Power and influence in clinical effectiveness and evidence-based medicine

Toby Lipman

Background. The need to base clinical interventions on valid findings of research has been a dominant theme in clinical practice during the last quarter of a century. However, there is much evidence showing that research evidence reaches everyday practice slowly. Solutions to this problem include evidence-based practice and implementation by guidelines and audit. Studies of these methods have included surveys of clinicians’ views, implementation projects and evaluations of educational interventions, but they have not examined their implications for the power structure of clinical organizations. This is surprising, given the emphasis placed on medical power in sociological studies of health care.

Methods. A framework derived from management theory defines and summarizes theories of power and influence under the headings: sources of power, overt methods of influence, unseen or covert methods of influence and individual response to influence. This framework is then used to analyse the power and influence possessed and exerted by general practitioners (GPs) and hospital consultants and how these are affected by evidence-based practice and guidelines and audit programmes.

Outcomes. GPs are seen as having less expert power than consultants and to be more compliant with externally managed guidelines and audit programmes. It is pointed out that compliance with guidelines and audit programmes helps GPs to meet their contractual requirement to be involved in clinical audit activities. Evidence-based practice, which directly challenges the authority of expert opinion is seen as a threat to the power of consultants, but a potential opportunity for GPs and other clinicians whose status is traditionally lower.

Keywords. Audit, clinical effectiveness, evidence-based medicine, guidelines, power and influence.

Introduction

During the last quarter of a century it has become clear that there is widespread variation in clinical practice and that ineffective interventions based on tradition continue to be used while effective interventions based on valid research enter practice too slowly.\(^1\) Cochrane advocated the use of evidence from randomized controlled trials to determine treatments rather than to rely on established practice\(^2\) and his argument is now generally accepted. However, variations in practice persist, for example in the referral rates of general practitioners (GPs)\(^3\) and rates of Caesarian section\(^4,5\). The delayed implementation of evidence favouring the use of thrombolysis in acute myocardial infarction\(^6\) is an example of the potential for harm if clinical practice is based on expert opinion alone.\(^7\)

These problems have been addressed in various ways. In the 1980s, clinical audit was widely promoted (for example by the Royal College of General Practitioners) as a means of reducing unacceptable variation in clinical practice.\(^8\) At that time the standard was usually set by professional consensus, and was supposed to be implemented by voluntary participation of clinicians. However, the 1990 new contract for GPs made audit a requirement of UK GPs’ terms of service.\(^9\)

Evidence-based medicine, developed by Sackett and colleagues as a combination of clinical epidemiology and critical appraisal, has been defined as “a process of life-long, self-directed learning in which caring for our own patients creates the need for clinically important information about diagnosis, prognosis, therapy and other clinical and health care issues”.\(^10\) It is concerned with identifying and rectifying gaps in our knowledge about
management by a process of question forming, searching for evidence, critical appraisal and evaluation. It implies that clinicians have autonomy, favours group learning as a means of clinical decision making and is explicitly sceptical of ‘expert opinion’ and ‘received wisdom’.  

Haines and Jones, reviewing the difficulties of getting research findings into practice, suggested the use of evidence-based clinical guidelines and audit as a means of implementing clinical interventions in selected priority areas. Such guidelines and audit projects, administered by organizations external to clinical teams, have been widely researched, especially by the King’s Fund PACE project, Clinical Governance, introduced by the UK government as part of the ‘New NHS’, groups together clinical audit, evidence-based practice, clinical risk reduction programmes, professional development programmes and other quality improvement measures as a statutory obligation of all NHS organizations.

Each of these methods of achieving optimum clinical performance is organized in a different way. Clinical governance itself is a heterogeneous grouping of disparate quality improvement measures (including audit and evidence-based practice) which cannot necessarily be implemented by a uniform organizational approach. What they have in common is a requirement for clinicians to change the way they practice in order to improve clinical effectiveness. Writers on evidence-based medicine advocate better information systems and improved educational interventions in order to overcome barriers to the use of research evidence and have investigated attitudes to the use of research evidence and the implementation and use of guidelines.

The literature of clinical effectiveness and evidence-based practice rarely touches on matters relating to power and authority within organizations. A group of GPs at an evidence-based medicine workshop believed that evidence-based practice was ‘empowering’ to primary care clinicians, and in a qualitative study of clinicians’ attitudes to the uptake of evidence a nurse observed that when nurses tried to use evidence-based guidelines they might be overruled by consultants. This omission is perhaps surprising given the emphasis on the power of doctors in sociological writing about medicine and health care. In order to explore these issues, theories of power and authority from management theory will be outlined and used to interpret the responses of consultants and GPs to guidelines and audit projects and to evidence-based practice.

