

Global Alliance against Chronic Respiratory Diseases (GARD) Basket



A package of information, surveillance tools and guidelines,
to be offered as a service to countries



A world where
all people
breathe freely



World Health
Organization

WHO Library Cataloguing-in-Publication Data

Global alliance against chronic respiratory diseases (GARD) basket : a package of information, surveillance tools and guidelines, to be offered as a service to countries.

1. Respiratory tract diseases - economy. 2. Respiratory tract diseases - prevention and control. 3. Respiratory tract diseases - diagnosis. 4. Lung diseases. 5. Developing countries. 6. Guidelines. I. Global Alliance against Chronic Respiratory Diseases. II. World Health Organization. Dept. of Chronic Diseases and Health Promotion.

ISBN 978 92 4 159679 4

(NLM classification: WF 140)

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Printed in Switzerland

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A package of information, surveillance tools and guidelines, to be offered as a service to countries

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Background

The Global Alliance against Chronic Respiratory Diseases (GARD) is a voluntary alliance of national and international organizations, institutions and agencies committed to the vision of “a world where all people breathe freely”. Its main objective is to initiate a comprehensive approach to fight chronic respiratory diseases by:

- i. developing a standard way of obtaining relevant data on the burden of chronic respiratory diseases and their risk factors (surveillance);
- ii. advocating for action on chronic respiratory diseases (advocacy);
- iii. encouraging countries to implement health promotion and chronic respiratory diseases prevention policies (prevention);

- iv. developing simple and affordable strategies for the management of chronic respiratory diseases (control).

GARD collaborating parties and working groups have prepared an inventory including questionnaires for surveillance, scientific publications, web page addresses, training materials and guidelines that can be used at country level on the basis of the needs and local capacities. This collection of information is referred to as the **GARD Basket, which includes both brochure and CD-Rom** and will be offered as a service to countries that request assistance in the fields of surveillance, prevention and control of chronic respiratory diseases. The

selection of the materials to be included in the final version of the Basket was the result of consultations with all GARD collaborating parties. A draft proposal was then prepared by the secretariat and sent to all collaborating parties for suggestions and criticism. After this second round of consultations, a new draft was sent to the experts chosen to be the core contributors and was further amended with their suggestions. The guidelines selected

are largely recognized as the most useful and up to date available, based on best evidence, prepared by expert committees and endorsed by the major scientific societies in the field. Articles were selected to complement the information contained in guidelines, usually more oriented to treatment, making the GARD Basket more comprehensive in subjects related to epidemiology, diagnosis, disease prevention and health promotion. It is clear to

Topics covered in GARD Basket

The documents included in the Basket are categorized according to the fields covered by GARD working groups:

- Burden, risk factors and surveillance of chronic respiratory diseases
- Awareness and advocacy on chronic respiratory diseases
- Prevention and health promotion on chronic respiratory diseases
- Diagnosis of chronic respiratory diseases
- Control and management of chronic respiratory diseases
- Paediatric chronic respiratory diseases



GARD that actions at country level have to be the matter of a specific national proposal decided locally, adapting or adopting international recommendations in the context of primary health care supported by reference centres. Our aim is to provide global evidence and recommendations to subsidize local decisions.

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GARD Basket material classification

In order to facilitate the search for a document in the Basket, all materials have also been categorized as to whether or not they are WHO publications. In addition, to stress those found to be more relevant to public health, some were labelled as essential and others as complementary. The list of materials is also ranked in chronological order, beginning with the most recent.

The list includes publications that are available on the Internet free of charge, in PDF format, and publications with restricted access that the copyright holders have

given permission to the World Health Organization to distribute in GARD Basket. A few copyright owners did not grant permissions for the inclusion of the PDF of their articles free of charge. In this case the reference will be listed but marked with an asterisk, to indicate the absence of the document in the CD-Rom.

GARD Basket will be distributed in a CD-Rom, but print versions of the major guidelines will be requested from GARD partners to be given to the Ministers of Health of each country that requests support from GARD.

GARD Basket key messages

Information on health promotion, disease prevention and treatment for health professionals and patients

Chronic respiratory diseases are chronic diseases of the airways and the lungs. Of these, the major preventable diseases include asthma and respiratory allergies, chronic obstructive pulmonary disease (COPD), occupational lung diseases and sleep apnoea syndrome.

