

Continuing professional development in public health medicine

ABSTRACT – *Background:* A survey of public health doctors was undertaken in the South Thames region to support coordination of continuing professional development (CPD) and to guide appropriate provision of educational activities for those working in the specialty.

Methods: A postal survey of 130 public health doctors in service, academic and military posts in the South Thames region of the UK.

Results: The response rate was 79% with good representation of grades and geographical areas. Public health doctors preferred personal and small group learning particularly focused on problem solving. Epidemiology as a basic discipline was rated highly by respondents, but senior doctors also showed preferences for topics beyond the textbooks. Respondents demonstrated that they had acquired such knowledge and skills, which could be shared in CPD sessions with colleagues. There was support for learning with and from non-medical colleagues. In the service posts structural change was ongoing, expectations of performance by management were high, and appropriate CPD was an expressed need, although time was seriously limited for this activity.

Conclusions: Appropriate CPD could support the effectiveness of public health physicians in challenging circumstances. However, a critical evaluation of the relevance of CPD programmes to public health practice is essential if CPD is to support doctors in delivering the public health agenda in the changing structures within which they work.

Evidence of participation in formal continuing professional development (CPD) is now required of all doctors in the UK, irrespective of discipline. The Faculty of Public Health Medicine of the Royal Colleges of Physicians of the UK has set up a Continuing Professional Development Unit and has developed a network of coordinators of CPD throughout the UK.

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Public health physicians submit diary evidence to the Faculty of time spent on various CPD activities.

Public health encompasses many subjects. A national survey recently undertaken by the Faculty of Public Health Medicine on the future role of the Faculty laid out a detailed classification of public health topics. This was drawn from those undertaken as part of training in the specialty, and the subjects encountered in everyday service practice. They include the basic disciplines such as epidemiology and statistics; the application of the basic subjects to practice, particularly in purchasing health care, assessing the health of a population and judging appropriate health care interventions; the specialist areas of practice such as communicable disease, and general topics such as public health law, the media, training and audit.

As part of the coordination of CPD in the (former) South Thames region, a survey of public health physicians was undertaken to obtain information to guide appropriate provision of educational activities for those working in the specialty in the region. As public health is a broad discipline including doctors as well as other professionals, the survey sought the views of doctors about learning with others working in the field of public health.

Methods

The survey of public health physicians working in what used to be the South Thames region was undertaken early in 1995. It included registrars, senior registrars, consultants, directors of public health (DsPH) and academic public health physicians of lecturer status and above. Medical advisers to Family Health Service Authorities (FHSAs) were included only if part of the specialty of public health medicine. The survey also included those in the region who were identified as public health physicians in the armed forces. In all, 130 doctors were identified using the combined databases of the Faculty of Public Health Medicine of the Royal Colleges of Physicians, and the continuing professional development circulation list at the South East Institute of Public Health Medicine where CPD was coordinated for South Thames.

A postal questionnaire was used. The aim was to establish a baseline of preferences for topics and methods for future learning, as well as current activities related to CPD.

In all 31 topics for CPD were identified. The

questionnaire contained open and closed questions covering preferences regarding these 31 topics, preferred learning methods, availability of respondents' time and the amount of time they wished to devote to CPD, their involvement in audit and individual performance review, and their views on the future funding of CPD. The survey also enquired about special skills of individuals to establish a skills database, and the views of respondents about learning with other disciplines in public health.

The results were analysed initially on SAS. Comparative analysis between academics and service staff employed StatXact Version 3.0.2 with exact inferential techniques. The use of these exact techniques means that the small sample size in some groups has been taken into account. The Kruskal-Wallis test has been applied to the comparisons of responses between academic and service doctors. Significance for testing of these groups has been predetermined at $p = 0.05$. The 95% confidence interval has been estimated about the difference between proportions of academic and service staff citing topics of most/least interest for their CPD needs. Qualitative information, particularly the information about special skills, was transferred to a database to inform the future provision of CPD programmes.

