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General practitioners' continuing medical education: A prospective study from the County of Aarhus

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Participation of Danish general practitioners (GPs) in continuing medical education (CME) has often been the subject of debate, although very little is known about the extent and content of activities. One-hundred-and-sixty-one Danish GPs participated in this one-year prospective study by collecting data on their own CME activities. We received 9980 data registration charts. During an average period of 8.4 months, the average Danish GP spent 67 h on traditional CME, equivalent to approximately 96 h per year, and 12 h on small group-based CME per year. In addition, he/she spent 90

h per year reading textbooks, journals, etc. The time spent on CME therefore totalled more than 200 h per year. Most of the CME courses took place outside surgery hours. We conclude that Danish GPs participate in a large number of CME activities – even more than their own organisation recommend.

Key words: continuing medical education (CME), general practice, prospective registration.

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The continuing medical education (CME) of general practitioners (GPs) has been a frequently occurring topic in the health debate in recent years. It frequently receives the attention of the media and often on the basis of single/isolated events. Politicians are often quick to comment. The many different patient associations all have their view on what sort of CME a GP should choose. Other specialists comment on GP skills and further training, and from time to time the participation of GPs in meetings and courses arranged or sponsored by the pharmaceutical industry is also discussed.

The discussion is based mostly on assumptions, as the majority of GPs' CME has not previously been described or recorded.

- Information up till now has been obtained through questionnaires and retrospective registrations.
- It is uncertain how much of the CME is planned and arranged by the pharmaceutical industry, and how much is arranged by doctors without the involvement of the pharmaceutical industry.
- There is no exact knowledge about the kind of topics in which GPs seek CME.

- The extent, the content and quality of the CME offered are not known.
- The GPs' own assessment of the quality of CME is not known.
- An overall assessment of the professional and pedagogical content of the CME has not been described.
- The degree to which and in what way GPs carry out self-studies and similar activities is unknown.
- It is uncertain how much time GPs spend on keeping up-to-date through reading the literature, etc.

With more precise knowledge about the GPs' CME, the debate about its extent and content would assume a more constructive angle.

METHOD

In the period 1 February 1998 to 31 January 1999 we carried out a prospective registration in the County of Aarhus of the CME of GPs. Charts were mailed to all doctors who on 1 January 1998 were members of the P.L.O. (General Practitioners' Organisation).

The GPs wishing to participate received a letter every month with the registration charts for the following months along with a stamped addressed envelope. They were asked to give information on CME programmes offered and on CME in which they had participated. Every month the GPs also submitted information about the amount of time they had spent

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on reading journals, which ones they had read, and the extent of other self-study activity.

Since not all GPs participated in all 12 months, the extent of the CME is primarily calculated per month and then multiplied by 12 in order to obtain the total yearly CME. At the start of the project, the participating GPs completed a questionnaire about age and type of practice, and what they estimated the extent of their own CME to be.

The questionnaires used in the study were tested by six GPs prior to the start of the project. Information on GP participation in Decentralised Group-based CME had been obtained from the postgraduate education supervisors in the County (4) and is therefore excluded from the individual registration.

Non-parametric analysis was used, and median values and 25–75% quartiles were chosen owing to skewed distribution of the extent of CME. The total CME has been calculated based on the individual GP's information. The presented median values were not used in the calculation.

RESULTS

Participation

A total of 174 (42%) of the 414 GPs stated that they wished to participate in the prospective registration. Only minor differences were found when the background information on the participating doctors was compared with that of the non-participating doctors. The participating GPs were approximately one year younger; there were more women and they were more frequently in a partnership practice.

Not all the GPs participated in all 12 registration months. Doctors registering for a long period did not undertake more CME or self-study than doctors registering for only a short period. The GPs participating only for a short period registered 8.8 h of CME per month (25–75% quartiles: 4–17 h/month), whereas the GPs participating for the whole period registered 6.5 h per month (25–75% quartiles: 4.4–11).

A total of 1474 registrations of participation in CME were submitted, along with 1054 registrations of other CME (reading of journals, textbooks, Internet, CD-ROMs, etc.).

GPs' own estimate of the extent of their own CME

At the start of the project, 205 (49%) GPs estimated the extent of their own CME in the preceding year. "The average GP" estimated the extent to be 78 h (median value) of CME per year. Total variation was from 10 to 290 h (25–75% quartiles: 55–100 h per year), equivalent to 50% of the GPs lying between 55 and 100 h.

Approximately 40 h of CME were non-sponsored; approximately 15 h were arranged by doctors but with a sponsor; and approximately 20 h were arranged solely by the pharmaceutical industry. "The average GP" stated that they regularly read three different medical journals (25–75% quartiles: 2–4).

