

## *For and against*

### Public health does not need to be led by doctors

For years lead positions in public health have been restricted to those with a medical background, and it is still impossible for individuals to be accredited as specialists in public health without medical training. But does such exclusivity have repercussions? Here a professor of epidemiology and two directors of public health present their views.

**FOR** Public health is the science and art of promoting, protecting, and improving health and wellbeing through organised efforts of society.<sup>1</sup> It encompasses all influences throughout life and, because the diversity is crucial, must be multidisciplinary.<sup>2</sup> Whether medical training enables unique qualities for leadership in public health is certainly plausible but unproved, and justifications have so far been little more than special pleading. Public health in the United Kingdom is, and has been, led by many people from several core disciplines: Chadwick, Chalmers, Cochrane, Day, Davey Smith, Doll, Farr, Greenwood, Hill, Morris, Nightingale, Peto, Rose, Titmus, Stacey to name but a few. It will surely continue to do so.

Yet for half a century a medical hegemony (legitimate or otherwise) has implied medical ownership and protection of careers, training, and accreditation in public health. All top public health jobs in the NHS and elsewhere from the chief medical officer down are protected, if not by law, by the BMA. It remains impossible to be accredited as a specialist in public health and, until quite recently, to attend postgraduate public health courses without a medical training. Funding for training and career opportunities are still grossly unequal and all this has clearly tended to confine others to roles different from, or ancillary to, public health. Until the need for this is satisfactorily justified it is a scandal. The academic sector is only now becoming an exception, where for too long the research, the teaching (exclusively of doctors), and the thinking were multidisciplinary—but never the chairs.

The necessary conditions for effective public health strategies nowadays are enabling key disciplines to work together from private and public sectors in partnership, creating the basis for public action—which, in turn, can only work when the groups being served are integral to the strategies proposed. The science of public health is both highly complex and extremely diverse<sup>3</sup> but, because proper implementation is intrinsically about enabling people to make choices, paternalism has no place. The perceived transfer of clinical expertise for the sick to congruent expertise for the healthy simply invites accusations of nannying. Legitimate clinical authority is mostly misplaced among fit populations.



Public health has to reconcile the short and long term interests of groups in complex social systems with respect to various indices of changing health and many possible influences on them; all with scientific uncertainty. The intelligent and successful combination of incomplete biological and epidemiological knowledge with incomplete social and environmental knowledge is problematic. Sensible strategies for bovine spongiform encephalopathy, desserts, HIV, screening for prostate specific antigen, salmonella, fish, chips, salt, etc, reinforce this all the time. So much of public health is, after all, medical, social, environmental, biological, and behavioural. The many core disciplines each require considerable extra knowledge to fully understand public health issues with the uncertainties; the particular mix depends on the area of public health application. As each discipline alone is not enough, should one particular core discipline seek to dominate the essential practice of public health across its entire breadth? With such complex uncertainties an unjustified dominant discipline is simply irresponsible because the evidence base in public health is not vested in a single discipline.

Moreover medical dominance of the practice of public health leads inexorably to bias in the way that its main purpose is perceived. For example, Geoffrey Rose coined the term “the prevention paradox” to describe the notion that successful preventive strategies bring

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large benefits to a community but may bring little to individuals.<sup>4</sup> Thus a salient feature of public health is gratuitously assigned to that of a paradox. Public health as now perceived and practised is thereby inevitably biased towards clinical concerns for individuals who are ill or at high risk. Whatever the benefit, secondary prevention assumes a greater importance than primary prevention for example, because that is the enthusiasm of the dominant practitioner. The most recent example is the coronary heart disease national service framework, in which 2 out of 12 standards, little of the money, and none of the infrastructure are devoted to primary prevention.<sup>5</sup> As this was chaired by the president of the Royal College of Physicians it is hardly surprising that the great bulk of the strategy goes to secondary and tertiary prevention. It is simply illogical for a profession whose credibility derives from treating disease to control the strategies for preventing it.

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Other disciplines, for which equality in that context is problematic, feel marginalised by the public health enterprise. Thus the really sparky young economist, for example, will tend to treat public health as another domain rather than central to his or her concern. Successfully excluded from public health by the “lead” discipline, there will be superior and, crucially, autonomous career opportunities elsewhere. This is simply wasteful of intellectual talent for public health.<sup>6</sup> Thus protected, public health medicine is spared the need to show greater effect attributable to its “superior” training, whereas preventable premature death rates remain relatively stationary. Public health practice should surely be judged on outcome not input.