Results

Responses were received from 103 public health physicians, a response rate of 79%. Sixty-five per cent of respondents worked in public health service posts, 14% in academic posts, 5% in the military and 5% in the regional health authority; 11% did not respond to the question about location of work. Forty-three per cent of respondents were consultants, several of whom had joint appointments as senior lecturers. This was followed by senior registrars (15%), DsPH (13%), registrars (13%), lecturers (6%) and senior whole-time academics (6%); 4% of respondents gave other job titles (eg military officers).

Ninety-three per cent of respondents indicated that they were involved in some form of CPD; 21% were currently enrolled on special courses to improve their skills, and 87% of respondents wished they could spend at least four hours per month on CPD, which is the minimum required by the Faculty of Public Health Medicine. Twenty-four per cent of respondents already knew that CPD would form part of their individual performance review. However, 39% of consultants, 38% of DsPH, 38% of senior lecturers, 33% of lecturers, 29% of senior registrars and 23% of registrars felt that their time for CPD was unreasonably limited. This was most marked for those who had worked in the regional health authority (60%), and least of a problem for those in academic posts (28%).

In assessing their preferences for CPD in the 31 public health topics, respondents could choose more than one area and could rate topics according to the relevance to their practice. Ranked responses are

Table 1. Ranking of topics chosen by respondents as most relevant to their CPD needs, with the percentage of preferences for each topic*.

Rank (1-30)	Topic	Percentage designating this as a high priority for their CPD
1	Outcome evaluation	80
2	Clinical effectiveness	76
3	Health needs assessment	72
4	Epidemiology	70
5	Primary care/public health interface	67
6	Priority setting	56
7	Equity in health	52
8	Statistical analysis and survey methods	51
9	Qualitative and quantitative aspects of research	49
10	Demography	46
11	Communicable disease updates	45
12	Recent clinical advances	44
13	Computer training	43
14	Principles of disease control	40
14	Health and the environment	40
16	Disease prevention and health promotion	39
17	Auditing outcomes from public health practice	38
17	Public health and priority services	38
19	Public health and acute services	37
19	Management	37
20	Ethics and practice	36
20	Consumer input to health care decisions	36
20	Training trainees	36
23	Economics of health care	35
24	Social policy and sociology	32
25	Public health audit methods	31
26	Budget management	30
27	Recent genetic advances	29
28	Public health and the media	28
29	Medicine and the law	25
30	Heredity	13

*Respondents could choose more than one topic, so the percentages do not add up to 100.

shown in Table 1. There were differences between the preferences of senior members of the discipline and trainees, and between academic and service staff. Highly popular topics (eg those ranking 1-5 in Table 1) were relevant to all grades of public health doctor, and the lowest ranking topics were only relevant to a small minority.

Apart from epidemiology, the consultants and DsPH were generally most interested in the topics that applied the methods of the basic subjects to everyday practice such as equity in health, priority setting and consumer input to health care decisions. These are

challenging to practice, because they are not an exact science and the methods are still being refined.

The differences between the academics and service public health staff in their needs assessment for CPD were less than might be expected, given that full-time academic staff in public health usually do not practise within service departments. There were significant differences in the higher relevance attached by service staff to:

- methods in public health (p exact < 0.02, Kruskal–Wallis test; 95% confidence intervals about the difference between proportions, 0.04–0.49)
- auditing *public health* outcomes from interventions (p exact < 0.01, 0.05–0.55)
- most recent clinical advances (p exact < 0.01, 0.06–0.58).

Respondents displayed definite preferences for the ways they felt they learnt best. The top six learning methods favoured by respondents were:

- reading and personal study (77%)
- seminars (67%)
- personal research (66%)
- presentation to a small group (64%)
- group problem solving (54%)
- courses (44%).

Various forms of peer review were less popular than small group work. The two least popular choices for learning were role play/simulation (62% rejected), and mock examinations (64% rejected).

The questionnaire sought information about funding for future CPD programmes. Fifty per cent of respondents did not yet know how funding would be arranged, and of the other 50%, only 10% suggested that they would pay for themselves. Questioned about non-NHS sources of funding, only 16% of respondents would find alternative sources totally unacceptable; the others would accept the possibility with reservations (59%) or with no reservations (25%).

