

Prevention and Control of Chronic Respiratory Diseases at Country Level

Towards a Global Alliance against Chronic Respiratory Diseases (GARD)

**based on the WHO Meeting on
Prevention and Control of
Chronic Respiratory Diseases**

Geneva, Switzerland, 17-19 June 2004

World Health Organization

**Noncommunicable Diseases and Mental Health
Department of Chronic Diseases and Health Promotion**

Chronic Respiratory Diseases and Arthritis

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Abbreviations

- AAAAI: American Academy of Allergy, Asthma and Immunology (aaaai.org)
- ACAAI: American College of Allergy, Asthma and Immunology (acaai.org)
- ACCP: American College of Chest Physicians (www.chestnet.org)
- ALAT: Latin American Thoracic Society (alat.brz.net)
- APSR: Asian Pacific Society of Respiriology (www.apsresp.org)
- ARI: acute respiratory infection
- ARIA: Allergic Rhinitis and its Impact on Asthma (www.whiar.com)
- ATS: American Thoracic Society (www.thoracic.org)
- BOLD: Burden of Obstructive Lung Disease (www.kpchr.org/public/studies/stds)
- BTS: British Thoracic Society (www.brit-thoracic.org.uk)
- CME: continual medical education
- COPD: chronic obstructive pulmonary disease
- CRD: chronic respiratory diseases
- DOT: Direct observed therapy
- DOTS: Direct observed therapy, short course (www.who.int/gtb/dots)
- EAACI: European Academy of Allergology and Clinical Immunology (www.eaaci.net)
- ECRHS: European Community Respiratory Health Survey (www.ecrhs.org)
- EFA: European Federation of Allergy and Airways Diseases Patients' Associations (www.efanet.org)
- ERS: European Respiratory Society (www.ersnet.org)
- FIHLA: Finnish Lung Health Association (www.filha.fi)
- FIRS: Forum of International Respiratory Societies
- FCTC: Framework Convention on Tobacco Control (www.fctc.org)
- GA²LEN: Global Allergy and Asthma European Network (www.ga2len.net)
- GDF: global drug facility
- GIFT: Global Initiative For Treatment
- GINA: Global Initiative for Asthma (www.ginasthma.com)
- GOLD: Global Initiative for Obstructive Lung Diseases (www.goldcopd.com)
- ICC: International COPD Coalition
- IMCA: Indicators for monitoring COPD and asthma in the EU
(europa.eu.int/comm/health/ph_projects/2001/monitoring) / (<http://imca.imim.es/>)
- ISAAC: International Study of Asthma and Allergy in Childhood
- IUATLD (UNION): International Union Against Tuberculosis and Lung Diseases (www.iuatld.org)
- LIC: low-income country
- MIC: middle-income country
- NCD: non-communicable disease
- NHLBI: National Heart, Lung and Blood Institute (www.nhlbi.nih.gov)
- NIH: National Institutes of Health
- PAA: Prevention of Allergy and Asthma
- PAL: Practical Approach to Lung Health (www.who.int/gtb/policyrd/PAL)
- PALSA: PAL in South Africa
- PHC: primary health care
- STEPS: STEPwise approach to NCD surveillance (www.who.int/ncd_surveillance/infobase)
- SuRF: Surveillance of Risk Factors (www.who.int/ncd_surveillance/infobase)
- THADE: Towards Healthy Indoor Air in Dwellings in Europe
- TB: tuberculosis
- UEMS: Union Européenne des Médecins Spécialistes
- ULASTER: Unión Latinoamericana de Sociedades de Tisiología y Enfermedades Respiratorias
(www.ulaster.com)
- UNION: International Union Against Tuberculosis and Lung Diseases (www.iuatld.org)
- WAO: World Allergy Organization (www.worldallergy.org)

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PREAMBLE

The enormous human suffering caused by chronic respiratory diseases (CRD) has been recognized by the Fifty-Third World Health Assembly which requested the Director-General to continue giving priority to the prevention and control of CRD with special emphasis on developing countries and other deprived populations (*WHA resolution 53.17, May 2000, endorsed by all 191 WHO Member States*).

Recognition of the need for a collaborative action against CRDs was first endorsed by experts attending the "WHO consultation meeting on the development of a comprehensive approach for the prevention and control of chronic respiratory diseases" (WHO-HQ, Geneva, 11-13 January 2001; *WHO/NMH/MNC/CRA/01.1*) and further highlighted by the delegates from two subsequent consultations "Implementation of the WHO strategy for prevention and control of chronic respiratory diseases" (Montpellier, 11-12 February 2002; *WHO/MNC/CRA/02.2*) and "Prevention and control of chronic respiratory diseases in low- and middle-income African countries" (Montpellier, 27-28 July 2002 and Paris, 10 June 2003; *WHO/NMH/CRA/04.1*).

This report summarizes the consultation of experts from 17 governmental and non-governmental organizations who participated in the "WHO meeting on Prevention and Control of Chronic Respiratory Diseases at country level" (WHO/HQ, Geneva, 17-19 June 2004).

INTRODUCTION

The meeting was opened by Dr Robert Beaglehole, Director, Department of Chronic Diseases and Health Promotion, Noncommunicable Diseases and Mental Health, World Health Organization. He indicated that the WHO Director-General, Dr Jong-wook LEE, is building on the work of the previous Director-General but that his intention is to reach people at the country level through programmes that are both practical and pragmatic. He encourages active programmes and building partnerships within organizations interested in collaboration with WHO.

The WHO Department of Chronic Diseases and Health Promotion is responsible for the control and prevention of chronic diseases including cancer, diabetes, cardiovascular diseases and chronic respiratory diseases. There is a need to look for synergies between disease specific groups and for integrated approaches to chronic respiratory diseases prevention and control, including communicable diseases. However, each WHO programme should be maintained, individualized and pursued in its own right.

