

# INTRODUCING EVIDENCE-BASED MEDICINE AND GUIDELINES FOR MATERNAL AND NEWBORN CARE IN THE REPUBLIC OF MOLDOVA

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## SUMMARY

Familiarity with Evidence-based medicine (EBM) concepts is low amongst key maternal and newborn care clinicians in Moldova. Simple interventions can increase the knowledge of EBM concepts there.

*Key words:* evidence-based medicine, maternal and newborn health, clinical guidelines, education, Republic of Moldova

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## INTRODUCTION

The Republic of Moldova is a small, post-Soviet country and one of the poorest in Europe. Infant and under-five mortality rates are respectively 15 and 20 per 1000 live births. The maternal mortality rate is 31 per 100,000 (1). Negative consequences of social and economic transition contribute to poor health, but specific problems with healthcare system delivery of maternal and newborn care worsen the situation.

The WHO global Making Pregnancy Safer (MPS) initiative focuses on evidence-based medicine (EBM) interventions that target the major causes of maternal and newborn morbidity and mortality. It aims at strengthening health systems by identifying evidence-based interventions at hospital and community levels to ensure that women and their newborns have access to optimal care. Situation analyses carried out by the initiative in central and eastern European countries suggest that many health professionals lack the appropriate background in epidemiology and updated scientific knowledge, a constraint in clinical management and guideline making, necessary skills required for EBM. To address the situation in Moldova, the MPS programme chose it to pilot an intervention on improving evidence-based medicine in eastern Europe.

Prior to developing maternal and newborn clinical guidelines in Moldova, a course to introduce key clinicians to EBM concepts and skills, so they could train others, was organized by WHO. This study reports on the implementation of this course.

## METHODS

Key Moldovan clinicians committed to guideline development were selected. Sixteen participants attended and from them two

trainers to cascade skills in future were selected. Simultaneous English–Russian translation during sessions was arranged and Russian-language materials were provided. Participants set their own learning objectives at the beginning of the course, longer-term personal objectives at the end, and completed evaluation questionnaires before and after the course.

Facilitators gave lectures, for example on the rationale for randomized controlled trials, and topics such as chance and bias. This was followed by participant group work, for example critical appraisal of research papers. To improve working the following was considered:

- availability of structured critical appraisal instruments
- clearly given tasks
- need for leadership and a rapporteur within each group
- moving chairs and desks to ensure participant interaction
- varying group membership.

Facilitators held feedback sessions with participants to discuss how the sessions had met their objectives and what could have been improved. Participants' pre-course objectives were similar to the course objectives.

## RESULTS

Pre- and post-course scores for familiarity with key concepts and the change in them are shown in Table 1. Thirteen participants considered that all their objectives were achieved, and three thought 90% of their objectives were achieved.

Participants favoured small group work, interactive learning, the informal environment, and the opportunity to appraise papers. More information on key concepts was a common request. Others requested improved translation.

**Table 1.** Self-reported familiarity with clinical effectiveness sources and terms

| Clinical effectiveness term or source | Familiarity (scale of 1 to 5)* |                         |                      |
|---------------------------------------|--------------------------------|-------------------------|----------------------|
|                                       | Mean pre-course (n=16)         | Mean post-course (n=16) | Change in mean score |
| Journal editorial                     | 3.3                            | 4.1                     | 0.8                  |
| Clinical trial                        | 2.5                            | 4.3                     | 1.8                  |
| Systematic review                     | 2.2                            | 4.3                     | 2.1                  |
| Meta-analysis                         | 1.3                            | 3.9                     | 2.6                  |
| Odds ratios                           | 1.6                            | 4.2                     | 2.6                  |
| Statistical significance              | 2.4                            | 4.3                     | 1.9                  |
| Confidence intervals                  | 1.3                            | 4.0                     | 2.7                  |
| Sensitivity                           | 1.4                            | 4.2                     | 2.8                  |
| Likelihood ratio                      | 1.4                            | 4.2                     | 2.8                  |
| Cohort study                          | 1.5                            | 4.1                     | 2.6                  |
| Case control study                    | 1.9                            | 4.3                     | 2.4                  |
| Literature search                     | 4.1                            | 4.5                     | 0.4                  |
| Cochrane Collaboration, WHO/RHL       | 1.3                            | 4.1                     | 2.8                  |
| Clinical audit                        | 1.8                            | 4.4                     | 2.6                  |
| Clinical guidelines                   | 3.9                            | 4.7                     | 0.6                  |

\*1 indicated no knowledge of the term and 5 indicated mastery.

## DISCUSSION

Low familiarity with EBM concepts was observed amongst key maternal and newborn care clinicians in the Republic of Moldova. Familiarity improved after our course. Participants may, however, have overestimated both their pre-course as well as their post-course familiarity. Although course feedback was mainly positive, problems were encountered. Translation of technical terms was a particular issue. As local trainers are trained further, this may become less of an issue.

The initial course appeared to improve knowledge of EBM, and was acceptable to key clinicians in Moldova. These clinicians are potential EBM leaders to influence the practice of others in the country (2). Future courses could be greatly improved using our feedback and other published evidence. For example, multi-faceted interventions involving small group work, regular meetings, clinicians posing questions in real clinical settings, and then accessing, appraising and applying research evidence, and auditing the process, are important if EBM is to become widespread (2, 3). A conceptual framework is now available to evaluate EBM teaching (4).

The introduction of evidence-based guidelines in the Republic of Moldova, and elsewhere, will require additional approaches, such as undergraduate EBM teaching, ongoing training of trainers, protected postgraduate training time, availability of evidence at point-of-care, as well as re-orienting the health-care system towards primary care and prevention, and better integrating care. Clinicians, patients, other healthcare professionals, managers and policy-makers need to be included in the process (5).

## REFERENCES

1. European health for all database [database on the Internet]. Copenhagen: World Health Organization Regional Office for Europe. [cited 2004 Jan 12]. Available from: <http://data.euro.who.int/hfad/>
2. Del Mar C, Glasziou P, Mayer D. Teaching evidence based medicine. *BMJ*. 2004 Oct 30;329(7473):989–90.
3. Coomarasamy A, Khan KS. What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review. *BMJ*. 2004 Oct 30;329(7473):1017.
4. Straus SE, Green ML, Bell DS, Badgett R, Davis D, Gerrity M, Ortiz E, Shaneyfelt TM, Whelan C, Mangrulkar R. Society of General Internal Medicine Evidence-Based Medicine Task Force. Evaluating the teaching of evidence based medicine: conceptual framework. *BMJ*. 2004 Oct 30;329(7473):1029–32.
5. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of change in patients' care. *Lancet*. 2003 Oct 11;362(9391):1225–30.

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