

## **ESCMID Workshop on *Progress towards Meeting the Challenges in Clinical Microbiology and Infectious Diseases***

The public health challenges from the threats of emerging infectious diseases in Europe in the early 21<sup>st</sup> century and their implications for healthcare services were discussed during a 2-day workshop in Leuven, Belgium. The workshop was organised by ESCMID and the Belgian Society for Clinical Microbiology and Infectious Diseases and took place on 17-19 March, 2004. Seventy delegates representing 28 countries, including participants and contributors from the WHO, European Commission and UEMS attended the workshop.

The purpose of the workshop was to review the preparedness of Europe to respond to the threats of spreading resistance, bioterrorism and emerging infections, to critically review progress in the organisation of infection diagnosis, treatment and prevention in the member states and to come up with recommendations directed at improving the current situation.

The input given by various keynote lecturers was later reflected and discussed in three working groups, which focussed on the following topics:

- i) Public health challenges for infectious disease surveillance, alert and response systems
- ii) Professional needs and models for health care services (microbiology and infectious disease departments, hospital infection control)
- iii) Specialist training and continuing development in the infection disciplines.

The conclusions of the working groups, as presented by rapporteurs, can be summarised as follows:

### *Ad i) Public health challenges*

The main purpose of surveillance systems is to detect and analyse emerging threats and to monitor the burden of infectious diseases. This can only be obtained by the clear definition of the objectives and public health gains achieved by use of surveillance information, which is often lacking.

An effective monitoring system for nosocomial infections must be built on routine laboratory data and active surveillance to provide information useful for infection control interventions. The determination of attributable burden of disease should be complemented by specific studies on length of hospitalisation and loss of life days associated with nosocomial infection.

Efforts should be made to make data on benchmarking of quality of care concerning hospital-acquired infections publicly available without destroying trust between practitioners, surveillance administrators and health policy makers.

In view of the changing demands on microbiologists and infectious disease physicians caused by rapidly-emerging new organisms in the community and the hospital setting there is a clear need for improved training at all professional levels. This refers to standardised molecular diagnostic techniques, epidemiological thinking, population awareness and communication channels including responsible use of the public media.

To efficiently develop early warning and response preparedness, scenario-guided emergency models must be developed with action plans defining clearly the role of each player in the response system (laboratory microbiologist, community- and hospital infectious disease physician, field and hospital epidemiologist, public health specialist, etc).

The diversity of current surveillance approaches and response systems across Europe does not ensure efficient use of available personnel and financial resources. As a first step an inventory and comparison of the various systems should be made, followed by the identification of gaps and the development of scores. The data should be used to develop a strategy for an internationally integrated and concerted approach towards an effective surveillance, alert and response system with proper resources and dedicated coordination.

The promotion of public health, the reaction to health threats and disease prevention are at present still in the hands of national authorities. It remains to be assessed whether and how the national public health agencies, systems and contingency plans can provide the basis for an effective and coherent international intervention system. The planned European CDC and European Community health programme must be able to respond to specific health needs of any member state by integrating national centres with central facilities. To be apt to its mission the European CDC should develop its own laboratory and field epidemiology resources. It should be provided with the appropriate resources, competence and management structure to overcome bureaucracy and national political sensitivities.

The role of ESCMID as the leading European organisation in the infection field is multi-fold. ESCMID should provide a platform for the interaction of all key players in academia, health care, regulatory and public health agencies, national and European organisations, industry and media. The Society should be a partner in defining the health targets, developing models of best practice, informing the professional and public communities about the threat by infectious diseases, fostering professionalism and providing training opportunities. ESCMID tries to bridge the infectious disease service line from bed to community and drive the cultural change and advocacy needed among professionals, politicians and the public to tackle one of the most important health threats.