From the results of this meeting, we need practical and realistic recommendations that can be implemented at the local level. It would be very useful to have a stepwise approach to the management and prevention of chronic diseases at the country level providing guidance on the steps that should be taken first and setting priorities for adding new steps.

WHO has several new initiatives either planned or underway on chronic diseases. One is to develop evidence on the importance of the chronic disease issues. As WHO responds to its Member States, so there is a need to build momentum from the ground up.

Another new initiative is to develop a global report on chronic diseases. There is keen recognition of the need for affordable drugs for chronic respiratory diseases, and an initiative on this topic may be possible by 2005.

CRDs represent a global health problem but they should be addressed in conjunction with co-morbidities and other diseases which may be induced by the same co-factors as those inducing CRDs. CRD management should be integrated in a chronic disease programme at country level.

Discussion:

- Tuberculosis is important for creating an integrated approach in low-income countries as, in PHCs, the staff in charge of TB may also be responsible for CRDs. However, a major requirement is the availability and affordability for low-cost but effective medications and optimal equipment.
- The collection of accurate data is essential for comparison between countries. The WHO acknowledged that collecting good data is important, but further steps are required to agree on definitions and methods of data collection. There is a WHO indicated Global Chronic Disease Risk Factor Data Base (www.who.int/ncd_surveillance/infobase).
- There is a requirement to have common guidelines that integrate all CRDs for use at local level.

Professors Jean Bousquet and Ronald Dahl were elected to serve as Chair and Co-chair. Dr Suzanne Hurd and Professor Leonardo Fabbri were elected to serve as Rapporteurs.

SESSION I: COUNTRY-FOCUSED ACTIVITIES IN PROGRESS

Global Initiative for Asthma (GINA): Paul O'Byrne

The Global Initiative for Asthma (GINA) (www.ginasthma.com) was implemented in 1991 in cooperation with the World Health Organization and the NIH/NHLBI (1). Several updates have been made (2). Its goals are to increase the appreciation of asthma as a global public health problem, present key recommendations for the diagnosis and management of asthma, provide strategies to adapt recommendations to varying health needs, services and resources, and to identify areas for the future investigation of particular significance to the global community. The strategies used by GINA to prepare management recommendations and to disseminate these recommendations worldwide were presented, including World Asthma Days in May. GINA reports have been widely disseminated and translated into multiple languages.

Global Initiative for Chronic Obstructive Lung Disease (GOLD): Leonardo Fabbri

The Global Initiative for Chronic Obstructive Lung Disease (GOLD) (www.goldcopd.com) was implemented in 1998 in cooperation with the World Health Organization and the NIH/NHLBI, (3). Its goals are to increase the awareness of COPD among health professionals, health authorities and the general public, to improve diagnosis, management and prevention and to stimulate research. The scientific committee has been very active in keeping the GOLD reports scientifically updated on a regular basis (so far yearly) and scientifically accurate based on published literature (4). Several special topics have been identified and special reviews conducted, such as the role of antibiotics in COPD as well as the management and outcome measures for COPD management. The GOLD Dissemination Committee, through a network of GOLD National Leaders, scientific societies and patient groups, conducts an annual World COPD Day usually held on 17 November. Through these efforts, the GOLD programme documents have been widely disseminated and translated into multiple languages.

Allergic Rhinitis and its Impact on Asthma (ARIA): Jean Bousquet

The Allergic Rhinitis and its Impact on Asthma initiative (ARIA) (www.whiar.com) was developed to update knowledge of allergic rhinitis for specialists as well as for general practitioners and health care professionals (5, 6). Other goals are to highlight the impact of allergic rhinitis on asthma and to provide recommendations for diagnosis, treatment and management. The ARIA guidelines, implemented in cooperation with the International Union against Tuberculosis and Lung Diseases (UNION), have been widely disseminated and translated into multiple languages. A major target has been the developing countries. The ARIA update is underway. ARIA has been incorporated in the Task Force asthma activities of EuroPharm Forum (www.euro.who.int/europharm), a joint network of national pharmaceutical associations and the WHO Regional Office for Europe.

Practical Approach to Lung Health (PAL): Salha-Eddine Ottmani

PAL is a component of the WHO Global DOTS Extension Plan (www.who.int/gtb/dots, www.who.int/gtb/policyrd/PAL) (7-10). It is a logical extension in health settings with successful TB control programmes. PAL is a syndromic approach towards the management of patients with respiratory symptoms within health care services, with a focus on PHC settings. It is an integrated health care service package targeting 20 to 30% of patients who attend PHC facilities. PAL has two major objectives: i) the improvement in quality of respiratory care, and ii) the improvement in efficiency of the respiratory service delivery system. PAL includes two basic components: i) standardization of respiratory care management through the development of clinical practice guidelines, and ii) coordination among health care levels particularly between first-level facilities

and referral levels. PAL basically focuses on priority respiratory diseases in patients aged 5 years and above, such as TB, ARI (with a focus on pneumonia), asthma and chronic obstructive pulmonary disease (COPD). PAL should be adapted to the epidemiological situation, population age structure and development level of the health system of the country. PAL activities are ongoing in Algeria, Bolivia, Chile, Guinea, Kyrgyzstan, Morocco, Peru, Nepal, South Africa, Tunisia and Uganda. Data from Kyrgyzstan and Morocco show that PAL reduces the prescription of drugs in general, and of antibiotics in particular; it also reduces the average cost of patient drug prescription, and increases the prescription of medications for inhalation use. Findings also show that PAL establishes a routine data set on CRDs from the country based Health Management Information System (HMIS). PAL is expected to secure and empower TB control in changing health systems, improve TB detection and quality of TB diagnosis, help national health authorities cope with the health sector reform, improve planning and health resource management, improve the referral system for respiratory conditions and TB, improve the competence of PHC workers, and contribute to increasing the confidence of patients in PHC services.