The questionnaire sought details of respondents' special expertise. Table 2 shows the wide-ranging skills that could be used as a resource in future CPD programmes. Many doctors train in public health when they have already achieved expertise in other areas, with skills derived from higher degrees, previous research, special interests or previous employment experience.

The questionnaire also sought opinions about the inclusion of other disciplines in public health CPD activities. Seventy-eight per cent of respondents indicated that they would favour such involvement, although most thought that the involvement should be appropriate to the particular topic of CPD. Most preferred as learning partners in CPD were non-medical

Table 2. Skills or topic expertise volunteered by respondents.

Abortion services
Appropriateness of admissions in the acute sector
Clinical audit
Critical appraisal
Editorial skills
Epilepsy
FHSA data: types and uses
Genetics
Green issues within the NHS
Health economics
Health promotion
Leadership skills
Management to MBA standard
Media work
Medical sociology
Microbiology
Organisation and management
Port health
Primary care services
Public health audit and education
Public health in developing countries
Public health law
Research techniques
Statistics
Use or design of software packages, particularly statistical

epidemiologists and statisticians, health economists and research associates.

Discussion

This survey was undertaken to aid the coordination of continuing professional development of public health physicians in a former health region of the UK. We were particularly interested in supporting those who have finished postgraduate training. This is the period when learning is left to the motivation, interest and organisation of the individual. CPD has become a more formalised process internationally. Examples of the supervising bodies and the systems in place are given in Table 3.

The Academy of Royal Colleges of the UK, of which the Faculty of Public Health Medicine is part, has published guidance on CPD recommending the amount of time per year, the content of CPD and the methods of assessment by the Colleges.

Most approaches to assessment of postgraduate learning needs depend on forms of self-assessment ranging from questionnaires as part of self-completed diaries to self-assessment examinations. The identification and assessment of learning needs is seen as important, but there is some question about the validity of self-rated needs^{1,2}. Relevance to learning needs is only weakly correlated with actual participation in

Table 3. Continuing medical education: the process in three countries.

Country	Bodies supervising continuing medical education	Examples of systems	Activities measured
UK	Standing Committee on Postgraduate Medical and Dental Education (SCOPME)*	Hospital doctors: 100 hours/year GPs: 5 days/year	Attending approved meetings; giving presentations
Canada	Maintenance of Competence Programme (MOCOMP)USA	Daily diary	Attending approved meetings; giving presentations; teaching; getting papers published; self-study methods
USA	American Medical Association Physicians Recognition Award (AMA PRA)	50 hours/year	Attending approved meetings; giving presentations; self-study methods

Source: *Postgraduate Medical Journal* 1995;71:129–31.

programmes. More research is needed to improve needs assessment techniques¹.

In keeping with other specialties in medicine, public health physicians prefer self-directed learning and adult learning methods with peers. There is concern internationally about how CPD is organised and presented. Many programmes fail to take account of the stage of learning and the specific needs of participants. Teaching is overwhelmingly lecture based, and learning therefore tends to be passive^{3,4}. Yet studies from the USA, New Zealand and the UK, covering both hospital-based specialties and general practice, have consistently shown that self-study through reading texts and journals, conducting research, small group work and exposure to the expertise of peers are the methods most favoured by more senior doctors^{5–8}. Most educational programmes ignore the self-learner. Formal studies comparing the learning outcomes of graduates from medical schools with self-directed, problem-based undergraduate courses with those from a traditional curriculum have shown that those from the self-directed training backgrounds kept more up to date in knowledge than those from a school with a traditional curriculum⁹.

Newer methods of CPD are beginning to concentrate on individual needs and self-directed learning. These include support from mentors, a buddy model, co-tutors, and portfolio-based learning¹⁰. Some are already in place for higher specialist training in public health medicine, but have not been widely used for CPD. The American College of Cardiology has developed smaller meetings in the Learning Centre Classroom, using methods actively to engage the participants with regular review of the programmes¹¹. In the small peer group CPD sessions, we have found that addressing topics 'beyond the textbooks' with problem-solving sessions in groups, or troubleshooting sessions, is popular, since many practical public health problems are not dealt with in standard textbooks. This has a corollary in clinical medicine where work is under way to link concepts such as the nature of a

'working diagnosis' with formal clinical problem-solving techniques¹².

