aware of their colleagues' skills, and help them to become more respectful and appreciative of each other – trust is increased, and individuals stop blaming each other.

This kind of discussion is likely to be particularly important if there is a mix of health professions in the group. For example, we find that doctors' and nurses' views about teamwork tend to be quite different, and the differences need to be discussed openly.

Figure 3. Part of a questionnaire for assessing a team

Attributes	Tick one box		
	Yes	??	No
How your team is organised:			
Does your team have a clear purpose?			
Does your team have sufficient external support?			
Are there specified tasks and timetables for your team?			
Are there agreed roles and responsibilities of each team member?			
Team leadership:			
Is the leader trusted by all other members of the team?			
Does the leader ensure every member is given a chance to make comments and suggestions?			
Does the leader reward team members by praising their contributions?			
Does the leader avoid time-wasting on irrelevant or unimportant matters without giving offence?			
Does the leader know when discussion should diverge (brainstorming) and when it needs to converge (come to an agreed decision)?			
Does the leader take action on the majority's views, not on his or her own views?			
Does the leader encourage progress by inviting action when it is clear what needs to be done?			
Team membership:			
Are there people who no longer need to be part of the team all of the time (because their expertise will be needed only occasionally in the future)?			
Are there people who need to be added because their knowledge or their commitment is important to success?			
Have you ensured the consumers are represented fully and vigorously?			
Your performance in the team:			
Do you listen carefully to what others say?			
Do you encourage others to speak?			
Do you support other people's ideas (by saying "I agree" or "that's a good idea")?			
Do you speak too much or too little?			
Do people think you talk too fast or too slow?			
Do people usually understand what you say?			
Are you often negative - pointing out weaknesses rather than strengths?			
Your level of trustworthiness:			
If you undertake to do some work, do you make sure it is done on time?			
Do you say what you think, and avoid misleading people, without giving offence?			
Do you avoid hatching plots with a subset of team members?			
Do you avoid trying to form subgroups and alliances with a few friends in the team?			
Do you invite others to be open, and to express their feelings?			
Do you congratulate openness and avoid criticising others when they are open?			
Do you show commitment to the team's goals by what you do (not just what you say)?			
Are you flexible? Do you have an open mind?			
Team processes:			
Is your team's work well coordinated?			
Are there good and clear rules for decision making?			
Are there good ways of managing conflict between team members?			
Is the team's performance regularly evaluated?			

At some stage, it is useful to ask participants to rate their own team – or at least, a team in which they have worked recently. Part of this rating instrument is shown in Figure 3. The complete instrument draws heavily on other people's ideas, including those presented by Mickan & Rodger (2000). We often add a section to the questionnaire in which the participant is asked to describe the two changes that would most significantly improve the performance of his or her team.

Finally, we invite participants to discuss ways in which the questionnaire might be used in future, and how it might be extended. In general, it seems important to make continual reference to what each participant might do next.

Talking about sub-cultures in health care

The issues of culture are particularly significant in health care. In addition to the culture of the organisation as a whole, there are usually strong professional sub-cultures – both clinical and non-clinical (Degeling, Kennedy & Hill 2001).

This stage provides opportunities to reinforce the general idea of cultural constraints to change, as well as to introduce the idea of conflicting cultures and the ways they can be handled. In a workshop for senior Chinese clinical managers, we pointed out that conflicts between medical and nursing cultures were a primary cause of difficulties in many health care systems including that of Australia. Several participants then argued such difficulties were of little importance in China. One factor was the Cultural Revolution, when many of the most powerful professional cultures were subjected to 're-education'. At a refreshment break, one of the authors turned round to find the nurse managers eager to talk informally – to stress that the clash between medical and nursing professions was still a major concern. The fact that they were not willing to challenge their (obviously medical) colleagues' views in the formal session was a strong indication that the gaps still existed.

We raise this matter in a variety of ways and contexts. One exercise involves asking participants to write down ways of thinking or acting that are typical of the medical profession – and which people from other professions are less likely to think or do. It should be something "... that is not seen to be sensible by people from other professions". This exercise is then repeated with respect to the nursing and administration professions.

A variant of this involves providing a list of statements, and asking participants to guess the most likely profession of the speaker. A similar exercise consists of asking participants to shout out adjectives that are often used in informal contexts by one professional group to describe another. We find that responses are virtually identical across organisation types and countries.

Performance in meetings

Most participants believe that meetings are important, not only in terms of the opportunities they present for improvement in operations but also because of their cost in staff time. Most can recognise common problems, such as poor chairing or inadequate preparation of materials.

However, there is another set of problems that are less well recognised – or which are recognised only when pointed out by the facilitators. A good example is partial or non-comparative evaluation, or ponceing (Dowey, 1995). The ideas are far from simple, and we find that it is necessary to spend some time illustrating them by use of local examples. Once the ideas are clear, it is normal for participants to recognise this behaviour as a major weakness of their own meetings. The same may be said of several other types of destructive behaviour.