Prospective registration of self-studies

The prospective registration of own reading/study of medical journals, textbooks, Internet and CD-ROMs included 149 GPs who registered their self-studies for 1–12 months, covering 1042 months. "The average GP" spent 7.5 h per month (median 25–75% quartiles: 5–11) keeping up-to-date through self-studies. The use of computer-based access to knowledge was extremely limited during the registration period.

Prospective registration of participation in CME

A total of 150 GPs submitted information on CME courses which were not decentralised group-based CME. Information on an average of 9.8 courses per doctor was submitted. The GPs registered CME for an average of 8.4 months, covering a total of 1271 months. Half of the doctors registered for 7–12 months. The doctors stated between 1 and 29 activities each (25–75% quartiles: 6–13).

"The average GP" registered a total of 67 h of CME during 8.4 months. Converted to a whole year, this corresponds to approximately 96 h per year (25–75% quartiles: 53–148). The registered absence from the surgery for an "average GP" was around 25 h during the 8.4 months, corresponding to 36 h per year.

Decentralised group-based CME

During the registration period, 140 decentralised group-based CME meetings of an average duration of 2.5 h were held in the County. The average participation rate in group meetings was 80%. A total of 388 GPs (94%) were members of a CME group during the period, and 35 groups were registered in the period. Each group held on average 6 meetings per year. A member of a CME group thus spent on average $6 \times 2.5 \times 0.8 = 12$ h per year on decentralised group-based CME. Around 70 GPs participated in several CME groups, so in their case the figure will be higher.

Total CME

For the "average GP", the total yearly CME is thus 108 h. Only 10% of the doctors in this study had a lower formalised CME activity than P.L.O.'s objective of 50 h. The total CME, including self-studies, thus totals approximately 220 h per year (25–75% quartiles: 152–283, Fig. 1).

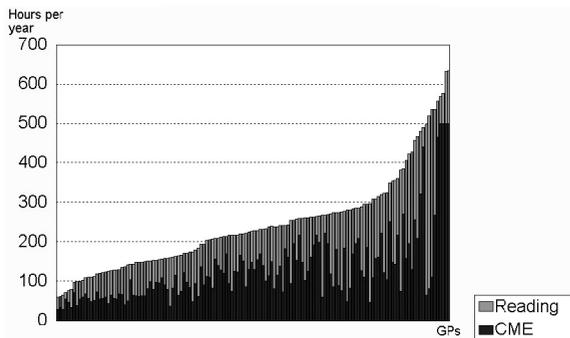


Fig. 1. Continuing medical education; 140 general practitioners, County of Aarhus.

DISCUSSION

The strength of the study is that it is a prospective registration of GPs' CME month by month. Previous recordings of the extent of Danish GPs' CME have been retrospective, based on the GPs' own estimate (1–3).

The weakness of the study is a relatively high primary drop-out rate with a participation of only 39%, probably owing to the comprehensive work the GP had to do in connection with the study. For instance, a two-page chart had to be filled in for each participation in CME. The comprehensive registration work may have resulted in the participating GPs representing a more active group of the County's GPs, thus leading to selection bias. However, we did not find any major differences between the participating and non-participating GPs' own estimates of the extent of the CME.

A further weakness was that not all GPs participated in all 12 months (secondary drop-out). A further analysis, however, shows that the GPs who registered for a long period did not undertake more CME or self-study than GPs who registered for a short period.

The P.L.O. has stated 50 h of documented CME per year as the target a GP must meet if s/he is to keep up his/her professional knowledge and skills. This study shows that the vast majority of participating GPs undertake considerably more CME than this recommended target. In "The CME questionnaire study 1990" by Kragstrup et al. (1), an average time

consumption of 65 h per year is stated. In a questionnaire study performed by the P.L.O. and the Danish College of General Practitioners in 1996, "The attitude questionnaire study 1996" (2), an average time consumption of 100 h per year is stated, which is close to the 108 h we found.

It is surprising that a GP spends as much as 7.5 h per month reading scientific literature. In the above attitude questionnaire study, 90% of the doctors stated that they spent a minimum of 1 h per week (2).

The great variation in the GPs' CME and self-study is clearly illustrated in Fig. 1. It is also obvious that there is no correlation between the two types of CME, i.e. some doctors prefer courses, others self-study, and therefore mean or median values cannot just be accumulated.

In a literature review, we have been unable to find prospective studies of the extent of CME of GPs. Previous evaluations have been made retrospectively on the basis of questionnaire studies with the uncertainty this method gives.

CONCLUSION

The participating GPs spent 67 h yearly on centrally and locally arranged courses in an 8.4 month period, equivalent to 96 h per year, in addition to at least 12 h per year spent on decentralised group-based CME. The extent of self-studies was 90 h per year. The total time consumption on CME per GP per year in this study is approximately 220 h (self-studies, traditional CME and group-based CME). Only 10% of the doctors in this study had a lower formalised CME activity than the P.L.O. target of 50 h per year.

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