Power and authority

Weber describes three ‘pure types’ of legitimate authority:

(i) Legal authority, based on ‘rational grounds’, in which authority is derived from a position established by normative rules (e.g. managing director, police officer) and in which obedience is due to the position rather than the person, who exercises authority only by virtue of occupying the position.

(ii) Traditional authority, in which authority is conferred by a belief in tradition established by custom, and in which obedience and loyalty are due to the person who occupies the position as well as the position itself (e.g. the monarch).

(iii) Charismatic authority, in which an individual’s ‘exemplary character’ and other virtues enable him or her to exercise authority, and to whom obedience is given because of ‘personal trust’ in the individual.

He points out that these types are rarely found in a pure form and observes that the first type, ‘legal authority’, is ideally suited to the management of bureaucratic organizations, which he considers both most efficient and virtuous, leading to appointment on merit and to greater democratization.

Handy distinguishes between power, influence and authority, classifying influence as the use of power, and authority as legitimate power, and has described the sources of power, overt and unseen methods of influence, and the individual response to influence (see Table 1).

This classification gives a framework to analyse the interplay of power, influence and individual response within organizations.

Consultant-led hospital teams and GP partnerships in the NHS

Although GPs are independent contractors and consultants salaried employees of NHS Trusts, both retain a similar degree of professional autonomy and are regarded as leaders of their teams. They have both position power and expert power, although consultants are traditionally thought more ‘expert’ than GPs, and are able to exert this largely through rules and procedures, persuasion and magnetism. Consultants dispose of considerable resource power over junior medical staff, whose careers may be advanced by being offered a post on a particular team, by a good reference from their consultant or by being invited to participate in teaching or academic activities within the gift of the consultant. In addition they may have considerable influence over the ecology of their unit. They are used not so much to being obeyed, as to having their views and opinions deferred to without question. This evokes compliance from their immediate circle (including patients, junior staff and non-medical staff), but their influence extends beyond their units to GPs (who may be prone to identification and compliance with advice from consultants, both about individual patients and in their continuing professional education) and to managers and (especially if the consultant is senior) to the various bodies which make policy for the
NHS as a whole. Consultants are also able to use their negative power whenever they perceive the need to resist outside influence or unwelcome suggestions from within their team.

GPs’ resource power over members of their team varies depending upon whether they own their premises and which of the team they employ, and their expert power is usually less than that of consultants. They have, of course, considerable power over patients and, although ideally they exert it by persuasion, it is likely that much of the time it is exerted by exchange or rules and procedures. Although GPs are legally independent contractors, they are bound by their Terms and Conditions of Service, a detailed set of rules and regulations, and in practice Health Authorities can exert considerable power over them through these (although they cannot suspend or dismiss them). Where Health Authorities have policies they wish to implement (such as changes in prescribing), they are able to influence GPs by offering payments if the desired change is implemented (resource power exerted by exchange) and back this up by educational and administrative activities such as outreach visits, educational meetings and written material (expert power exerted by persuasion).

Consultants are employees of their Trusts and can be suspended or dismissed by them. In practice this happens only rarely and consultants’ position power (like that of GPs) is remarkably secure. Once appointed, they are in a very powerful situation and most appear willing and able to exert their power by all the means described above. They are well able to resist changing their practice in response to their Trust’s (or anyone else’s) influence,
arguably much more so than GPs are to resist their Health Authority.

Clinical effectiveness by guidelines and audit projects

There is much historical evidence that valid research often takes years or decades to achieve general acceptance by the medical profession and that its implementation is frequently uneven. For example, only 41% of primary care patients in a 1991 study were receiving adequate secondary prophylaxis following myocardial infarction. One remedy is to make important research findings the starting point for determining what treatment should be given to patients. Ideally, evidence-based guidelines, derived from systematic review of the research evidence, are used to set standards for audit. Local priorities are identified, and implementation is achieved by auditing current levels of performance, and informing clinicians through the provision of written guidelines, education and feedback. In primary care, Medical Audit Advisory Groups (MAAGs), set up after the UK GP contract was reformed in 1990, are often used to undertake the audits. Committees of local experts (academics or public health professionals, with a few GP enthusiasts) set the priorities and instruct GPs what to do, usually in an educational setting (see Table 2).

This model is widespread in primary care. GPs are consulted (often as part of a research agenda which seeks to understand the cultural and organizational barriers and facilitators to implementation) but do not initiate the project, set the standards or organize the details of implementation. The power (position, expert and resource) behind making these decisions is firmly in the hands of experts, Health Authorities and MAAGs. The educational aspects give the impression that the desired mode of influence is persuasion, which may be expected to lead to identification or even internalization on the part of the GP. But what is the reality? In practice implementation is achieved by rules and procedures and, especially, exchange, leading to GPs’ compliance. The 1990 contract’s requirement for GPs to be involved in audit can be fulfilled by co-operating with bodies such as MAAGs, and GPs are often perfectly happy to let MAAGs and local experts set the agenda in exchange for relieving them of the extra work that would be entailed in carrying out the audits themselves. It can be argued that GPs’ power was reduced by the 1990 contract and that their compliance with clinical effectiveness programmes partially reflects this.

