

European Society of Clinical Microbiology and Infectious Diseases (ESCMID)

“Health in Europe: A Strategic Approach”

Comments by the ESCMID Executive Committee, <http://www.escmid.org>

The European Society of Clinical Microbiology and Infectious Diseases (ESCMID), a learned society with a membership of 3100 professionals active in medical microbiology, clinical infectious diseases, infection control and biomedical research, is dedicated to promote excellence in the prevention, diagnosis and treatment of infectious diseases by supporting professional, educational and scientific activities, stimulating debate between stakeholders and advising health policymakers. ESCMID endorses entirely the document on “Health in Europe: A strategic approach“. However, we want to make several comments about the document.

1. The Use of Health Indicators as Outcome Measure of Health Policy

While ‘Health Life Years’ (HLY) is a useful indicator of the general health and well-being in a particular state, it does not tell much about specific issues and problems to be addressed. As an outcome measurement it would thus take a long time before any improvement in a particular area, e.g. decrease the incidence of TB, in a specific country would be reflected in the HLY. Furthermore, reflection in HLY is very sensitive to the general incidence of a particular disease. For instance, whatever the incidence of TB is in a particular country, it obviously still needs to be decreased. However, if it has a relatively low incidence to start with, a successful effort may not have any detectable impact on HLY. Consequently, the specific incidence data are still the most sensitive indicators, at least as far as communicable disease are concerned.

2. Harmonisation of Diagnostic Guidelines

In the field of communicable disease a major task could be to achieve as much standardization as possible among the member states. This applies to the whole array of issues from case definitions to diagnostic approaches and methods.

Specific tasks/aims could be:

- Revise the list of communicable diseases (Commission Decision 2000/96/EC) and examine whether it covers all pathogens we really need to monitor.
- Revise the list of pathogens to be monitored for antibiotic resistance. Although the above Decision mentions nosocomial infections (3.1) and antimicrobial resistance (3.2) the extension of the list by the pathogens EARSS is dealing with might be considered, for instance, including *Acinetobacter baumannii*.
- Review whether for the pathogens to be monitored case definitions, guidelines etc. are indeed available (most are) and to what extent these have been adopted by member states. It could be a major problem in several member states that, while national laboratories/institutions directly providing data to EU use uniform EU guidelines for testing and reporting, this might not be the case for individual laboratories in the same countries. Example: technical and interpreting criteria for antibiotic resistance may vary between labs within the same country (one may use CLSI guidelines, another the British criteria, while still others use local guidelines), and they certainly vary between countries. As another example we must be aware that the reported incidence of salmonellosis

may greatly vary according to the diagnostic guidelines used (when and how to test). Without harmonised guidelines between member states comparison of data will remain biased.

3. Priorities for EU Health Strategy in the Field of Communicable Diseases

We identify major infectious diseases threats for consideration by the Commission to be included as targets for the EU health strategy and we suggest possible initiatives to better protect citizens from these threats.

1. Infectious diseases – public health priorities:

- AIDS & tuberculosis
- Healthcare associated infections
- Antimicrobial resistance
- Epidemic infections and bio-terrorism

2. New EU initiatives for effective prevention and control of infectious diseases:

- Expansion of the European CDC: research on microbial virulence, drug resistance and ecology
- Health technology assessment: laboratory diagnosis, therapy, surveillance and control
- Capacity building: infection surveillance, management, and prevention
- Partnerships for health
- EU international leadership for communicable disease control

3.1 Infectious Diseases are a Public Health Priority for Europe.

As recognised by the EU, infectious diseases are increasing threats to public health. Disease outbreaks as well as ever-increasing antimicrobial drug resistance in pathogens causing community- and hospital-acquired infections demand close monitoring, vigilant alert systems and continuous revision of diagnosis, management and control strategies. Faced with these rapidly evolving challenges, public health and patient care delivery systems need to adapt in a flexible and pro-active manner. Progress depends on dialogue and cooperation between health sciences and medical practice, between health care professionals managing infection and national health systems with their diverse organisation, local priorities and assets.