PAL in South Africa: Eric Bateman

Based on the PAL program, the PALSAs programme has been adapted to include priority lung diseases (asthma, COPD, tuberculosis, pneumonia, AIDS-related lung complications and upper respiratory tract infections) for use by “frontline clinicians” (nurse practitioners) in South Africa. The initiative involves an integrated guideline for diagnosis and treatment and a structured programme of on-site, in-service training involving marketing strategies employing the “key messages” concept, usable training materials and prompts with liberal use of artwork and practical aids for the clinician. A key to successful implementation is the adaptation of materials for local needs and the involvement of stakeholders at the local level in the project from the beginning. Clinicians requested that the guideline should include all the common respiratory diseases. The entry point to the diagnostic algorithm is the presence of cough and/or difficulty in breathing. The validity of the algorithm has been studied in a sample of more than 1300 patients attending a primary care clinic in Cape Town, in which PALSAs nurse diagnosis and treatment was compared with that of a pulmonologist. Data sets have been collected and are now being analyzed. The effectiveness of the programme in increasing TB detection and improving care of asthma and COPD has been demonstrated in large pragmatic randomized control trials in the Free State Province of South Africa. The programme has been regarded as a success and, at the request of the provincial health authority, has been modified to include anti-retroviral treatment. It is currently being implemented throughout the Province and is being considered for use in other areas. This initiative illustrates the value of integrated management guidelines in primary care that are evidence-based, consistent with local and international guidelines, and accepted and owned by all local stakeholders.

Forum of International Respiratory Societies (FIRS): Carlos Torres

FIRS is a “cooperative union” of international (transnational) professional and scientific societies which have respiratory health as its main (primary) interest. Participating organizations include ACCP, ALAT, APSR, ATS, ERS, UNION and ULASTER. The primary objectives are to identify priorities and new areas for global initiatives in respiratory health. There is an initiative currently underway to collect information on biomass fuels and respiratory health. Another initiative is to validate low-cost but effective spirometry.

Finnish Lung Health Association (FILHA): Markku Nieminen

The current areas of interest in the Finnish Lung Health Association are the evaluation and upgrading of the National Asthma and COPD Programmes as well as the quality of spirometry measurements, smoking cessation and the implementation of the National Sleep Apnea Programme. A programme in rural China, conducted from 1996 to 2003 and supported by the

UNION, the University of British Columbia and Foreign Ministries of China and Finland, was described. Other programmes have also been carried out, e.g. the prevalence of asthma and allergic diseases in Mongolia.

WHO Collaborating Center for Prevention and Control of CRD in Asia Pacific: Sohei Makino

The target diseases for this project include asthma, COPD, post-TB CRD, occupational respiratory diseases, diffuse pan bronchiolitis and allergic rhinitis. The collection of data on these diseases from many countries in the region is an important goal. Smoking prevalence in males is very high (> 50% in many countries) and the number of women and children smoking is increasing dramatically. Approximately 5% of the population in each of the participating countries has been diagnosed with asthma, and 8% with COPD. GINA, GOLD and ARIA are the prototype guidelines that are used, although most countries have adapted these documents for local use. In this region, the use of inhaled glucocorticosteroids for asthma is lower than in Europe and the US. Nevertheless, the asthma mortality (in Japan) has been on the decline. Data on COPD and home oxygen therapy in Japan was also provided as well as data on TB incidence in the countries of this region. New industries are being developed and the group is considering developing guidelines for the prevention of occupational lung diseases (pneumoconiosis, lung cancer, COPD). Proposed future directions were provided.

Global Allergy and Asthma European Network (GA²LEN): Paul van Cauwenberge

The European Union Programme to stimulate research has a segment on nutrition and food safety which includes a section on allergy and asthma (11). Funding has been provided for a five-year period to cover several different work packages in multiple countries. The objectives of the project include the following: to strengthen European research in allergy and asthma, to confront the fragmentation of European research, to spread excellence and knowledge, to integrate European research centers, to address allergy and asthma and to decrease the overall burden of these diseases. GA²LEN (www.ga2len.net) will focus on the European network for the first five years, but has plans to persist after EU funding is stopped and to expand to central/eastern European countries.

National Heart, Lung, and Blood Institute (NHLBI): James Kiley

The US National programme for Chronic Respiratory Diseases has objectives defined by the Department of Health and Human Services and its Healthy People 2010 goals (www.nhlbi.nih.gov). The programme on asthma and COPD includes goals that will require a spectrum of work from epidemiology, basic research, genetics and pharmacogenetics, clinical trials, demonstration as well as education initiatives. Data on asthma in a variety of population groups were presented along with special programmes developed to study the means to reduce the disparities of asthma in minority groups. Details of the US National Asthma Education and Prevention Program (NAEPP), basic and clinical research activities and future goals for the asthma programme were provided (12). The multidisciplinary COPD programme was also presented. The NHLBI has also been an active partner in the GOLD effort. Increasing COPD awareness and developing programmes for early diagnosis of COPD are future directions that are planned.

- Healthy People 2010, (www.healthypeople.gov)
- Ethnic differences in asthma and associated phenotypes (13)
- Coordination of Federal Asthma Activities, C. Lenfant, (www.nhlbi.nih.gov/about/naepp/asth01rpt.pdf)
- National Asthma Education and Prevention Program (www.nhlbi.nih.gov/about)
- Action Against Asthma, A Strategic Plan for the Department of Health and Human Services. (aspe.hhs.gov/sp/asthma/index.htm#toc)

