THE EUROPEAN RESPIRATORY ROADMAP: INTRODUCTION

A “roadmap” is an extended look at the future of a chosen field of inquiry composed from the collective knowledge and imagination of the brightest drivers of change in that field [1].
The European Respiratory Roadmap (hereafter “roadmap”), the first of its kind, seeks to serve as a basis for the respiratory community to communicate with key decision and policy makers on the importance of a focused strategy for respiratory medicine.

The roadmap will be officially presented at the European Respiratory Society (ERS) annual meeting in Amsterdam in September 2011. A shorter, policy maker version of this roadmap will be launched in September at the European Parliament.

It aims to outline the future needs of respiratory medicine in terms of changes in clinical practice, patient empowerment, expected new models of care delivery, and prevention strategies. It highlights the major research challenges that still persist, and how the training and education of health professionals will need to change and adapt to meet the societal challenges of the next generation. The roadmap will be an ongoing project that will gather and select content from all fields in respiratory care in Europe. It is available on the ERS website at www.ersnet.org/roadmap

The roadmap is structured into the following four chapters: 1) Prevention, 2) Clinical care, 3) Research and 4) Medical education and training. It is entirely independent from external funding and is published by the ERS on behalf of the whole respiratory community.

WHY A ROADMAP NOW?

Respiratory diseases – acute, chronic, communicable and non-communicable – impose a global burden affecting hundreds of millions of people. Over half a billion people worldwide suffer from asthma and chronic obstructive pulmonary disease (COPD) alone. The World Health Organization (WHO) estimates that 4 million deaths in 2005 were caused by chronic respiratory diseases, and these numbers are set to increase by an estimated 30% over the coming decade [2].

With regard to communicable disease, infectious pneumonia is the world’s number one killer of infants and children aged under 5 years [3], accounting for more childhood deaths than malaria, AIDS and measles combined [4]. In 2007, there was an estimated 9.27 million cases of tuberculosis (TB) according to a recent report of the WHO [5]. TB is also the number one cause of death among people infected with HIV.

The current economic crisis is expected to have an impact on TB [4].

Non-communicable, chronic respiratory diseases, together with cancers, cardiovascular disease and diabetes, make the largest contribution to global mortality. Worldwide, non-communicable diseases account for 60% (35 million) of global deaths. Non-communicable diseases are projected to increase by a further 17% in the next 10 years [6]. These will be the diseases of the future. They are not only highly prevalent chronic diseases, but their prevalence is also increasing. While cardiac diseases, stroke and cancer have been decreasing as a cause of death in the past three decades, death due to COPD has doubled in the same time period [7]. These data are in contrast to the lack of public awareness about morbidity and mortality due to respiratory diseases. There is a multitude of reasons why we do not seem to be dealing very well with these diseases. Several of these reasons are put forward in the present publication.

One of them is undoubtedly that not enough is being invested in research on respiratory diseases. In 2002 in the UK, respiratory research only claimed 2.8% of the Medical Research Council budget, whereas 13% of mortality was due to respiratory diseases [8]. Similarly, an analysis we recently made of the Seventh Framework Programme for Research
and Technological Development (FP7; 2006–2013) demonstrated that, although 4.3% of the health budget was claimed by respiratory research, only 0.5% was devoted to COPD and asthma, the diseases that without question pose the greatest challenge (fig. 1). A second reason is that we need to combat the known risk factors of respiratory disease more vigorously. The recent EU barometer survey on tobacco showed that smoking prevalence is still very high in the EU, even exceeding 35% in countries like Spain and Greece, and with only one country (Sweden) approaching the currently lowest prevalence of 15% (fig. 2) [9].

Whatever the reasons, this will pose a tremendous burden to our healthcare systems, as care for chronic respiratory diseases is expensive owing to the requirement for expensive therapies, such as long-term medical and oxygen therapy, therapy for exacerbations of the disease (which often require hospitalisation), and end-stage therapies such as rehabilitation, lung volume reduction surgery and, particularly, lung transplantation [10]. In contrast, our healthcare systems are already overstressed as, in most European countries, healthcare costs have now risen to 10.5% of the gross domestic product (GDP) on average, which corresponds to about 28–29% of the fiscal income of those countries [11]. Figure 3 shows the increase in healthcare costs in European countries in the past two decades. These costs are expected to increase even more, because of the increasing costs associated with the ageing of the population in most European countries [12]. Healthcare expenditure is expected to reach 16% of GDP in most European countries by 2020. In future, this will require concerted efforts across Europe to ensure effective prevention and management of chronic respiratory diseases.