AIDS and tuberculosis

The marked regional disparities around the world but also across Europe in the incidence of transmission and drug resistance of AIDS and tuberculosis are clear indications of the need for international co-operation in sharing best practice for prevention and treatment programmes for these diseases. These policies should ensure equal access of all, including persons in low income and underprivileged communities, to health education, prevention and effective therapy. In co-operation with WHO, the EU should support these policies and stimulate systematic collection of process and outcome data from member states to allow benchmarking of the capacity of health care systems and international co-operation programmes to deliver these benefits.

Healthcare-associated infections and antimicrobial resistance

Healthcare-associated, or nosocomial infections, which affect too many patients admitted to acute care, long-term and home care facilities, carry a tremendous burden of morbidity and healthcare and disability costs. Effective therapies for these infections are dwindling away due to accumulation of multi-drug resistant bacteria in healthcare settings and their rapid emergence in the general population as well. Studies have

shown that infections caused by some of the resistant bacteria add significantly to the healthcare cost and may increase the risk of treatment failure and death from severe infection. More research is urgently needed to measure the health and economic costs and better understand the determinants of nosocomial infections and antibiotic resistance in Europe. In all healthcare institutions, an infection prevention programme should be developed by physicians trained in health care epidemiology and implemented with the support of dedicated infection control practitioners. It is a matter for concern that there is no certified medical speciality training in infection control in most European countries and that many hospitals lack of such specialists. The EU should support capacity building in healthcare epidemiology and infection control specialists, operational research and exchange of best practice towards prevention of nosocomial infection. It should stimulate systematic collection of process and outcome data from member states to allow the benchmarking of the capacity of healthcare systems to deliver effective prevention of health care associated infection. In this era of increasing resistance to available antibiotics, the current trend in major pharmaceutical companies to discontinue their antibacterial drug research and development programmes is a matter of great concern. The decreasing market incentives related to the rising cost and length of clinical development of anti-infective drugs and to pressure on drug price and consumption need to be addressed. Concerted action by the pharmaceutical and biotechnology industry, the EMEA, national drug regulation authorities, and academic bodies should identify ways to achieve a better balance between public health needs for new antimicrobial drugs and the economic constraints of research and development.

Epidemic infections and bio-terrorism

The rapid spread of the Severe Acute Respiratory Syndrome (SARS) showed the vulnerability of our global society to unpredicted epidemics. Ecological and social changes, international travel and trade of goods facilitate the dispersion of microbial pathogens and infectious diseases around the globe, creating complex challenges for health care systems. The preparation of national pandemic influenza response plans is an illustration of the difficulties to co-ordinate health systems and summon scarce resources to meet potential threats. Bio-terrorism is another emerging threat that was illustrated by the anthrax attacks in the USA in 2001. This event stressed the need to improve the level of preparedness of health care providers and microbiologists to diagnose and manage infectious disease caused by unusual agents and toxins. Following up on the BICHAT initiative led by the Commission, EU should increase its support of biodefence planning against deliberate release of biological agents. These systems should be upgraded and integrated into generic infection surveillance, alert and response systems. International co-ordination of these national systems need to be improved and put to the test through international exercises.

3.2 New EU Initiatives for Combating Infectious Disease

Expansion of the European CDC: biological research on virulence, drug resistance and ecology of microbial pathogens

ESCMID has given its full support to the launching of the European CDC to co-ordinate more effectively surveillance and control of communicable diseases at European level. In fact, collaboration between ESCMID and ECDC has been initiated at various levels and the ESCMID Study Group on *Clostridium difficile* has served as an advisor. To enable containment of antimicrobial resistance and develop novel strategies for limiting the dissemination of more virulent viruses and microbial pathogens, the EU should further support research into the ecological determinants and genetic mechanisms that underline the evolution of microbial pathogens and their interaction with animal and human hosts. This research field would greatly benefit from a closer interaction with epidemiologists investigating infectious diseases epidemics in Europe and elsewhere.