Figure 4 shows a part of a questionnaire that we use as the basis for summarisation. One extension involves asking participants to select one of the behaviours ranked as common in their organisation, and to suggest ways of reducing it.

An interesting feature of our experiences is that all the listed behaviours are common in some organisations, and again there seems to be relatively little variation between organisation types and countries. From our small and biased sample of experiences, one might hypothesise that meeting behaviours are universal in some respects. In a recent discussion with a group of Japanese health professionals, one of them argued that meeting behaviours were widely different in Japan and Australia. His colleagues mostly disagreed: the way in which (say) the high moral ground is claimed may differ in terms of language and gesture, but the underlying process is the same and leads to the same results.

Figure 4: behaviours that reduce the effectiveness of meetings in your organisation

Behaviour	Importance
1 Ponceing (incomplete evaluation resulting in unfair criticism)	
2 Stereotyping or labelling	
3 Rationalising (giving false explanations of why you disagree)	
4 Transference (attributing your own opposition to someone else)	
5 Temporising (giving poor excuses for delaying changes)	
6 Speaking for the tribe: masking self-interest with general attribution	
7 Using sacred rather than profane language	
8 A common form of attribution: underestimating the community	
9 Talking about shortfalls rather than under-used resources	
10 Claiming the high moral ground	
11 Making unfair use of history	

We suggest a variety of ways to change meetings, and the mix depends on the problems perceived by the participants. For example, we may invite them to design a set of guidelines for future meetings that covers (say) preparations, chairing, unacceptable behaviours, and the rights and responsibilities of everyone to intervene when unacceptable behaviours emerge.

Other treatments

Various other kinds of ideas may be raised and illustrated. In some organisations, there may be value in talking about ideas as simple as a suggestions box, or having rap sessions.

We have always found a discussion of mentoring to be useful, if only because there has been little experience of it in the organisations where we have worked. Mentoring means appointing an experienced person to help a more junior person to achieve personal (and therefore the organisation's) goals. The help may involve technical training on a one-to-one basis, giving advice on personal matters on a one-to-one basis, giving introductions to other staff, speaking in favour of the protégé, being a role model and a motivator, and protecting the protégé from potential mistakes and problems. We encourage the view that mentoring is a good idea. It is especially useful for junior staff who lack confidence or who are traditionally less able to settle in – such as young women in some societies.

We say very little about individual staff performance appraisal, for the obvious reason that our focus is on teams rather than individuals. However, we have found it useful to ask about aspects of performance appraisal that encourage or constrain improvements in organisational cultures. It may also be useful to discuss aspects of performance appraisal that could serve as a basis for organisational appraisal (Spreckley & Hart 2001).

Similarly, there is nearly always value in talking about open doors: the idea that senior staff leave their office doors open, and make it clear that any junior staff member is welcome to enter. Participants often observe that it may not be practical to leave the door open all the time. However, they tend to be comfortable with the idea that senior staff should announce times of the day and the week that their doors will be open. The opposite scenario seems to be equally attractive: that senior staff should make the trip to where junior staff are working, to have informal conversation – and mainly to be willing to listen.

Finally, we think it is very important to stress the responsibility of each individual to help build a better organisational culture. This may involve asking each participant to write down one step that he or she will take tomorrow, and then asking each in turn publicly to explain it. We have found that not everyone is willing to do this, but there are lessons and messages in silence as well.

Conclusions: what next?

We have found a high degree of consistency of participant reactions across six countries on three continents, in both formal and informal evaluations. First, most people consider the topic to be relevant to them – to a greater extent than other workshops we have delivered on specific technical issues such as clinical governance, insurance benefits design, clinical pathways, or product costing. They think that the most benefit is derived when sessions involve communication between staff of all levels and types.

Second, they believe that some consideration of organisational cultures is a pre-requisite to consideration of technical matters – and especially those that have a significant element of culture. For example, it makes sense to talk about organisational cultures as a prelude to addressing a topic like clinical pathways, if only because most people's responses to the idea of pathways are strongly affected by their own professional or organisational cultures.

Third, many participants are initially cautious, but the large majority rapidly become enthusiastic about diagnosing their own organisations' cultures – and their own roles in maintaining or changing them. This might not be a general conclusion. Much may depend on the details, including the extent to which participants are helped to express ideas in non-threatening ways.

Finally, most participants leave the workshops having some degree of commitment to try to apply ideas learned or reinforced during the workshops. We have no scientific basis for judging whether they are achieving permanent changes in organisational culture, but return visits suggest they have successfully made small changes in the right direction.

With regard to methodology, we feel we are still at the beginning: we are using the equivalent of the 1976 Osborne computer with its 5" screen and 32kb RAM. Every workshop leads us to contemplate changes for the next. Perhaps our talking about learning organisations has encouraged a change in our culture too.