**BACKGROUND**

In 2010, when the ERS launched a series of actions to raise awareness for respiratory diseases, a major...
initiative was the 2010 Year of the Lung; a particular highlight of the year was our global lung function testing event, the first-ever World Spirometry Day, on October 14. Another major initiative was the ERS pre-ministerial conference on chronic respiratory diseases, held on October 19, in partnership with the Belgian Presidency of the EU. The ERS was invited to present its recommendations on chronic diseases at the ministerial conference the following day. The official Council conclusions reflected the collective efforts of the ERS to raise the profile of chronic diseases [13]. Consequently, the ERS took the initiative to develop this roadmap, with a set of recommendations to serve as a guideline for European governments in their confrontation with chronic respiratory diseases [14, 15]. This roadmap was developed as a result of an 18-month process in which, through all of its assemblies and committees, the 11,500 members of the ERS were involved. In a summit in Leuven on March 4–5, 2011, the document was further refined with feedback from external experts, including politicians, members of the European Commission, leading academics, health policy makers, representatives of patient organisations, ethicists, journal editors, officials of granting agencies, journalists and lobbyists. Finally, it was reviewed by experts who were not involved in the development process. With this publication, we proudly present the result of this process.

It is our hope that this comprehensive roadmap initiative will substantially improve the predicament of respiratory diseases in Europe and contribute to a greatly improved quality of care in the future.

M. Decramer and Y. Sibille

M. Decramer is currently President and Y. Sibille is EU Secretary of the European Respiratory Society

REFERENCES


**LIST OF CONTRIBUTORS**

The following is a list of those contributing to the *European Respiratory Roadmap*, comprising members of the European Respiratory Society leadership and the heads of its assemblies; the presenting delegates and rapporteurs from the European Respiratory Society roadmap summit in Leuven, Belgium, held on March 4 and 5, 2011; and production and editing support staff provided by the offices of the European Respiratory Society.

Marc Decramer, Katholieke Universiteit Leuven, Leuven, Belgium
Yves Sibille, Université Catholique de Louvain, Louvain-la-Neuve, Belgium
Laurent P. Nicod, Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland
Paolo Palange, University La Sapienza, Rome, Italy
Jonathan Ayres, University of Birmingham, Birmingham, UK
Peter J. Barnes, Imperial College London, London, UK
Florence Berteletti-Kemp, Smokefree Partnership, Brussels, Belgium
Francesco Blasi, University of Milan, Milan, Italy
Annette Boehler, University Hospital, Zurich, Switzerland
Elisabeth Brambilla, CHU Grenoble, Grenoble, France
Vito Brusasco, University of Genoa, Genoa, Italy
Neil Bullen, European Respiratory Society, Sheffield, UK
Peter M.A. Calverley, University of Liverpool, Liverpool, UK
Kai-Håkon Carlsen, Oslo University Hospital, Oslo, Norway
Luke Clancy, Tobacofree Research Institute, Dublin, Ireland
Brendan Cooper, Queen Elizabeth Hospital Birmingham, Birmingham, UK
Vincent Cottin, University of Lyon, Lyon, France
Sven-Erik Dahlén, Karolinska Institutet, Stockholm, Sweden
Pim De Boer, Astma Fonds, Leusden, the Netherlands
Paul de Grauwé, Katholieke Universiteit Leuven, Leuven, Belgium
Anh Tuan Dinh-Xuan, University Paris Descartes, Paris, France
Lee Dodd, European Respiratory Society, Sheffield, UK
Claudio F. Donner, Mondo Medico, Borgomanero, Italy
Oliver Eickelberg, University of Giessen Lung Center, Giessen, Germany
Monica Fletcher, Education for Health, Warwick, UK
Francesco Forastiere, Rome E Health Authority, Rome, Italy
Karl Freese, European Commission, Brussels, Belgium
Ghislaine Gayan-Ramirez, Katholieke Universiteit Leuven, Leuven, Belgium