- Asthma and the Environment, A Strategy to Protect Children (aspe.hhs.gov/sp/asthma/appxd.pdf)
- President's Task Force on Environmental Health Risks and Safety Risks in Children (yosemite.epa.gov/oceph/ochpweb.nsf/content/Whatwe_fedtask.htm)
- Coordination of Federal Asthma Activities (www.nhlbi.nih.gov/about/naepp/asth01rpt.htm)
- Setting the Action Agenda to Achieve National Asthma Objectives (www.nhlbi.nih.gov/health/prof/lung/asthma/am_sp01/setadg.htm)
- NHLBI issues updated guidelines for the diagnosis and management of asthma (14).
- NAEPP Expert Panel Report updated (www.respirar.org/eng/library/epr.htm)
- Expert Panel Report : Guidelines for the Diagnosis and Management of Asthma (www.nhlbi.nih.gov/guidelines/asthma/execsumm.pdf); (www.nhlbi.nih.gov/health/prof/lung/asthma/am_sp01/setadg.htm)
- Healthy Youth, Health Topics, Asthma (www.cdc.gov/HealthyYouth/asthma/publications.htm)
- Inventory of Federal Asthma Activities, 2001 (www.nhlbi.nih.gov/about/naepp/asth01apx.pdf) NHLBI FACT BOOK 2003, p 13
NHLBI Fact Book 2002, p101
- NHLBI Funds Centers for Reducing Asthma Disparities (www.nhlbi.nih.gov/new/press/02-10-30a.htm)
- Collaborative Studies on the Genetics of Asthma (CSGA) . (apps.nhlbi.nih.gov/popstudies/Contacts.ASP?TrialNumber=5018)
- Genome screens for asthma (www.genomenetwork.org/articles/06_01/Asthma_susceptibility.shtml)
- Asthma Clinical Network (www.acrn.org) (www.personal.psu.edu/staff/r/r/rrz1/acrn.htm) (www.clinicaltrials.gov/ct/show/NCT00000622)(www.asthma-carenet.org/)
(www.nhlbi.nih.gov/funding/policies/d&eguide.htm)
(www.nhlbi.nih.gov/funding/policies/d&eguide.htm)
- Morbidity and Mortality 2004 Chart Book on Cardiovascular, Lung, and Blood Diseases, NHLBI, NIH
- NIH Web site (www.nih.gov/)
- NHLBI Public Web site (www.nhlbi.nih.gov/index.htm)

**European Federation of Allergy and Airways Diseases Patients' Associations (EFA):
Susanna Palkonen, Erkkka Valovirta**

EFA is a collaborative network of 42 patient associations. It covers 23 countries, includes over 400,000 patient members and aims to improve the quality of life of allergy, asthma and COPD patients (www.efanet.org). As the representative of its members on a European level, the EFA three-fold strategy in disease control includes influencing European Union regulations and carrying out EC funded projects, partnering projects and contributing to the development, dissemination and implementation of international guidelines on allergy, asthma and COPD. As an example, two recent EFA projects focus on indoor air quality (IAQ). The "Indoor Air Pollution in Schools" project assessed and interacted with existing evidence on indoor air pollutants, pollution and health effects in European schools, initiatives and legislation, in order to improve it (15). The local partners of the project are EFA member associations. Recommendations for European and national programmes to improve IAQ in schools were put forward in the final report and have provided a basis for national and local initiatives by EFA members and other parties. Another

multidisciplinary project with a similar concept, including the evaluation of cost-effectiveness of improving IAQ, “Towards Healthy Indoor Air in Dwellings in Europe” (THADE), focuses on the home environment and will be finalized in 2004 (www.efanet.org).

EFA member associations organize many services for patients on a national level, such as information, education and peer support. In collective interest serving, common activities include lobbying for patient care, health in general, healthy air, information and training of professionals research projects, and funding of research.

Asthma Burden and Trends in China: Yu Zhi Chen

The prevalence of asthma and COPD have increased significantly in the past decade. The lack of asthma education in medical training leads to poor treatment for asthma and patients are often treated with antibiotics. The economic burden of treating asthma is very high as medications are expensive. There is a requirement for comprehensive training programs including enhanced patient/family education by community-based nurses. An appeal to the Ministry of Health is needed to pay priority attention to asthma and COPD and to lower market prices of medications.

SESSION 2: CHRONIC RESPIRATORY DISEASE SURVEILLANCE

WHO integrated approach for NCD surveillance – STEPS and SuRF: Kate Strong

The NCD InfoBase collects country-level data on important NCD risk factors for all WHO Member States (16). A system (modular design) for use in developing countries and based on chronic disease risk factors has been developed (smoking, obesity, alcohol, raised blood pressure/cholesterol, physical inactivity, blood glucose, fruit/vegetable intake). There are now modules on stroke and diabetes, but these could be expanded to include a CRD module with risk factors (tobacco, allergy, indoor and outdoor pollution, occupational exposure and nutrition).

The Surveillance of Risk Factors Report (SuRF) is a product of the NCD InfoBase and it displays existing data on the prevalence and mean values of the 8 major risk factors related to noncommunicable diseases (NCDs) for WHO Member States. The program is available on line, (www.who.int/ncd_surveillance/infobase). It focuses on recent, nationally representative data and presents the data as they are reported by survey sources. A main objective of the NCD surveillance programme is to use the collected data from each country to produce best estimates of country-level risk factor prevalence and trends in standard age groupings. The resulting comparable risk factor estimates will be published in the Surveillance of Risk Factors Report 2 (SuRF 2). Problems include the comparability of data, as the data are collected in many different ways. Attempts at harmonization are being made. Data collection will be expanded by working through the regional offices.

Assessing COPD Prevalence in General Population: David Mannino

The COPD definition from GOLD/ATS/ERS includes four stages of disease (3, 17) (www.goldcopd.com). Using this definition, results from a variety of studies were presented to show the increase in COPD by age and within each of the COPD stages. Of concern is the relatively large percent of a population in stage 1 and the observation that a large proportion of subjects in stage 2-4 remain undiagnosed and untreated (18). A programme to assess the Burden of Obstructive Lung Disease (BOLD) was described, including the use of an automated data management system for the transfer and review of the data from participating countries (www.kpchr.org/public/studies/stds). This economic model in conjunction with the epidemiologic part of the study will provide information as to the overall burden of chronic obstructive pulmonary disease (COPD) throughout the world. The goal of this research is to develop a model that can be used to assess a community's current and future economic burden due to COPD. The model will allow users to estimate the potential impact of changes in key parameters, such as smoking status, on future costs of COPD-related healthcare. Preliminary data from a pilot project conducted in Guangzhou, China were presented.