Few guidelines and audit programmes have been studied in secondary care. A study of a programme to implement guidelines for risk assessment and prevention of deep-vein thrombosis in hospital in-patients identified a number of problems. Thirty-five out of 79 eligible wards did not use the guidelines; the reasons given were ‘not applicable’ (10 respondents), ‘consultant refusal’ (seven respondents), ‘not agreed—general’ (three respondents), ‘guidelines not seen’ (two respondents) and ‘not implemented’ (13 respondents). Educational sessions were difficult to achieve with nurses and impossible for junior hospital doctors, because of their other commitments. There was poor communication within the trusts and, although co-operative, clinical audit departments were “not being used in a strategic way to gather routine data”. The authors comment dryly that “the guideline development group could have been made more manageable by having less [consultant] surgical input”.

Overall, the consultants’ response to external experts was more negative and less compliant than the GPs’. Some refused outright to co-operate, others claimed that the evidence was ‘not applicable’ to their specialty while others simply did nothing to assist implementation. The clinical audit departments had little or no power, and the external experts had much less influence than in comparable situations in primary care. The project challenged consultants’ expert power (but weakly) and some responded by resisting strongly. The only means of influencing them was persuasion which, in the event, could not overcome their negative power (for it to have been successful would have required consultants to comply or identify with the expert or personal power of the project leaders). Though the evidence base of the proposed intervention was scientifically valid, this alone was not sufficient to overcome the resistance of some consultants to ceding power.

Table 2 Achieving clinical effectiveness by guidelines and audit

| 1 | Clinical area identified and prioritized by local expert group |
| 2 | Evidence-based guideline sought (either pre-existing or by commissioning systematic review) |
| 3 | Expert group sets standard for audit |
| 4 | Local clinicians informed by educational meetings and distribution of guideline |
| 5 | Audit carried out by audit team answering to expert group |
| 6 | Feedback of audit results to clinicians and setting of new audit standard |

Evidence-based practice

Evidence-based practice, like the guidelines and audit model, is designed to apply the findings of research to patients’ medical problems. However, it starts with a problem presented by the patient rather than with the research evidence (see Table 3).

This is antithetical to the process used in guidelines and audit methods, which take a population rather than an individual perspective on medical interventions. Maynard criticizes evidence-based practice because it is
A need for information arises during clinical practice due to recognition of a gap in the clinician’s knowledge about how to manage a patient’s (or group of patients’) clinical problem. The evidence is critically appraised for validity and applicability to the patient’s problem. The question is used as the basis of a search for evidence to inform management of the problem. The evidence is critically appraised for validity and applicability to the patient’s problem. The appraised evidence is used to inform management of the problem.

Evidence-based practice became established in the UK following David Sackett’s appointment as Director of the newly formed NHS R&D Centre for Evidence-Based Medicine at Oxford in 1994. It was promoted especially by the week-long UK workshops on teaching evidence-based medicine, first held at Oxford in July 1995, followed by annual workshops in London, Oxford, Wales and (from 1999) Durham. The workshops are conducted in small groups, with the responsibility for learning handed over or, some would say, thrust upon the participants, who must learn how to ask ‘structured answerable’ questions and answer them using difficult, newly acquired skills, and at the same time ‘unlearn’ lifelong habits of deference to experts and concealment of their own ignorance. The atmosphere is often emotional and participants sometimes appear to experience a ‘paradigm shift’ in world view (evidence-based medicine has been explicitly promoted as a paradigm shift in the practice of medicine).

Thus a doctor practising evidence-based medicine views the world differently from one practising in the traditional paradigm. In particular, there is no longer a requirement to defer to traditional experts, whose fallible judgement has been documented and cited as the reason why the new paradigm is necessary. If a question arises during a ward round, for example, evidence must be cited, or sought and critically appraised, to answer it. In the traditional paradigm, a ‘teaching round’ consists of consultants asking questions of their juniors (who must strive not to appear ignorant, and accept as true whatever the consultant tells them). In evidence-based medicine the balance of power (in the form of the right to ask questions) is shifted towards juniors, who are not only entitled to ask for evidence to back up their seniors’ assertions, but who (if they have mastered the skills of question forming, searching and critical appraisal) may on occasion discover something their senior did not know. If taken to its logical conclusion, it is also implies a shift of power towards individual patients, as clinicians are encouraged to act as interpreters of evidence for their patients, who are thus given a greater opportunity to share in decisions about their management.

