

# IDENTIFYING ONLINE EDUCATIONAL RESOURCES TO SUPPORT COMPETENCY-BASED ICM TRAINING

**CoBaTrICE** (Competency-Based Training in Intensive Care Medicine in Europe) has defined 102 competencies required of a specialist in Intensive Care Medicine (ICM)<sup>1</sup>.

Educational materials are necessary to support the acquisition of these competencies. We aimed to identify existing educational resources which could be integrated into a web-based competency training programme.

## METHODS

A structured online search was combined with an iterative review process to identify suitable educational resources. Searches were conducted by ICM trainees using pre-defined terms derived from the CoBaTrICE competencies, descriptors and syllabus<sup>2</sup>, mapped to MeSH terms where applicable. These primary search terms were applied to two major online search tools (Medline & OMNI) and specific web-sites recommended by ICM specialists. Searches were limited to online, English-language resources, published or updated within the last 5 years. Preferably they were also peer reviewed, freely accessible and with an international focus. Personal recommendations were also permitted.

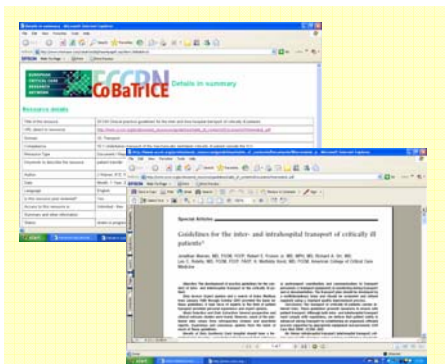
An online database was used to collect information about suitable resources, not the resources themselves.

A multi-national group of ICM specialists evaluated all the recommended resources, applying criteria based on mandatory and desirable characteristics, and their own professional judgement of the context, content, format & educational value of the resource. More detailed review criteria were defined as the search and review processes progressed; these were applied by an editorial group during a second review of all resources in order to promote consistency and facilitate cross referencing between competencies.

## RESULTS

Trainees from 18 countries conducted online searches over a three month period using 163 primary search terms. Information about 676 resources was collected. Following specialist review, 320 resources were retained in the database. These include journal articles (abstract or full text) (35%), other documents (21%), slide presentations & lecture notes (2%), e-learning resources(22%) and online texts (16%). The content of each resource was categorised as being basic, intermediate or advanced and each was linked to single or multiple competencies.

Resources have been identified to support the acquisition of competencies in all CoBaTrICE domains via the CoBaTrICE website. Users can search the database of resources using search terms or links from specific competencies. Most resources are freely accessible (83%) and they can be opened by following a direct link from the CoBaTrICE website (see fig. 1).



**Fig.1**  
Example of an online data-entry page used during the identification of resources and the URL link to this educational resource from the CoBaTrICE website.

## FUTURE DEVELOPMENT

We found that accessing information to support learning is a time-consuming task, and a standardised approach to assessing the quality and relevance of resources is important in ensuring consistency. Almost half of the resources recommended by trainees were rejected during specialist review. Reasons for rejection were related to both the quality of the content (e.g. mandatory criteria not met, single case study), and the accessibility of the online resource (e.g. inactive URL, web presentation) as well as repetition and relevance in comparison to other recommended resources.

It is evident that this database of online resources will require ongoing revision and updating. The CoBaTrICE website permits users to recommend other educational resources not yet included in the database and to send comments about existing resources to enable the editorial committee to revise and update the database at regular intervals. This will also include the collection of resources in other national languages.

## CONCLUSION

A structured search strategy, and iterative review process, has enabled us to identify existing online educational resources which can be linked electronically to the CoBaTrICE competencies. The CoBaTrICE database of ICM resources will assist trainers and trainees with educational activities and facilitate lifelong learning.

The CoBaTrICE collaboration would like to acknowledge the contribution and support of the ICM trainees and National Coordinators who participated in the CoBaTrICE educational resources working group

## REFERENCES

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