Primary Health Care (PHC) based assessment of asthma and COPD prevalence: Isabella Annesi-Maesano

A prerequisite for fighting asthma and COPD is obtaining good data on respiratory diseases at country level. The question is whether PHC practitioners, who see the patients at preclinical stages, can identify and appropriately manage patients with early symptoms of the disease. However no data exist to determine if this approach is feasible, especially in developing countries. A validation study was designed and will be conducted in Cape Verde (Africa).

Indicators for monitoring COPD and asthma in the EU (IMCA): Enric Duran-Tauleria

The project "Indicators for Monitoring COPD and asthma in the EU" was funded by the Health Monitoring Programme of the European Commission. The main aim of the project was to identify a set of indicators appropriate for monitoring asthma and COPD in the EU and to recommend the methods and tools that should be used for data collection. The project has carried the following

tasks: 1) all routinely and research sources of data were identified and examined for the assessment of their comparability (within and between countries) and their strengths and limitations; 2) international databases such as OECD, WHO, EUROSTAT were examined to explore ways for improvement; 3) the best scientific evidence on risk factors, prevalence, clinical management and policy interventions was reviewed in order to identify the new data that should be incorporated on the new information systems; 4) the most important protocols or clinical guidelines were compared and the main issues that should be monitored identified. Based on this information and the consensus among project participants, four main groups of indicators have been recommended for the implementation of the new health monitoring system: i) demographic and socioeconomic situation; ii) health status; iii) determinants of health and iv) health systems. Since the total number of indicators was quite large, a formal process of prioritization was established and the priorities for data collections have been defined. The results of this project will hopefully contribute to the development of the European Health Survey System and more generally to the new health monitoring system in the European Union being developed by DG-SANCO. More information on the project can be found at the following web sites:

(europa.eu.int/comm/health/ph_projects/2001/monitoring) or (<http://imca.imim.es>)

Discussion on Presentations from day one

- The goals of FIRS were further discussed. FIRS is not a structured formal organization, but is a forum to discuss the initiatives of each society. Experience in low-income countries will help to reach some of the governmental groups. FIRS is to support initiatives from each participating society and possibly to launch their own. Approximately three meetings are held each year attended by the President/past president and sometimes the President-elect of each partner. The main goal is “lung health.”
- Definition of COPD: Participants recommended the adoption of the GOLD/ATS/ERS definition. However, it is clear that for severe patients (stages III and IV) there are co-morbidities, especially with cardiovascular disease, that need to be considered with this WHO initiative.
- It is clear that much work has been carried out on asthma and COPD; WHO should compile an inventory of all the projects.
- Will the practising community accept spirometry for the diagnosis of COPD (and asthma)? Participants agreed that spirometry is the most important measurement that should be made on all patients who are breathless. The WHO CRD report should encourage the use of spirometry and encourage the availability of affordable (low-cost but reliable) equipment despite the difficulties of the PHC System in low-income developing countries. There is a need to differentiate between screening, diagnosis and treatment. It has been proposed that individuals who need continuous treatment should be seen at least once by a specialist. However, this proposal may be impractical in many MIC/LIC.
- Chronic respiratory diseases are underdiagnosed and undertreated. We need to stress the importance of the real burden of CRDs to patients, to governments and to society, in order to involve everyone in the importance of respiratory diseases. For this WHO CRD programme, a simple approach is necessary. The next steps require the development of a simple, realistic, step-wise programme of control and prevention that can be implemented at country level, using the many tools already available. Programmes of surveillance, monitoring and prevention are important but resources to undertake these activities are hard to obtain, especially in the rural areas. It would be useful to draw upon programmes already underway, especially those already adopted at national level, such as the Convention on Tobacco Control.

SESSION 3: CRD PREVENTION, COMMONALITIES WITH OTHER PROMINENT CHRONIC DISEASES

WHO/FCTC countries endorsing the convention: Gemma Vestal, WHO

Tobacco kills almost five million people each year. If current trends continue, it is projected to kill 10 million people a year by 2020, with 70% of those deaths occurring in developing countries. Tobacco also takes an enormous toll in health care costs, lost productivity and of course the intangible costs of the pain and suffering inflicted upon smokers, passive smokers and their families. In May 2003, the member countries of the World Health Organization adopted an historic tobacco control treaty, the Convention on Tobacco Control (CTC) (www.fctc.org) (21), which has the potential to reduce the terrible toll induced by tobacco smoke. A summary of the background, goals and progress of implementation of Framework of the Convention on Tobacco Control (FCTC) has been given. On June 29, 2004, 168 countries signed the FCTC and 26 have ratified the treaty.

High susceptibility to CRD in response to pollution and/or infections: Yohannes Tesfaigzi

Several studies suggest that susceptibility to COPD may have genetic etiology. Approaches to identify COPD genes were presented. Family pedigree association studies have identified specific chromosomal loci associated with asthma and with COPD, and there are now several studies underway to determine if there are some loci that are identical in both these diseases. Candidate genes associated with COPD include oxidant/anti-oxidant, inflammatory mediator, proteinase/anti-protease and cell death/anti-cell death. Information about a study on COPD genetics from New Mexico was presented. If susceptible individuals can be identified, treatment for disease can be personalized.