A recent survey of current continuing medical education for rheumatologists in the UK also raised concern about the lack of time for CPD, particularly among senior specialists who had no academic appointments¹³. A commentary on that survey noted the difficulties staff had in obtaining time off for educational programmes outside their places of work¹⁴. Non-academic staff in public health medicine identified similar pressures. These are all the more severe because of the still evolving structure of the NHS which places pressure on senior members of the specialty. Several senior respondents mentioned the need for distance learning programmes.

A recent survey identified about 90 non-medical staff working in public health in the South Thames region. Most were graduates who worked in departments of public health in district health authorities. In our study there was much support for learning with non-medical colleagues. This can be taken forward at local level, particularly in the larger departments of public health where there are already several non-medical colleagues. The range of skills in Table 2 shows that public health physicians in South Thames had already acquired knowledge beyond the textbooks that could be shared to good effect with their colleagues, within public health and probably also with GP and clinical colleagues.

CPD is a relatively under-researched area, one reason being the poor status of such research in academic circles¹⁵. This is changing internationally, and a recent review of randomised controlled trials of educational interventions to change physician performance has concluded that widely used methods such as conferences have little direct effect, while more effective methods are not used enough¹⁶. A critical

*Since 1995, CMC in the UK has been supervised by the Royal Colleges; requirements vary between disciplines – Ed.

evaluation of the success of CPD in the UK is essential as this activity competes with an increasing number of tasks for the precious time of doctors and others in the NHS.

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References

- 1 Fox RD, Harvill LM. Self-assessment of needs, relevance and motivation to learn as indicators of participation in continuing medical education. *Med Educ* 1984;**18**:275-81.
- 2 Laxdal OE. Needs assessment in continuing medical education: a practical guide. *J Med Educ* 1982;**57**:827-34.
- 3 Lewis AP, Bolden KJ. General practitioners and their learning styles. *J R Coll Gen Pract* 1989;**39**:187-9.
- 4 Anderson MC. New opportunities to improve physicians' life-long learning. *Acad Med* 1996;**71**:115-16.
- 5 Wickersham EA, Fike ML, Rousseay E, Boyer JT, et al. Arthritis: preferred learning methods among Arizona therapists. *Am J Occup Ther* 1982;**36**: 509-14.
- 6 Stanley I, al Shehri A, Thomas P. Continuing education for general practice: 1. Experience, competence and the media of self-directed learning for established general practitioners. *Br J Gen Pract* 1993;**43**:210-14.
- 7 West SR, Spears GF. Some perceived postgraduate education needs of house surgeons, registrars and specialists. *N Z Med J* 1976;**84**:471-4.
- 8 Manning PR, Denson TA. How cardiologists learn about echocardiography. A reminder for medical educators and legislators. *Ann Intern Med* 1979;**91**:469-71.
- 9 Shin JH, Haynes RB, Johnson ME. Effect of problem-based, self-directed undergraduate education on life-long learning. *Can Med Assoc J* 1993;**148**:969-76.
- 10 Editorial. Continuing medical education. *Postgrad Med J* 1995;**71**:129-31.
- 11 Lewis RP. The new CME. *J Am Coll Cardiol* 1996;**27**:1815-6.
- 12 Kassirer JP. Teaching problem solving - how are we doing? *N Engl J Med* 1995;**332**:1507-8.
- 13 Bankhead CR, Symmons DPM, Jayson MIV. Continuing medical education for rheumatologists: The current picture. *Br J Rheumatol* 1995;**34**:172-3.
- 14 Bradlow A. Continuing medical education in rheumatology. *Br J Rheumatol* 1995;**34**:98-9.
- 15 Fox RD. New horizons for research in continuing medical education. *Acad Med* 1990;**65**:550-5.
- 16 Davis DA. Changing physician performance: a systematic review of the effect of continuing medical education strategies. *JAMA* 1995;**274**:700-5.

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