Self-Perception of Competencies and Need of Training in Evidence Based Medicine among Medical Laboratory Professionals Worldwide


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ABSTRACT

Background: To investigate the perceptions of medical laboratory professionals worldwide regarding their competencies and needs in Evidence Based Medicine (EBM).

Methods: A self-completed questionnaire was designed by the Evidence-Based Laboratory Medicine Committee (EBLM) of the Spanish Society of Laboratory Medicine (SEQC-ML) and adapted to English by the EBLM Committee of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC). The questionnaire consisted of six sections (A. Sociodemographic Data, B. Training in EBM, C. Access to EBM Material, D. Perceptions about Self-Competency, E. Preference for Training and F. Comments and Suggestions) and 36 variables. The variables were scored on a scale of 1 to 10. The survey was administered via SurveyMonkey® and mailed in April 2017 to all Presidents and Representatives of IFCC National Societies. Data analysis was performed using IBM SPSS. The study was performed in accordance with the Ethics Research Committee.

Results: 553 IFCC members responded to the survey. The mean age of respondents was 48 years, the mean professional experience was 21 years and 53% were female. 54% of respondents were Europeans, 25% Americans, 20% Asians, 2% Africans and 1% Australians. 80% reported to have some basic training, 10% advanced training and 3% did not respond. Cronbach’s coefficient 0.860 Medical laboratory professionals indicated that they had a low level of satisfaction with their current knowledge of EBM (average 4.62 points). There is a great interest in learning how to access Evidence Based Clinical Practice Guidelines (average 8.14 points) and in receiving further training on EBM (average 7.77 points). Factors that showed differences in responses were gender, formal training in EBM, years of experience and age. Men were more satisfied about their EBM knowledge than women (5.21 points vs 4.45 points; p=0.004) and women were more interested in improving their knowledge (8.26 points vs 7.75 points; p=0.034).

Conclusions: Medical laboratory professionals were very interested in EBM, especially in accessing Clinical Practice Guidelines and other EBLM materials. They also considered EBM as necessary in their daily practice. The findings of this survey will help to plan future training on EBLM for laboratory professionals.

INTRODUCTION

Evidence-Based Medicine (EBM)

EBM, as defined by Sackett et al. (1996), is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. EBM involves formulating a clinical question, searching the evidence, evaluating the evidence, applying the evidence to individual patients, and revising the plan as new evidence becomes available.

AIM

To investigate the perceptions of medical laboratory professionals worldwide regarding their competencies and needs in Evidence Based Medicine (EBM). The aim was to identify the best evidence to guide clinical decision making in the care of patients and to evaluate the perceived competencies and needs regarding the practice of EBM/EBLM among medical laboratory professionals.

METHODS

A self-completed questionnaire was designed by the EBLM Committee of the Spanish Society of Laboratory Medicine (SEQC-ML) and adapted to English by the EBLM Committee of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC).

The questionnaire consisted of six (6) sections with a total of thirty-six (36) questions.

A. Sociodemographic Data

B. Training in EBM

C. Access to EBM Material

D. Perceptions about Self-Competency

E. Preference for Training

F. Comments and Suggestions

The questionnaire was administered via SurveyMonkey® and mailed to all Presidents and Representatives of IFCC National Societies.

Variables were scored on a scale of 1 to 10. Data analysis was performed using IBM SPSS.

The study was performed in accordance with the Ethics Research Committee.

RESULTS

Figure 1. Survey participation

- 50 countries
- 544 respondents

Figure 2. Sociodemographic Data

- 53% lab directors (41%)
- 43% lab staff (18%)
- Others (2%)

Figure 3. Training in EBM

- 81% of the participants (n=544) did not have previous training on EBM
- 16% had advanced training
- 3% did not answer this question

Figure 4. Responses to sections C, D and E

C. Access to EBM Material

- Last year I accessed training materials regarding EBM
- I searched for information regarding critical appraisal of scientific literature
- My decisions were supported by Clinical Practice Guidelines (CPGs)
- I accessed the IFCC website for information pertaining to EBM

D. Perceptions about self-competency

- Last year I applied EBM
- ... in all areas of my practice
- ... to adjust services based on demand
- ... to update clinical services
- ... when searching scientific literature

E. Interest in receiving continuing education

- I am interested in receiving continuing education on critically appraising...
- ... Clinical Practice Guidelines
- ... scientific literature regarding meta-analysis
- ... scientific literature regarding treatment
- ... scientific literature regarding prognosis
- ... scientific literature regarding diagnostic tests

Figure 5. Respondents’ attitude towards EBM and previous training

- Satisfaction with EBM knowledge
- Interest in EBM training
- Consulted training EBM material
- Consulted Clinical Practice Guidelines

Figure 6. Respondents’ attitude towards EBM and gender

- Males (n=222)
- Females (n=324)

Figure 7. Respondents’ attitude towards EBM and age

- < 40 (n=94)
- 40-50 (n=116)
- > 50 (n=156)

RESULTS SUMMARY

- There is a low level of satisfaction with current knowledge of EBM (4.6 average grade).
- There is a great interest in receiving further training on EBM (7.9 average grade) and in learning how to access Evidence Based Clinical Practice Guidelines (8.1 average grade).
- Factors that demonstrated differences in responses were formal training in EBM, gender, years of experience and age.
- Men showed greater satisfaction than women with their EBM knowledge and women expressed more interest in receiving further education.

CONCLUSIONS

Laboratory professionals were very interested in receiving education on EBM, especially in access to CPGs and other EBLM materials. They also considered EBM as necessary in their daily practice, even with multiple difficulties implicated while applying it. The findings of this survey will help to plan future training on EBLM for laboratory professionals.

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