All this does not necessarily suggest the misuse of the “medical model” and its replacement by a more social construction of disease. Each is vital. Public health is most effective when it comes from the best interaction of all relevant paradigms in the context. Public health is suffering now because, while one discipline is dominant, public health is divided and dissipated. The Health of the Nation failed precisely because it was centred in the health service and relied on medical expertise to lead its implementation and

evaluation.<sup>7</sup> That way other key public health professionals were accorded a marginal role, as were key institutions such as local authorities and environmental health departments.

Institutionalised public health now is too often miles from where the action is needed. Of course many specialists in public health have explicitly broken away from the clinical tradition, but they all still cling to many key and exclusive professional (clinical) standards, and it is still not they who operate in the community at a population level. The medical workforce tends to have a limited understanding and indeed influence over other key areas within that public health remit, but it is good at downplaying the role of others in the public health enterprise.

Unless respected members of communities can become equivalent specialists in public health practice—whether originally doctors, teachers, statisticians, architects, social workers, environmental health officers, district nurses, etc, the confusion between medicine and public health will remain. Public health is not clinical medicine just as it is not anthropology, but to deny the best anthropologists in the land the same opportunities as doctors to contribute fully to the enterprise is to deny the importance of public health itself. And that is probably what is at the root of this absurd argument. Currently public health is both marginal to clinical medicine and to other relevant professions because of this absurdity. Public health needs to be led by genuine, knowledgeable, lifetime and committed enthusiasts, from whatever background. Let the tail wag the dog no more.—Klim McPherson

Competing interests: The author has worked for and received funds from the NHS Executive to investigate the need and demand for specialists in public health who are not medically qualified.

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**AGAINST** Public health is experiencing a renaissance in the United Kingdom owing to robust policies committed to tackling inequalities in health.<sup>1</sup> Public health is “everybody’s business,”<sup>2</sup> and politicians, the professions, and the public will contribute to its improvement.

Medicine makes a professional contribution to public health at many levels, from inside government, through the chief medical officers, to being a component of every doctor’s practice. This article focuses on the contribution of public health doctors working outside of government whose main job is the practice of public health to their local population.

At the local level, health authorities and local authorities are key organisations. Doctors lead neither corporately. In the NHS, where public health depart-

ments are currently based, corporate leadership has been with chief executives since the Griffiths report in 1985,<sup>3</sup> and local government has not employed doctors since 1974. However, public health doctors based in health authorities in the NHS have been leading public health practice to their local populations. This is because public health doctors currently are the only group professionally trained and accredited to do so.

## Professional basis for public health practice

Public health doctors assess the health needs of their populations and recommend action to improve health. They practise from the same professional principles that govern the doctor-patient relationship. Their

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practice is underpinned by the same professional framework that requires registration, specialist training, accreditation, adherence to clinical governance systems, and, in time, revalidation. This framework provides protection for the local population and gives a basis for redress if there is inadequate practice. Its credibility comes from the established frameworks of professional regulation rather than from a corporate—and often transient—power base of organisations in the public sector. It is this professional accountability that equips public health doctors to be the leading advocates for public health to their local population.

### Public health is “everybody’s business”

As medical consultants, public health doctors are employed through a contract that defends their independence of speech on professional matters. Implementing new public health policies has created a pressing need to develop the public health workforce.

The principles of professional accountability, backed by a contract protecting independent professional opinion, should be the basis for its development. This approach would enable relevant professions and disciplines to develop their contribution to public health practice based on their skills, experience, and established traditions. The expanded public health workforce would include not just doctors but nurses, pharmacists, dentists, environmental health and social scientists, health promotion specialists, and others. This community of public health professions would provide the range of skills needed to staff multidisciplinary public health teams to each local population. This would build on the established systems of professional training for specialist areas and avoid the creation of a new profession of homogeneous public health practitioners based on the lowest common denominator of basic skills. Key professions have already established this approach, although its development is uneven.<sup>4-7</sup>

To be effective, public health practitioners must have influence and impact on organisations in the local health systems, and a professional basis to public health practice is crucial. The Acheson report (1988) defined public health as “the science and art of preventing disease, prolonging life and promoting health through the organised efforts of society.”<sup>8</sup> The report recommended the appointment of directors of public health as the lead public health practitioner at the local level.

### Key role of the director of public health

The director of public health fulfils two roles. The first is professional; assessing health needs on best evidence and advocating required change to improve the health of the population. To carry out this role the director needs a multidisciplinary team that has strong links to relevant local organisations. The director must also lead a department which is a suitable environment for training and professional development, linked to academic networks. The second role is corporate, where the director is an executive director of a health authority. An inherent tension often exists between the two roles, and the wise director has always relied more on his or her skills to influence all key local organisations rather than the executive power in one NHS body.<sup>9</sup>

The current policy climate, which encourages partnerships, may provide different ways to ensure public health practitioners have corporate influence in all key local organisations. Whatever the corporate arrangements, the principle should be that the multidisciplinary public health team should have access and be accessible to corporate boards with a responsibility for health to their local population.

