EVALUATION OF CONTINUING MEDICAL EDUCATION IN AL-QASIM, SAUDI ARABIA

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Objective: To evaluate CME activities in Al-Qassim region in the Kingdom of Saudi Arabia

Methods: A study using a pre-structured questionnaire was conducted in Al-Qassim, targeting physicians working in the hospitals. The survey was conducted in two phases. The first phase was conducted at the inception of the department of professional education and the second one year later. Questionnaires were given to a sample of physicians working in the hospitals.

Results: Mean CME hours in the region increased from 5.5(±5.9) to 14.2(±19.7), p=0.0001. 50% said that the CME should be presented differently. There was a need for regular courses (61%), departmental and bedside activities (52%) and visiting speakers (45%). Only 47% of the physicians were using the Internet.

Conclusion: There is a need to shift from credit counting to a process that can yield professional development through practical courses and departmental activities. The use of the Internet in CME activities should be encouraged.

Key Words: Education, continuing, CME, professional, evaluation.

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INTRODUCTION
Continuing medical education (CME) is part of the lifelong process of learning that all doctors are involved from medical schools until retirement.1 However, CME concentrates on the update of knowledge mainly, not on skills needed in order to practice modern medicine effectively. That learning, not teaching, is what leads doctors to change their practice has resulted in a shift in perspective.2 Accordingly, education is regarded as the facilitation of learning not instruction.

The Department of Medical Education, a new department, was established as a responsible body to provide a framework for continuing medical education, facilitating, monitoring and evaluating activities at the regional level in the Ministry of Health (MOH). The aim of this department is to facilitate change in clinical practice through self-directed curriculum, small group interaction and organizational learning. Since good quality CME can ensure high quality care of the population, the development of an objective systematic evaluation followed by modification of the CME events is vital for the improvement of the health care system.3 An important part of this systematic evaluation is to conduct needs assessments for medical education and to re-modify the content of CME to meet those needs.4,5 This situation analysis is an important step especially with the evolution of a new department like the department of health professions education that would collect a data base information to evaluate the progress of work in the future, and help planners to identify their objectives more clearly. The aim of this study was to evaluate the CME activities and to assess needs among physicians working in hospitals in the Al-Qassim region, Saudi Arabia.

METHODS
This is a surveillance study, conducted in two phases, to evaluate the CME activities among physicians working in hospitals in the Al-Qassim region. The first phase was conducted in the year 1421 Hejri corresponding to year 2000 Gregorian, at the start of our work as a department of health professional education. A structured questionnaire was used to collect information from physicians working in the hospitals. This information included; (1) Identification data, (2) amount of CME hours attended in the region and outside, (3) the attitude and suggestions regarding CME and (4) how to improve it. Fifty questionnaires were distributed to each of the five main hospitals in the region; King Fahad Specialist Hospital (KFSH) in Buraidah, Maternity and Children’s Hospital (MCH) in Buraidah, King Saud Hospital (KSH) in Unaiza, Al-Rass Hospital and Al-Medmab General hospital. The sample represents almost 50% of physicians working in the 5 main hospitals, 250/527. The questionnaires were distributed in envelopes, through the medical education coordinator in each hospital and collected two days later. Physicians were recruited at random from physicians list. After one year, the second phase, in the year 1422 Hejra, 2001 Gregorian, 30 questionnaires each containing specific questions on the number of CME hours and Internet use was distributed to a new sample, in the following hospitals: Al-Rass, KFSH, KSH, and MCH. A total of 120 physicians working in the hospitals were re-sampled using the same methods as in phase one.

SPSS was used for data entry and analysis. T-test was used to compare quantitative data while chi-square was used to compare qualitative data. The sample was re-weighted according to the total number of physicians working in each hospital in

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Table 1: CME hours (mean ± SD) attended in the last year by status of physicians

| Place             | Consultant     | Specialist     | Resident      | Total     |
|-------------------|----------------|----------------|---------------|-----------|
| Hospital          | 61.5 (± 68.56) | 50.4 (± 55)    | 33.2 (± 39)   | 46.72 (± 54.6) |
| Region            | 7.24 (± 6.83)  | 5.79 (± 6)     | 4.12 (± 4.76) | 5.51 (± 5.9)  |
| Outside region    | 4.69 (± 10.89) | 1.0 (± 2.96)   | 2.51 (± 9.17) | 2.31 (± 7.76) |

relation to the total number of physicians in the five hospitals.