References

- Abercrombie N, Hill S & Turner BS 2000, *'The penguin dictionary of sociology'* (4th ed), Penguin, London.
- Anon 1995, 'Understanding culture: key messages for leadership', *Health Progress*, vol 76 no 2, pp 20-4, 48.
- Beer M & Nohria N 2000, 'Cracking the code of change', *Harv Bus Rev*, vol 78 no 3, pp 133-41, 216.
- Birleson P 1998, 'Learning organisations: a suitable model for improving mental health services?' *Aust N Z J Psychiatry*, vol 32 no 2, pp 214-22.
- Braithwaite J, Hindle D, Iedema R & Westbrook JI 2002, 'Introducing soft systems methodology plus (SSM+): why we need it and what it can contribute', *Australian Health Review*, vol 25 no 1.
- Cavaleri SA 1994, 'Soft systems thinking: a pre-condition for organisational learning', *Human Systems Management*, vol 13 no 4, p262.
- Checkland PM & Scholes J 1990, *'Soft systems methodology in action'*, John Wiley and Sons, Chichester.
- Clifford N 2001, 'Strategic alignment between senior and middle managers in local government and health', *Int J Health Care Qual Assur Inc Leadersh Health Serv*, vol 14 no 2-3, pp 87-95.
- Degeling P, Kennedy J & Hill M 2001, 'Mediating the cultural boundaries between medicine, nursing and management—the central challenge in hospital reform', *Health Serv Manage Res*, vol 14 no 1, pp 36-48.
- Dowie J 1995, 'The danger of partial evaluation', *Health Care Anal*, vol 3 no 3, pp 232-4.
- Ennis K & Harrington D 1999, 'Quality management in Irish health care', *Int J Health Care Qual Assur Inc Leadersh Health Serv*, vol 12 no 6-7, pp 232-43.
- Grylls CJ 1990, 'Organisation change on the run: a simplified model for managers', *Australian Health Review*, vol 13 no 1, pp 22-33.
- Hill S & McNulty D 1998, 'Overcoming cultural barriers to change', *Health Manpower Management*, vol 24 no 1, pp 6-12.

- Ho W 1999, 'Hospital transformation and organisational learning', *Journal of the Royal Society of Health*, vol 119 no 4, pp 247-50.
- Jackson C, Broadhurst N & Bogduk N 2002, 'An audit of the use of epidural injections for back pain and sciatica', *Australian Health Review*, vol 25 no 5.
- Ingersoll GL, Kirsch JC, Merk SE & Lightfoot J 2000, 'Relationship of organizational culture and readiness for change to employee commitment to the organization', *The Journal of Nursing Administration*, vol 30 no 1, pp 11-20.
- Lawry TC 1995, 'Making culture a forethought: what to do when strategy meets organizational culture', *Health Prog*, vol 76 no 4, pp 22-5.
- London J 2001, 'Employees' perceptions of workplace change', *Australian Health Review*, vol 24 no 4, pp 128-34.
- Macias-Chapula C 1995, 'Development of a soft systems model to identify information values, impact, and barriers in a health care information system', *J of Information Science*, vol 21 no 4, pp 283-289.
- Mahony K 2000, 'Faith in the 'cultural fix': limits to a planned cultural change program in a rural health service', *Australian Health Review*, vol 23 no 4, pp 187-96.
- Mark A & Scott H 1991, 'Changing cultures – determining domains in the NHS', *Health Services Management Research*, vol 4 no 3, pp 193-205.
- Martin J 2001, *'Organizational Culture: Mapping the Terrain'*, Sage, New York.
- Mickan S & Rodger S 2000, 'The organisational context for teamwork: comparing health care and business literature', *Australian Health Review*, vol 23 no 1, pp 179-92.
- Oakley P 1995, 'Cultural changes within the NHS', *British Journal of Hospital Medicine*, vol 54 no 2-3, pp 113-4.
- Seago JA 2000, 'Registered nurses, unlicensed assistive personnel, and organizational culture in hospitals', *The Journal of Nursing Administration*, vol 30 no 5, pp 278-86.
- Senge P 1990, *'The fifth discipline: the art and practice of the learning organisation'*, Doubleday, New York.
- Spreckley P & Hart T 2001, 'Organisational development: reigning cats and dogs', *Health Serv J*, vol 111 no 5756, pp 28-9.
- Van Ess Coeling H & Simms LM 1993, 'Facilitating innovation at the nursing unit level through cultural assessment, Part 1: How to keep management ideas from falling on deaf ears', *The Journal of Nursing Administration*, vol 23 no 4, pp 46-53.
- Vaughan D 1996, *'The challenger launch decision: risky technology, culture, and deviance at NASA'*, University of Chicago Press, Chicago.
- Weber V & Joshi MS 2000, 'Effecting and leading change in health care organizations', *Jt Comm J Qual Improv*, vol 26 no 7, pp 388-99.
- Wilkof M & Ziegenfuss JT 1995, 'Culture audits: a tool for change', *Health Prog*, vol 76 no 4, pp 34-8.