If all public health practitioners have similar methods of professional accreditation and independence of speech guaranteed by contract, there is no principled reason why they should not be appointed to a key corporate position. In fact, in England there have been no statutory obligations to appoint doctors.

It is probably for cultural and practical reasons, however, that the public health doctor would be appointed to NHS based bodies. Culturally, a public health doctor links the population perspective to practitioners providing individual care. This role, set out by Jerry Morris in his seminal paper published over 30 years ago, becomes more relevant in today’s integrated health systems in the United Kingdom.<sup>10</sup>

### The influence of doctors on public health

Practically, as long as the profession of medicine plays a dominant part in health systems then it is likely that corporate boards would wish a doctor to be on them. Despite many attempts to marginalise the medical profession, its power and influence remains strong and should be engaged to promote public health.

The preference for doctors on corporate NHS bodies applies more widely than public health medicine, to include doctors concerned with management and general practitioners concerned with new primary care structures. The professional framework developed for public health doctors could be utilised by others as a basis for their professional contribution to their populations.<sup>11</sup>

This issue is not about some inherent medical privilege to leadership but one of principle, whereby the new public health workforce is developed to explicit professional standards. This approach does not ignore democratic accountability. All corporate entities in the public sector must be accountable to an elected body that demands high professional standards of practice.



The debate over medical leadership is a distraction from the far more pressing issue of ensuring suitable training programmes are developed in public health departments accessible to all members of the multidisciplinary team. These programmes should train all members in exercising leadership in their area of professional expertise.

Beneath the surface of this debate may lie issues about reward and recognition. These issues are for society to decide. However, the reward and recognition for all members of the public health team would not come through the dilution of the professional framework established for public health doctors. This model ensures the delivery of a service to high professional standards and protects against the inappropriate exigencies of misplaced corporate and political demands. This principled approach would enable all public health professions and disciplines to work together to improve health to local populations throughout the United Kingdom.—Sarah Taylor and Edward Coyle

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Competing interests: ST was chairman of the Central Committee for Public Health Medicine and Community Health, 1998-2000, and EC is its current chairman.

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## Summarising economic evaluations in systematic reviews: a new approach

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Systematic reviews of healthcare interventions, which are aimed at informing health policy, increasingly include economic evaluations in addition to evaluations of clinical effectiveness.<sup>1-3</sup> The challenge reviewers face is collating, appraising, and synthesising economic evidence in such a way that it is clearly helpful in making decisions about the effects and costs of competing alternatives. However, the methodology for summarising the findings of economic evaluations is not as well established as that applied to structured summaries of clinical evidence. The aim of this paper is to illustrate and discuss the relative merits of commonly used methods and to offer a new approach that makes interpreting the evidence easier for decision makers who require a clear overview of the findings.

We describe well established methods that can be used to summarise the findings of a review of economic evaluations, namely narrative summaries, permutation matrices, and the cost effectiveness plane, and we give examples of how a permutation matrix has or could have been used in two published systematic reviews. Finally, a new method is described that presents the same information in a clear, concise, and hierarchical manner and which provides an effective tool for summarising the same results.

### Existing summary methods

The most elementary method of summarising the results of a review of economic evaluations is the narrative summary, which, in conjunction with a tabular approach to recording the results, provides a descriptive summary of the review.<sup>4</sup> The drawback to this method is that the gist of the findings is not always immediately obvious.

### Summary points

Systematic reviews of healthcare interventions are increasingly integrating clinical and economic evidence

Methods are needed to summarise and convey clearly the findings of these reviews

The methodology for summarising the results of economic evaluations is not well established

Methods for summarising the results of economic evaluations include narratives, tables, the cost effectiveness plane, and permutation matrices

A new hierarchical method offers an effective means of summarising the results of economic evaluations within a systematic review

An alternative system for summarising the findings of economic evaluations is the cost effectiveness plane; it presents the results in four quadrants.<sup>5</sup> This system is potentially useful because it presents the magnitude of the differences in costs and effectiveness as well as their direction. However, it is somewhat technical in nature, lacks common reference points that can be used across different economic evaluations, and has not been widely used in systematic reviews. Consequently, it is not discussed in this paper.

A more common approach is to use a framework for evaluating the possible outcomes of economic evaluations.<sup>6</sup> This is a form of permutation matrix that