Occupational and Environmental risk factors for COPD - Strategies of intervention: Giovanni Viegi (www.ifc.cnr.it)

A presentation was made on occupational and environmental contributions to COPD and asthma using ERS and ATS documents. Data on attributable fraction of occupation on asthma and COPD in several countries were also presented (range: 15-30%) (22). Several studies have indicated that occupation as a risk increases among cigarette smokers. It is recommended that clinicians should be made aware of the potential occupational etiologies for obstructive airway disease and consider them in every patient with asthma or COPD (23, 24). Adverse effects of air pollution were illustrated, from increased mortality to odors, with emphasis on the prevalence and exacerbation of COPD. Particular mention was also put on the increased incidence of asthma in children from ozone exposure, as well as impacts on respiratory outcomes from high urban pollution levels (25). Are prevention measures possible? The beneficial effect of downtown closure to private traffic in Atlanta during the 1996 Olympic games is a good example. Practical proposals to reduce vehicle emissions were presented, including several proposed target goals to reach by 2020, as reported in a UNION (IUATLD) document (26). Data on biomass fuels and other common indoor pollutants in a variety of countries were also presented.

Acute exacerbations in COPD: Dr Vladimir Abrosimov

Acute exacerbations of obstructive pulmonary disease are a very common reason for medical treatment and for significant increase in mortality. The most common causes of an exacerbation are infection of the tracheo-bronchial tree and air pollution. However the cause of about one-third of severe exacerbations cannot be identified. Effects of infection in COPD were described. In the past few years, there has been an increased interest in the mechanisms involved in exacerbations of COPD, essential for the development of individual treatment regimens.

Secondary and tertiary prevention of allergies: Marek L. Kowalski

Allergy is a systemic, chronic and progressive disease. Allergic diseases have a significant impact on quality of life and impose an increasing economic burden. Most patients with bronchial asthma are allergic and many patients with allergy go on to develop asthma. Allergy has a progressive nature, and allergic sensitization increases the risk of developing symptomatic disease. Furthermore, the presence of one allergic manifestation increases the risk of development of another (e.g. patients with allergic rhinitis or atopic dermatitis are 3-5 times more likely to suffer from bronchial asthma). Thus the prevention of allergic sensitization (primary prevention), the prevention of development of symptoms in sensitized subjects (secondary prevention) or alleviation/control of symptoms (tertiary prevention) may have a potential impact on the prevalence and social burden of respiratory diseases including asthma.

Several programmes of primary, secondary and tertiary prevention are at different stages of development and further, coordinated efforts of allergists and pulmonologists will prove which measures are the most effective (27, 28). The PAA (prevention of allergy and asthma) programme of WHO-CRD is carried out with WAO (29).

Pulmonary hypertension, cor pulmonale, thrombosis: Marc Humbert

Pulmonary hypertension is defined by a mean pulmonary artery pressure above 25 mm Hg (30). If untreated, this condition has a poor prognosis. Idiopathic pulmonary arterial hypertension (IPAH) is very rare, arterial pulmonary hypertension (APH) is rare but pulmonary hypertension (PH) is very common affecting probably millions of patients around the world. The major risk factors of PH are COPD (31), altitude (32), schistosomiasis (33) and sickle cell disease (34). Patients with TB, HIV, liver cirrhosis, auto-immune diseases, congenital heart diseases and sarcoidosis are also at risk (35). Obesity is an associated risk factor (36).

There are no early symptoms. The first signs are progressive dyspnea on exertion although lung function tests may be normal. Simple tools may help screening populations at risk (electrocardiogram and chest X ray). A more accurate method for screening is represented by the echocardiography-doppler which allows the noninvasive measurement of systolic pulmonary artery pressure. Echocardiography could be performed in regional referral centers. A definite diagnosis of pulmonary hypertension requires invasive measurements (right-heart catheterization).

Much has been learned about pathophysiology leading to the development of new medications, many of which are quite expensive, but enable improved survival (37). Less expensive drugs are also of interest including anticoagulant, diuretics and oxygen therapy which is an important treatment in these patients. These treatments should be available for all patients with pulmonary hypertension.

A WHO programme for the awareness of pulmonary hypertension would be very useful.

SECTION 4: CRD CONTROL AND REHABILITATION

Long-term oxygen care in middle and low-income countries: Ali Ben Kheder

Recommendations for the use of long-term oxygen based on data from the NOTT and MRC studies (published in the 1980s (38)) were discussed. In MIC/LIC, affordability is a problem and requires an adapted health care policy. The estimated need for oxygen in Tunisia was presented, along with the costs that are required per patient.

CRD Rehabilitation in middle and low-income countries: Peter Frith

Standards for pulmonary rehabilitation programmes (including both asthma and COPD patients) have been developed for the Australian and New Zealand setting. Covering a review of the evidence for and against a range of modalities and outcome measures, there are evidence-rated recommendations for practice and research. The Australian Lung Foundation and partners are developing a toolkit to assist new and established rehabilitation workers.

Recommendations based on level of evidence were summarized and both hospital-based and home-based approaches were discussed. Pulmonary rehabilitation improves dyspnea (the major symptom of chronic lung disease), quality of life, and exercise tolerance. An inexpensive rural community (low-income) out-reach programme was described along with some of the positive programme outcomes. A team-based approach is essential. Barriers to implementation include funding, as there is no reimbursement for pulmonary rehabilitation at present in Australia and most other nations.

There are challenges for poor and middle-income countries to implement this highly effective therapy, and for the international community to assist with training and infrastructure support. The major principles are patient training for self-management, upper and lower limb training, and psychosocial support, and they can be adapted to a variety of settings even when professional and physical resources are scarce. Australia has two postgraduate University credentialed training programmes (in Adelaide and Melbourne), which can provide training for health professionals from the geographic region.

British approach to management of COPD: Michael Rudolf

The programme in the UK for guidelines dissemination and raising awareness of COPD provided by the BTS COPD Consortium (www.brit-thoracic.org.uk/copd) was described (39). There is a need to have a small number of key messages to help make both patients and the general public aware of COPD, as well as a structured programme for disseminating new guidelines when they are released. Provided market research data on the results of awareness of U.K. COPD guidelines amongst both general practitioners and nurses as well as data from a MORI public opinion poll show that awareness of COPD remains low in comparison with other diseases (40).