*Ad ii) Needs in the health care systems and infection management models*

Within Europe, a variety of specialist services and organisational models have developed for diagnostic laboratories, clinical services and public health programmes. This diversity poses a major problem in building integrated and international surveillance and alert and response systems, which can be addressed in part by standardisation of methods, accreditation and quality assurance. On the other hand, awareness of the threat by emerging infectious diseases, including drug resistant microorganisms, is rising, which seems to translate into increasing support for the improvement of professional services, closer collaboration and the convergence of expertise in Europe. Technological advances in diagnosis and communication as well as access to more robust data provide novel opportunities for improved patient management to be assessed by cost-benefit analyses and also promote a better integration of infection specialists. Meanwhile the technological developments in molecular diagnostics and automation as well as the increasing health care costs drive the centralisation of laboratory services, which have a negative impact on the quality of samples and jeopardise the interaction between the microbiologist and the clinician.

The opinion seems to prevail in Europe that the clinical microbiologist should participate in clinical ward rounds and provide advice on diagnostic and therapeutic issues. In addition, clinical microbiologists have a definite role to play in infection control, drugs & therapeutics, antibiotic policy and biosafety committees. This reflects the notion that the expertise of microbiologists, infectious disease and infection control specialists must be better integrated in a manner that varies according to the specific needs and historical background of different health care facilities.

Many countries suffer from an ageing workforce and shortage of infection specialists, which might undermine the current efforts to improve disease management and public health in this field. Measures need to be discussed to enhance career options for young physicians and recruit new talents in the infection disciplines.

There were, however, conflicting views a) on the microbiologist's managerial responsibilities for running the laboratory, b) on the question as to what degree expensive equipment and core facilities should be shared with other disciplines in laboratory medicine, and c) on how many clinical microbiologists a 1000-bed hospital should optimally have. It was suggested to establish a working party to investigate the current arrangements in Europe and come up with recommendations and a blueprint for the optimal organisation of health care services in the infection field while taking into account the diverse historical, cultural and economic backgrounds of different countries.

#### *Ad iii) Specialist training and continuing development in the infection disciplines*

The current core training programme developed by the respective UEMS Sections for Infectious Diseases and Medical Biopathology, Microbiology Commission, are quite general with the specifics left to the national authorities. This flexible approach is considered adequate in view of the disparity of European medical health care systems. Core competence must be comprehensive and apply to all types of infections, including HIV, hepatitis, tuberculosis, and sexually transmitted diseases. To warrant free movement of specialists and similar quality of care across Europe, core curricula should be similar in all member states.

The implementation and validation of training programmes vary considerably between EU member states. Research in the assessment methodology for specialty training and competence (re)certification is encouraged. While validation of training centres is supported, it is probably premature to call for European board examinations.

Infection Control should have its own curriculum. In countries where Infection Control is not recognised as a specialty, the curriculum should be incorporated into that for Microbiology and/or Infectious Diseases, depending on which specialty has the responsibility for Infection Control.

Taking into consideration the need for a better integration of all infections specialties a core curriculum for a single specialty of infection should be considered. After a common training trunk it should allow various degrees of subspecialisation in Medical Microbiology, Infectious Diseases, Paediatric Infectious Diseases and Infection Control. Training in Infectious Diseases should always be based on Internal Medicine. Discussions within UEMS on a single specialty should be initiated.

Adherence to European recommendations must be strived for; validation of training programmes should remain national.

It should be possible to collect CME/CPD credits at the national and international level. To simplify and harmonise CME accreditation the UEMS Specialist Sections should be empowered to accredit European and international events.

In the closing session, Marc Struelens, ESCMID President, summarised the main conclusions by saying that

- i) the interface of the infection disciplines with public health must be strengthened
- ii) models and performance indicators for health care services need to be developed with the goal of better integrating infection specialists while respecting the subsidiary principle
- iii) an international surveillance, alert and response system needs to be implemented and put to test
- iv) the European CDC is to be supported and enabled to assume a leading role in tackling the global threats from infectious diseases
- v) ESCMID should expand and evaluate its educational activities to meet the needs of professionals in the infection service line
- vi) ESCMID offers a platform for interaction of the various key players in shaping professional policies in the infection field
- vii) cooperation with the European Commission, WHO, UEMS, and national specialist societies must be fostered
- viii) advocacy needs to be improved and targeted for the medical profession, policy makers and the general public.

A more detailed and comprehensive position paper on these professional issues will appear in one of the forthcoming issues of *Clinical Microbiology and Infection* under the title *ESCMID Declaration on Meeting the Challenges in Microbiology and Infection*.

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