This interaction could be ideally developed at the European CDC. Establishing European reference laboratory facilities at the ECDC to support communicable disease surveillance, and integrating them with centres of excellence in infectious diseases research would boost the European research capacity. It would also help developing a sense of collective responsibility among biomedical scientists and healthcare professionals who are tackling the global threats of infectious disease and constitute a highly effective and visible EU investment in international solidarity for health protection.

Health technology assessment: laboratory diagnosis, therapy, surveillance and control of infectious diseases

In Europe, academic centres and biotechnology companies are contributing significantly to innovative technologies (including nucleic acid amplification tests, nanotechnologies, bio-sensors) that lead to high performance microbiological assays for testing in the diagnosis, case-screening or surveillance of infections. The EU should further support the development and validation of technologies that are likely to impact on the quality of care, containment of resistance or disease control. Co-ordinated health technology assessment should be actively promoted through the support of large scale clinical, epidemiological and health economic studies of the cost-effectiveness of novel diagnostic and microbial genotyping tests in the management of infected patients and the control of communicable infections. Likewise, there are a number of therapeutic modalities for infection with currently marketed drugs as well as infection control measures using currently available technologies that lack a robust scientific basis to establish their effectiveness. It is unlikely that the pharmaceutical or health technology industries will fund studies to validate or improve these strategies where there is no market incentive to do so. It would be of great benefit for the EU and its citizens to help funding clinical trials and epidemiological intervention trials to determine the real benefit of these traditional medical and public health practices.

Capacity building: infection surveillance, management, and prevention

Effective infectious diseases surveillance, alert and response systems rely very much on individual competence of health care providers and microbiologists if warning signs are to be identified early and adequate response to be deployed in a timely manner. Health care as well as laboratory specialists need basic epidemiological skills and perspective that is too often lacking in current speciality training curricula. Conversely, public health agencies need to have staff members with sufficient clinical experience and laboratory expertise to engage in a fruitful dialogue with these care providers to improve the feedback and use of pertinent surveillance data.

Continuing medical education and special professional development schemes have to be devised to address these training needs for effective participation of all health professionals in epidemiological surveillance and outbreak control interventions. In addition, there is a need for continuous exchange of best practice among players in the infectious disease service line.

4. ESCMID Contribution

The ESCMID can contribute to filling these gaps by its educational programme. Its annual congress is attended by more than 6000 participants in the infection disciplines, biomedical researchers and public health practitioners. ESCMID post-graduate courses, workshops, and summer school offer advanced training by an international faculty to over 800 health professionals each year.

Partnerships for health

ESCMID is the leading professional organisation for medical microbiologists and infectious disease specialists in Europe and undertakes regular consultation with various stakeholders in public health to meet the challenges in the field of infectious diseases for the coming years. The ESCMID workshop "Progress towards Meeting the Challenges in Microbiology and Infectious Diseases" in 2004 enabled participants from 24 countries, including delegates from WHO, from two Directorates of the European Commission (Directorate General for Public Health and Consumer Protection and Directorate General for Research), and the European Union of Medical Specialists (UEMS) to review the health care practice and policy issues related to the challenges from infectious diseases and formulate recommendations for improving the professional expertise and models of infectious disease management. A follow-up to this workshop is planned in 2008 to monitor progress and set the agenda for the coming years.

ESCMID is committed to develop further its educational programme in support of sharing best practice models, networking of laboratories and increasing the capacity of health care providers to contribute to infection control and emergency management. ESCMID is also willing to pool expertise from its membership and offer platforms for consensus building among national experts to progress the pan-European harmonisation of standards of microbiological practice in the service of diagnosis, surveillance and treatment of infection. The funding under the Community Health Programme of the European Committee for Antimicrobial Susceptibility Testing (EUCAST, organised by ESCMID) is a recognition of its role in this area.

ESCMID together with other national and international scientific societies shall put emphasis on the fact that infectious diseases, although recognised as a threat to European citizens, have not received the necessary degree of attention by governments in the European region.

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