Essential health care facilities to diagnose COPD and pneumonia: Ronald Dahl

Information about community acquired pneumonia, an important cause of mortality, was presented, along with information on COPD. A major part of the presentation was related to obstructive sleep apnea, an important health problem estimated to affect between 5 and 20 million people in Europe. This problem has an impact on quality of life, accidents, school and work attendance, as well as cardiovascular morbidity and mortality.

Essential health care facilities to treat COPD and pneumonia: Leonardo Fabbri

The avoidance of risk factors, and particularly smoking cessation, is the only effective intervention to modify the course of COPD. The most recent GOLD recommendations for the management of COPD (4) were discussed, and it was agreed that they represent guidelines that need to be tailored in particular with respect to the availability of medications in various parts of the world. Because COPD exacerbations are expensive in terms of both health resources and mortality, maintenance medical therapy is important in reducing the rate and severity of exacerbations in patients with severe and very severe COPD. Both acute exacerbations of COPD and pneumonia can enter the differential diagnosis of other infections, in particular TB, in high prevalence areas. This could in theory increase the detection rate of active TB cases, an important objective of public health at country level. Antibiotics are the mainstay of treatment for both community acquired pneumonia and infectious exacerbations of COPD. However, as the infectious nature of COPD exacerbations is difficult to diagnose, the role of antibiotics for the management of COPD exacerbations remains uncertain. Support treatments (such as oxygen and invasive or non-invasive ventilation) may be required for patients with severe COPD and/or pneumonia.

Essential health care facilities to diagnose and treat allergy and asthma: José Rosado-Pinto

Risk factors in developing countries vary from one country to another and there are clear differences between middle and low-income countries (41), for example, poverty, tobacco exposure, infection, malnutrition, indoor/outdoor pollution. A project on asthma was presented from three Portuguese-speaking cities on three different continents (Africa, Europe, Asia) including barriers for diagnosis and treatment (financial, social, cultural and language) (42, 43). Health care facilities, (in-patient and out-patient) were compared. A fifteen year experience in Cape Verde (African middle income country) in asthma and allergy fields concerning the organization of hospital care, health care professionals, training and epidemiologic research (44) was discussed. The success of improving the essential health care facilities in asthma and allergy depends on the priorities of the member states and on the availability of respiratory teams supervised by experts from national and international backgrounds. The programmes should identify and control allergy and asthma and provide access to essential drugs.

Level of drug coverage of patients with diagnosed CRD: Nadia Aït-Khaled

Global poverty and the high price of drugs for CRD are important barriers for the management of chronic respiratory diseases, yet both asthma and COPD are important diseases in all middle-income and in some low-income countries (45). Steps are needed to make changes and to increase the level of drug coverage of patients with CRD. At national level, the main steps are to recognize CRD as a public health problem, to establish national guidelines recommending essential drugs only, to organize the training of health personnel to avoid high cost and inefficient practices, to encourage the use of high quality generic essential drugs and to try to provide essential drugs through insurance. This can be achieved only by new actions at international level: the message should be clear that the majority of patients with asthma can be effectively treated with inhaled glucocorticosteroids and short-acting β_2 agonists which should be available and affordable (46, 47). To decrease the cost of drugs in poor countries, international NGOs could work together with WHO as a “Task Force” for CRD management by the creation of a “Global Asthma Drug Facility” recently proposed by UNION (www.iuatld.org). This structure could be organized using the model of Global Drug Facility (GDF) implemented by Stop TB partnership for antituberculosis drugs (48, 49).

The implementation of CRD management requires human and financial resources that are sometimes difficult to obtain on a national level for a non-infectious disease. As national tuberculosis programmes are well developed in most developing countries, it may be possible to integrate standardized management programmes for COPD and asthma into tuberculosis

programmes by extending existing information systems to other chronic diseases. This implementation proposed by PAL could increase drug coverage for CRD and increase the quality of services.

Global Initiative For Treatment (GIFT) of major chronic diseases: Shanthi Mendis

The cost of medications is a problem in all chronic diseases. The WHO chronic disease initiative includes coronary heart disease/cerebrovascular disease, asthma, diabetes, glaucoma, cancer and familial hypercholesterolemia and will address issues of affordability, accessibility, quality/efficacy and evidence-based prescription. Creating a fund to pay for the treatment of chronic diseases will not be feasible; this might be a solution for HIV and/or TB as these are diseases that are expected to decline eventually. Other approaches need to be considered. At present, medications on the priority list (related to CRD) include salbutamol, aminophylline, ipratropium and beclometasone but to bring drug prices down, several actions are required, such as ensuring generic medicines of good quality and seeking volume discounts. There was a group decision to leave aminophylline and theophylline on the list of essential drugs. There is a requirement to work on a method of bringing attention to the “best medications” for asthma and of ensuring that these are on such a list.

Fostering collaboration with potential donors to improve access to treatment: Larry Grouse

A critical issue is to involve the donors for respiratory health promotion. A task force plan for possible implementation was presented and, in implementing action plans, whatever is established, the importance of high scientific integrity is essential. A WHO-led task force could collaborate with donor groups and be implemented at the country level. Donors have been involved actively with many NGOs and initiatives and are linked with the large numbers of individuals who work with these initiatives.

A donor means “something that is given”; some are voluntary efforts, not just monetary contributions. Guidelines for Drug Donation published in 1999 by WHO will be followed in the Task Force for Access to Medications. These Guidelines for drug donations have been developed by the WHO in cooperation with the major international agencies active in humanitarian relief. The Guidelines aim to improve the quality of drug donations, not to hinder them.

The US COPD Coalition (www.uscopd.com) was presented as an example of a non-for-profit effort that has been established through voluntary participation of a variety of medical, government and patient groups. It brings together health professional organizations, patient organizations and foundations, individuals, and government agencies working to improve the lives of people with COPD.