RESULTS

Phase I study: 168/250 (67%) completed questionnaires were collected. The average age of the respondent physicians was 41.9 (± 7.5) years and with an average duration of work in the region of 5.6 (± 5.2) years. The average years of work in the region was significantly higher for doctors working with MOH (6.7 years) compared to 2.9 years for doctors contracted by companies (p=0.0001). This was expected as the turnover in the companies is higher than MOH. 1.8% (3) were Saudi, 51.6% non-Saudi (Arabs), and 46.6% non-Saudi, (others).

Average CME activities attended in the last year

Although it did not reach a significant level, consultants and specialists attended a higher number of CME hours compared to residents (Table 1). It should, however, be noted that a high dispersion of the data around the means reflects a big discrepancy of CME hours attended within each group. No attempts were made to compare hospitals, as the sample was rather small (Table 1).

Circulars and notice boards (80%) were the main methods of announcement of CME activities and it reached the physicians (87%) a few days before the activity. The main drive to attend such activities was to gain professional competence (97%) although the checking of attendance also played an important role. Lack of time (81%) was the main reason for non-attendance of CME activity.

Seventy percent of the respondents said that the number of activities was adequate, while 26% said that the activities were few. Only 14% of the consultants said that the activities were inadequate, compared to 35% of specialists and 25% of the residents (p=0.002).

Sixty-five percent of physicians said that the quality was good, while 18.4% said that they were excellent, but 16.5% said that it was poor. Of the respondents, 48.7% said that the presentation of CME should be different. The following suggestions were given by the doctors for the improvement of CME activities. More than one suggestion was allowed. Thirty-five percent said that the topics should be of more practical importance and that departmental activity (16%) would be more effective than lectures given to doctors from all the different specialties. Also, many doctors (19%) suggested that eminent speakers should be invited to improve the quality of CME activities and attract more doctors to attend. According to physicians, clinical courses and clubs especially those related to their specialty, as well as life support courses were the main areas needing attention.

Internet connectivity and use

Thirty-four percent of the sample had Internet connection at the time of the first phase study. Being connected to the Internet was significantly affected by status. Fifty-three percent of the consultants compared to 36% of the specialists and 23% of the
residents (p= 0.034) were connected to the Internet.

**Phase II study:** The response rate was 62%, as 93 physicians responded to the questionnaires. Mean age was 41.7 (±6.5) years with an average 7.5 (±6.5) years of work in the region. In the region, the duration of service was longest in Al-Rass hospital [9.61 years (±9.1)], as physicians were MOH employees while it was shortest in KSH [2.5 years (±1.29)], since physicians were company employees.

**CME activities**
There is a significant increase in the average number of CME hours gained through regional activities. CME hours gained through hospital activities fell but not significantly compared to first phase of the study.

**Internet**
There was a significant increase in the number of physicians who had access to Internet (34% in first phase to 47.36% in the second phase), but the main increase was in the consultant category where there was an increase from 53% in the first phase to 71% in the second phase. Consultants were more likely to have an Internet connection (71%) compared to specialists (40%) and residents (22%), p=0.003.

**DISCUSSION**
The high turnover of physicians is a big challenge to CME in Al-Qassim, as medical education is a cumulative process. In the four main hospitals in Al-Qassim, physicians are employed through companies. The contracts for these companies are of three years duration only. This may explain why the average duration of work is 2.9 years for physicians employed by companies compared to 6.7 years for MOH employees (p=0.001).

