cigarette manufacturers. In theory, a cigarette manufacturer who wishes to introduce a perfumed cigarette to mask the smell of tobacco smoke can do so without regulatory obstacles. On the other hand, if a pharmaceutical company wants to add mint flavouring to nicotine gum to make it more palatable, it must endure years of regulatory hurdles.[3]

It is not a coincidence that cigarettes have so far managed to escape regulation. Soon after taking office, the former United States Surgeon General Everett Koop discovered that tobacco "is considered neither a food nor a drug nor a cosmetic; therefore it is a unique substance, virtually outside regulatory control."[4] The reason for the cigarette's unique legal status, at least in the United States, is that Congress made sure to insert a clause that specifically excluded tobacco from virtually every major law passed to protect consumers, including the Controlled Substances Act 1970, the Consumer Product Safety Act 1972, and the Toxic Substances Control Act 1976.[5] This lamentable record culminated in the supreme court ruling two years ago that the Food and Drug Administration lacked the authority to regulate tobacco.

By contrast, the report from the royal college has identified several existing pieces of legislation in the United Kingdom that do not seem to exclude tobacco, including the Consumer Protection Act 1987, the Medicines Act 1968, and the Food Safety Act 1990. These laws offer a promising framework for the regulation of nicotine, including tobacco products.

The urgent need for levelling the playing field in nicotine regulation is underscored by the proliferation of new tobacco products on the market. In the absence of any regulation, cigarette manufacturers have introduced a veritable bazaar of new products—for example, R J Reynolds's "Eclipse" and Philip Morris's "Accord" (examples of so called smokeless cigarettes), as well as Brown and Williamson's "Advance" and Vector Tobacco's "Omni" (examples of "low carcinogen" cigarettes). New cigarette products are often implicitly marketed to smokers as "safer" alternatives to conventional cigarettes. No Cochrane reviews have yet been conducted to back any claims of "safer" cigarettes. However, history warns us that whenever product modifications are introduced by cigarette manufacturers they are usually nothing more than a marketing exercise designed to deter smokers from quitting.[6] For example, the seemingly wide range of choice that consumers have in the "low yield" cigarette market is an illusion based on machine yields of nicotine and tar that bear little relation to the actual levels inhaled by smokers.[7]

This is not to deny that genuine reduction of harm might be achievable some day through technological advances. Economic logic means that such technological innovations might be encouraged and sped up by levelling the competitive playing field for products containing nicotine.[3] An independent nicotine regulatory authority with jurisdiction over both new tobacco products and other nicotine delivery products would serve the interests of both fair competition and the protection of public health.

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Doctors and managers

A constructive dialogue has to replace mutual suspicion

The rejection of the contract for UK consultants has brought the relationship between doctors and managers into sharp focus. The BMA and consultants got a bad press. Managers were characterised as everything from the unwilling pawns of a malign government to intellectually second rate, morally bankrupt outsiders who do not understand health care and exist only to frustrate good patient care. This caricature of doctors fighting with managers is strange as many of the managers who would have been responsible for implementing the contract were in fact doctors. Some serious work by managers and doctors is needed to understand the nature of the problem and develop new ways of working together.

It is helpful to see this latest upset as part of a deeper problem, which has a long history. In 1920 Sir George Newman, the first chief medical officer at the Ministry of Health, speaking to the BMA, said: "The state has seen in the profession a body insistent on the privacy and individuality of its work, the sanctity of its traditions and the freedoms of its engagements. The profession has seen in the state an organisation apparently devoted to the infringement of these traditions and incapable of putting anything worthy in their place. It has feared the imposition of some cast iron system, which might in practice make the practitioner of medicine servile, dependent and fettered."[1] The introduction of managerial reforms in the 1980s and the split between purchaser and provider in the 1990s highlighted this tension further.

The tension may reflect real and important differences in the way that doctors and managers see their roles and responsibilities, which means that important issues, such as accountability, the use of guidelines,

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targets, and finance are approached in quite different ways. This may be the result of the different training and beliefs that underlie the two disciplines and which the education and experience of both groups tends to reinforce. As the *BMJ* has noted before, longstanding unhappiness prevails in the medical profession in many countries, which is related to a change in the expectations placed on doctors and the extent to which this is different from the original conception of the job or "psychological contract" they signed up for.[2–5] This unhappiness is perhaps being taken out on managers since from a doctor's perspective they are such a visible manifestation of the problem.

This problem is a fundamental issue for the NHS because of the pivotal role and influence that doctors have in the organisations in which they work. We are cautious of military or sporting metaphors in management, but in this case the lesson that teams or armies that do not enjoy the full commitment of key members will fail sooner or later is supported by studies of organisational failure[6] and a recent examination of failing hospitals.[7] If not addressed, the problem threatens individual institutions, the successful implementation of the health service reforms, and perhaps even the future of the NHS.

Once we have identified clearly the nature of the problems, the next step is to start to look for solutions. Many of those proposed have been simplistic, impractical, and strikingly free of evidence. The *BMJ* will be devoting the issue of 22 March 2003 to the relationship between doctors and managers, and a companion edition of the *Health Services Journal* will be published on 27 March. Although time is short and we cannot promise publication, we would be interested in submissions describing the relationship between clinicians and managers and how to improve it. This work will help to inform a summit meeting on 27 March between leaders of the medical profession and organisations that represent NHS management, to discuss a new understanding of how managers and doctors can work constructively together.

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Preventing and treating tetanus

The challenge continues in the face of neglect and lack of research

One hundred and twenty years ago, the *BMJ* contained the following report: "Death from tetanus induced by hypodermic injection. An inquest was held by the coroner for the city of Dublin last week on the body of a governess, aged fifty-six years, [who] used to inject morphia herself subcutaneously, for the relief of neuralgia arising from bad teeth … Dr Austin Meldon was of the opinion that the cause of tetanus must have been the injury of some nerve by the needle."[1]

In fact, the governess's tetanus probably resulted from chronic dental infection or using a dirty needle, not the nerve injury the doctor supposed. Six years after this report, Arthur Nicolaier showed that tetanus resulted from contamination of wounds with soil bacilli, which, he correctly deduced, produced a "strychnine-like" toxin responsible for the disease.[2]

More than a century later much more is known about the tetanus toxin; its deoxyribonucleic acid has been sequenced and its mechanism of action established. We are equipped with antitoxin and a vaccine to prevent the disease, yet tetanus continues to be a major public health problem throughout much of the developing world.

In 2000 only 18 833 cases of tetanus were reported to the World Health Organization worldwide.[3] Seventy six countries, including many of the countries most at risk, did not supply data, and the information of those that did was often incomplete. Surveys indicated that only 3% of neonatal tetanus is reported.[4] On the basis of the WHO data, studies by Stanfield and Galazka,[5] and our data from Vietnam (our hospital admits about 300 patients with tetanus each year) we estimate a true global incidence of 700 000 to 1 000 000 cases per year.

Incidence has genuinely declined over the past 20 years, coinciding with an increase in primary immunisation coverage. In most countries, however, no provision exists for vaccinating people who were born before these programmes were implemented, providing the boosters required for long term protection, or protecting those who miss schedules during periods when public health infrastructures break down—for example, during wars and mass displacement of people. As a result older children and adults remain at risk. Even in countries with good primary immunisation programmes, elderly people may still be vulnerable, either because of incomplete primary vaccination or because protective antibody levels decline over time,[6] as illustrated by a case report in the *BMJ* this year.[7]

The clinical features of tetanus arise from the action of tetanus toxin, which blocks inhibitory input of

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