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European external quality assessment schemes in occupational and environmental medicine

Edited by
Gino Morisi, Antonio Menditto
Marina Patriarca and Andrew Taylor

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EUROPEAN EXTERNAL QUALITY ASSESSMENT SCHEMES IN OCCUPATIONAL AND ENVIRONMENTAL MEDICINE

Edited by **Gino Morisi, Antonio Menditto, Marina Patriarca** and **Andrew Taylor**

Ann. Ist. Super. Sanità, vol. 32, n. 2 (1996), pp. 191-192

Preface

Within the European Union, fair and equivalent conditions with respect to the quality of life should be ensured to the citizens of all member states. In terms of occupational health, the new European legislation on the safety of workers applies to all member states and, therefore, the same level of protection from health hazards at the workplace should be ensured to all workers. Undue exposure to chemicals present in the environment is also a cause of mounting concern and requires appropriate actions to be agreed at the European level. Biological monitoring programmes for exposed workers and the general population are increasingly carried out to provide the necessary information for risk assessment.

Laboratory medicine is often decisive in terms of actions required. Tests performed in occupational and environmental laboratory medicine (OELM) aim to identify the exposure to given chemical(s), evaluate the level of internal exposure and assess the health risk involved. The analytes determined are often unusual and present at low concentrations, thus requiring the on-going assessment of specific sampling and storage procedures. Method development and the exploitation of analytical techniques to achieve adequate level of sensitivity, specificity, accuracy, and reproducibility are important components of laboratory medicine.

The reliability and comparability of the results of laboratory tests throughout Europe is an essential requisite for the establishment of these fair and equitable conditions. According to international guidelines, all testing laboratories should guarantee the reliability of their results by implementing an appropriate quality assurance system, which should include participation in external quality assessment schemes (EQAS). Participation in EQAS is of the utmost importance for analytes for which few or no reference materials are available.

Over the course of the years, EQAS in OELM have been promoted in most European countries. EQAS organisers are faced with specific problems, such as the preparation of their own control materials, and the design of strategies for the evaluation of performance within small groups of participants. Comparison of different solutions to these problems is a first step towards the harmonisation of procedures and comparability of results among different countries. Collaboration among EQAS organisers is necessary to approach new methodological problems, to ensure the reliability of data produced for an increasing number of potentially toxic chemicals, and to support the quality of rare analyses by means of initiatives at European level. Accreditation of occupational and environmental health laboratories by international and European organisations, for which participation in EQAS is required or strongly recommended, could also benefit from harmonised protocols for European EQAS in this field.

The first steps toward harmonisation of EQAS in OELM were supported by the European Commission, Directorate General XII, Standards, Measurements & Testing (SM&T) Programme. The SM&T coordinated a multicentre project to compare procedures for evaluating laboratory performances in blood lead analysis, as used by EQAS operating in different European countries, and also contributed to the organisation of two meetings. These initiatives prompted a sharing of

knowledge among different EQAS organisers and allowed for initial discussions to be carried out. The EQAS organisers established a positive basis for further collaboration as a network of European EQAS organisers. It is planned that the proposed activity of the network will focus on development of standards of laboratory performance, implement new harmonised EQAS with priority given to substances of major concern according to the present European legislation, and on initiatives for education and training. In this volume the existing EQAS and the results of the European collaborative project on blood lead are described, and the discussions and the proposals for further collaboration are reported. Preparation of this issue of the *Annali dell'Istituto Superiore di Sanità* has been made possible by collaborative efforts and it provides an up to date account of the state-of-the-art of methods and procedures used in European EQAS.

The Editors

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