Table 2: Frequency distribution of variables related CME activities

| Variable | No. (%) |
|----------|---------|
| How did they know about CME? | | |
| Circular | 134 (80.0) |
| Notice board | 133 (79.6) |
| Morning meeting | 85 (50.4) |
| Word of mouth | 54 (32.4) |
| Others | 46 (27.3) |
| When did they know about the activity? | | |
| Few days | 146 (86.7) |
| Few hours | 14 (8.2) |
| Just before | 6 (3.8) |
| After | 2 (1.3) |
| Why you are attending CME activities? | | |
| increase my professional competence | 163 (97.1) |
| To accumulate credit hours | 140 (83.1) |
| Because they are checking attendance | 119 (70.9) |
| To pass exam | 114 (67.9) |
| To support the speaker | 73 (43.6) |
| I have nothing else | 37 (21.9) |
| Others | 34 (20) |
| How to improve CME activities? | | |
| Subject of practical importance | 58 (34.8) |
| Guest speaker | 32 (19) |
| Suitable time | 28 (16.8) |
| At departmental level | 26 (15.7) |
| Audiovisual | 19 (11.2) |
| CME activities suggested as needed most by the physicians: | | |
| Regular courses | 102 (61) |
| Morning meeting | 89 (53) |
| CPR | 87 (52) |
| Departmental cases | 87 (52) |
| Regular clubs | 86 (51) |
| ACLS | 76 (45) |
| Visiting lecture | 76 (45) |
| Critical care management | 73 (43.4) |
| Departmental journal | 73 (43.4) |
| Bedside teaching | 72 (42.8) |

Although specialists and residents attended fewer CME activities, compared to consultants (Table 1), they felt that the available CME activities were too few. This may be explained by the fact that the system
Table 3: Comparison between CME hours and Internet connection in the first and second phase

| Variables                                | First phase (1421H) N=127 | Second phase (1422H) N=93 | p-value |
|------------------------------------------|----------------------------|----------------------------|---------|
| CME hours in hospital (Mean ± SD)        | 46.72 ± 54.6               | 37.6 ± 26.9                | 0.139   |
| CME hours in the region (Mean ± SD)      | 5.51 ± 5.9                 | 14.22 ± 19.77              | 0.0001  |
| CME hours outside region (Mean ± SD)     | 2.31 ± 7.76                | 4.25 ± 12.0                | 0.149   |
| Proportion of physicians with an Internet connection | 34%                        | 47.36%                     | 0.04    |

of work gave the specialists and the residents little time to attend or made it difficult because of unsuitable timing.

Although the trend now is to maximize the use of web-based CME,6,7 only 34% in the first phase and 47% of physicians, one year later, had internet connection (Table 3). Since only 22% of the residents had an Internet connection, any attempt to use the Internet as a channel for CME would be affected.

A consultant is more likely to have an Internet connection (71%) and attend more CME activities (61.5 hours/year). One wonders whether it is job obligation or personal character that motivates and spurs a doctor to self-improvement and a higher status.

Although some studies done in Saudi Arabia covered some of the challenges facing CME,8 our study revealed other challenges including high turnover of physicians, distance which prevent physicians working in remote Primary Health Care Centers from attending activities, and scarce resources. Also, one of the most important challenges of continuing medical education and continuing professional developments is the creation of a demand for career development.9 This is a life-long process, for both the need and the obligation to learn and improve oneself apply to all doctors of all ages and all hierarchical levels.

Our study (Table 2) showed that physicians expressed the need to shift away from credit counting of theoretical lectures, to a process that can record learning that has taken place and its application in practice.10 Learning that occurs in the context of workplace is needed and is far more likely to be relevant and reinforced and lead to better practice.11

We recommend the use of a model of small CME groups2 in direct relation with the different specialties emphasizing practical issues and interdepartmental cooperation. Courses like Basic Life Support (BLS), Advanced Cardiac Life Support (ACLS) (Table 2), are good models for CME which can lead not only to professional developments but also CME hours.

As shown in Table 3, CME activities increased significantly one year after the establishment of the Department of Health Professional Education. To improve the quality of CME and to meet the needs of professional development, the central role of Health Professional Education Department in planning, evaluating and monitoring is mandatory. This role should not only be reflected on the quantity but also on the quality of CME in the region.

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