This is a profound challenge to consultants’ expert power and it is not surprising that consultants have not universally welcomed evidence-based medicine. If you have spent years assiduously acquiring knowledge and expertise, and have arrived at the status of consultant (with all that implies in terms of personal power) it may be uncomfortable to have it undermined in this way. Evidence-based medicine has been represented as a threat to ‘clinical freedom’ (albeit possibly an acceptable one) and to individual clinical expertise. The volume of criticism, much of it personally directed at Sackett and his colleagues, has led them to publish clarifications of what they mean by evidence-based medicine.

In primary care, criticism has been just as fierce, but for different reasons. It is claimed that evidence-based medicine devalues the humane and social aspects of clinical practice. Certainly only a small proportion (about 5%) of UK GPs believes that they need to acquire the skills of evidence-based practice. Nevertheless, GPs are prominent among tutors at evidence-based practice workshops and among their organizers and evidence-based practice has enthusiastic GP advocates. It is potentially attractive to GPs because it enables them to retain control of medical problems in the community which formerly had to be handed over to experts in secondary care. This represents an enhancement of GPs’ expert power.

Evidence-based practice has a low priority in clinical governance in primary care. One reason is the (accurate) perception that “evidence-based practice skills are not widely disseminated”. But it is also true that if these skills were to be widely disseminated the local expert groups who currently implement clinical effectiveness programmes, and consultants, would have to cede expert power to GPs and others. This would mean that bureaucratic implementation processes could be less dominant (as there would be an effective alternative), which is not necessarily an attractive prospect to a management concerned to maintain control and accountability over what happens in the NHS.

Discussion

Both the process of evidence-based practice and guidelines and audit projects have a place in improving the
use of research evidence in clinical practice. The former devolves power to the individual clinician and patient level and is arguably an advance on traditional clinical practice, both in terms of keeping up to date and of individualizing the application of research findings. The latter retains power within expert groups and enables implementation to be controlled by a bureaucratic structure as described in the classic model of Weber. Bureaucracies can be very effective in achieving improvements in specific health outcomes for a defined population, but are unlikely to be able to achieve the application of current best evidence for all health problems that might present to doctors, particularly to GPs. Evidence-based practice might therefore be seen as a useful (some would argue essential) tool for clinicians to address problems that have not been identified as local priorities.

However, neither evidence-based practice nor guidelines and audit programmes are value-free tools that we can use or not use to achieve optimum population or individual-patient outcomes. They enhance the power and influence of some groups, while reducing that of others. It is not surprising that groups whose power and influence are threatened should resist change that threatens them. Evidence-based practice seems to have greater potential to destabilize existing structures of power and influence than guidelines and audit programmes. It is arguable that the present distribution of power and influence could not survive the widespread adoption of evidence-based practice.

The groups that stand to lose power and influence from evidence-based practice are established consultants and health service bureaucracies. From the viewpoint of a classical Weberian bureaucracy, evidence-based practice in its pure form is uncontrolled and uncontrollable. It is based upon individual clinicians’ judgements about what are the important questions to answer about individual patients’ management, on their ability to find and critically appraise evidence, and on how they negotiate decisions about management with individual patients. Thus it would not be possible to anticipate and determine in advance protocols for the management of each individual’s clinical problem. It has been persuasively argued that where patients present with undifferentiated problems, such as in general practice or in accident and emergency departments, a bureaucratic, deterministic approach is likely to be less successful than one based upon an understanding of theories of chaos and complexity. Rather than practice according to rigid protocols or guidelines imposed by a bureaucratic hierarchy, such organizations would function as complex adaptive systems, in which each member of the team would respond according to his or her knowledge and ability, seeking information from the most appropriate source as and when necessary.

The implication of this is that power would naturally devolve to the level at which clinical decisions are made, whether that be consultant, GP, nurse, junior doctor or paramedic. Consultants would lose part of their authority and be placed in a position where they might have to compete for expert power with their juniors, nurses, GPs or even patients. Management would have less apparent control over the clinical process. This ought to be attractive to GPs (and to some consultants), but they would have to give up control over many clinical decisions to other members of their teams. Perhaps the greatest barriers to achieving this are the perceived difficulty of internalizing the process of evidence-based practice, and long-established traditions of deference to authority.

Conclusions

Barriers to the implementation of guidelines and evidence-based practice include established power and authority structures within health care organizations. Studies are needed which address these issues, and implementation programmes need to take them into account. Collaboration with management theorists and other social scientists should be considered when implementation programmes or evidence-based practice are being evaluated.

References