The proposed WHO NCD CRD Task Force participants were discussed.

SESSION 5: PATIENT AND PROFESSIONAL EDUCATION

Continuous medical education of health professionals: Mina Gaga

Many methods providing continuous medical education were presented. It is easier to undertake CME programmes in large settings such as teaching hospitals and when funds are available, but this is more difficult in remote and poorer areas. CME programs should have a clear message and be of good quality. Furthermore, they must lead to desired changes in clinical practice and, in order to succeed, they should involve the “students” and make use of skills such as, according to a Cochrane review (2003): "Interactive workshops can result in moderately large changes in professional practice, but there are no effects from 'didactic' teaching sessions - i.e. lectures to large audiences” (50, 51). The aims and means of CME were discussed. E-learning and internet-based learning are becoming widespread and are relatively inexpensive and rapid. A quick survey in many countries showed that internet-based learning is possible in most and is perhaps a preferable way for CME. The medical school curriculum should include teaching communication skills as these are very important when dealing with patients, particularly in the care of chronic diseases.

CME activities represent an important target of many organizations including AAAAI, ACAAI, ACCP, ATS, BTS, EAACI, ERS, UEMS and WAO.

Patient education and self management programme for CRD control: Suzanne Hurd

Education for asthmatics and COPD patients is an essential part of the management (50, 52). Programmes for patient self-management (asthma) from GINA and education (COPD) from GOLD were presented. Issues are the need for different end-points. Those on the team need to be clarified. The roles of doctors/nurses need to be carefully defined (for example, who can provide medications and under what situation?). How to empower those outside the health care profession? There might be a need to expand the definition of self-management in relation to COPD.

Discussion of day two

- Do not change the word COPD, do not return to chronic bronchitis or emphysema. We are making progress in raising awareness of COPD and should continue with this.
- The issue of CME is important and needs some further thoughts on how to do this better. It is more likely to be successful if it is done through medical/professional societies and medical schools rather than through the government. The Universities cannot do CME accreditation but they can make educational programmes uniform throughout a region.
- A written action plan is very effective for asthma care and patients like it. The general practitioner/primary care doctor will probably not have the time to do this well.

SESSION 6: CONCLUSIONS AND FUTURE STEPS

Global CRD Awareness activities and development of a World Lung Health Day

Development of an International Alliance against Chronic Diseases to support WHO coordinated country-focused activities for the surveillance, prevention and control of chronic respiratory diseases.

1. Both in developing and developed countries, **CRDs represent an enormous burden** which has been recognized by the Fifty-Third World Health Assembly (*WHA Resolution 53.17, May 2000*).
2. In contradiction to most other diseases, the **global burden of CRDs is increasing**.
3. **There are urgent needs for:**
 - 3.1. An **increased awareness of the importance of the burden of CRDs** which should be regarded as major diseases and as a serious global health problem by:
 - The health care professionals who should consistently highlight the burden of CRDs and be champions of these problems.
 - The patients who do not insist sufficiently on CRDs.
 - The media.
 - And the government, department of health, health provider organizations and agencies.
 - 3.2. An **increased awareness of CRD risk factors** to reduce their burden.
 - Anti-tobacco campaigns: The WHO/FCTC program should be an integral part of the CRD-WHO programme. Tobacco legislation against tobacco smoke exposure in public areas should be encouraged at country level.
 - Prevention strategies at workplace.
 - Other prevention strategies (indoor and outdoor air pollution including biomass fuels, allergy) need more research but are likely to be of great importance in the future.
 - A CRD module of STEPS/SuRF including risk factors (e.g. tobacco, allergy, occupation, pollution, diet and physical exercise) is of great importance. This module would increase the awareness of the prevalence and severity of CRDs to governments.
 - 3.3. An **optimal diagnosis of CRDs**.
 - Spirometry, supported by adequate education, should be available at all levels, in order to ensure correct diagnosis, in particular in PHCs and in primary care.
 - Peak flow should be available at PHC level if there is no spirometry.
 - Allergy testing and oxymetry should be available at second referral centers.
 - 3.4. An **optimal management of CRDs**.
 - There is a global general agreement on the management of CRDs around the world. National guidelines based on essential drugs adapted to country needs should be developed.
 - The availability and affordability of medications is a clear problem in many MIC/LIC.

- In order to improve health care, efficiency and equity, a task force for medication access may be started in collaboration with GIFT.
 - Generic drugs of good quality should be available.
 - An increased level of drug coverage through international actions is advised.
 - Transversal primary care diagnostic approaches based on symptoms need to be developed, tested and disseminated in a format which is acceptable for primary care practitioners, but also in PHCs by health care professionals.
 - These guidelines should however provide the best medical care and should be based on previously validated disease-based guidelines.
 - Flexible and pragmatic approaches should be used in different countries.
- 3.5. The development of **prevention strategies** based on the assessment of risk factors.
- 3.6. The assessment of **costs of CRDs** which are important, not just to health care but to a country's economy as a whole. They need to be identified by epidemiologic and socio-economic studies.
- 3.7. The identification of **unmet needs**. In particular, research is needed to develop effective prevention strategies.

4. **To achieve these identified needs:**

- 4.1. There should be an **improvement of the collaboration between the fragmented governmental and non-governmental programmes** which already exist, with a special emphasis on developing LIC/MIC. **A coordinated WHO-CRD action plan** will avoid duplication of efforts and waste of resources. This plan should **foster country focused initiatives** according to the special needs of each specific country to better recognize, prevent and manage CRDs.
- 4.2. The inventory of known programmes on CRDs should be regularly updated.
- 4.3. Education at pre- and post-graduate levels is essential.
- 4.4. Pilot studies at country level (with a country coordinator) in each WHO region should be established to confirm the proposals for the WHO-CRD Programme.

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