Preventable chronic respiratory diseases are a major global health problem:

i. hundreds of millions of people of all ages (from infancy to old

age) suffer from these diseases and respiratory allergies in all countries of the world and more than 500 million of these people live in developing countries or deprived areas;

ii. chronic respiratory diseases are increasing in prevalence, particularly in children and the elderly;

iii. chronic respiratory diseases affect quality of life and provoke disability of affected individuals;

- iv. chronic respiratory diseases cause premature death and create large adverse and underappreciated economic effects on families, communities and societies in general;
- v. WHO and the World Bank have estimated that four million people with chronic respiratory diseases might have died prematurely in 2005, and they have projected that the death rate and the global burden of these diseases will increase considerably in the future.

Many risk factors for preventable chronic respiratory diseases have been identified and efficient preventive measures established. Tobacco smoking in both developed and developing countries, indoor air pollution particularly in developing countries, allergens, occupational agents, and some diseases such as schistosomiasis or sickle-cell disease cause preventable chronic respiratory diseases. Pneumonia, bronchiolitis and tuberculosis may also result in airway scars. Prevention of these risk factors will have a significant impact on the burden of this group of diseases. The current trend of longer life poses an additional risk for chronic respiratory disease, as ageing is an independent risk factor for this group of ailments. Effective management plans have been shown to reduce chronic respiratory disease morbidity and mortality, but plans

are fragmented and need to be coordinated, as well as integrated to primary health care activities.

Although the cost of inaction is clear and unacceptable, preventable chronic respiratory diseases and their risk factors receive insufficient attention from the health care community, government officials, patients and their families, as well as the media. The Fifty-third World Health Assembly recognized the enormous human suffering caused by chronic diseases and requested the WHO Director-General to give priority to their prevention and control, with special emphasis on developing countries (Resolution WHA53.17, May 2000, endorsed by all WHO Member States). This led to the formation of the Global Alliance against Chronic Respiratory Diseases (GARD).

There are numerous documents issued by WHO or published by other institutions covering multiple aspects of chronic respiratory diseases that might be useful for the update and education of health professionals and patients. The following concepts should be emphasized:

- i. chronic respiratory diseases are common preventable and controllable diseases, and are frequently overlooked;
- ii. they affect people of all age groups, ethnicity and social status, worldwide;

- iii. the burden of these common ailments constitutes an unbearable challenge to poor families and public health systems of low income countries;
- iv. there are evidence-based cost-effective means to prevent and control chronic respiratory diseases, such as those proposed by the WHO Framework Convention on Tobacco Control and Practical Approach to Lung Health and International Primary Care Respiratory Group.

Three topics deserve special comment, due to their importance to the lay public and for health promotion:

- i. physical activities – these are important to subjects with asthma, who should be adequately treated to tolerate regular exercise, and to COPD patients, who benefit from rehabilitation programmes. Inactivity may be related to poor recognition of disease and consequent under diagnosis and under treatment. Except in a few circumstances in advanced stages of illnesses that require physical activity restrictions, persons with chronic respiratory diseases should be encouraged to adopt regular exercise for a healthier life;
- ii. diet and nutrition – persons with severe COPD have to exert a greater effort to breathe. They are often elderly and they lose weight. The effects of poor caloric

nutrition may contribute to deterioration of their respiratory problems. Conversely, obesity has been associated with more frequent asthma, and may also be a problem in subjects with severe COPD, due to the increased breathing needs and greater effort required to breathe. Therefore, adequate nutrition is an important concern, not only for health promotion, but also for prevention and better control of chronic respiratory diseases. The WHO publication “Global strategy on diet, physical activity and health” is an important source of further information;

- iii. traditional medicine – traditional medicine, alternative practices or complementary medicine attract a spectrum of reactions, from uncritical enthusiasm to uninformed scepticism. GARD acknowledges the worldwide frequent use of traditional medicine, and wishes to search for evidence to recommend this type of approach to therapy, but only when efficacy and tolerability are proven. The publication “WHO Traditional Medicine Strategy 2002–2005” has analysed the potential for these types of practice in various diseases.

Tools for surveillance

Questionnaires are useful instruments to evaluate prevalence,

risk factors, diagnosis and control of chronic diseases in samples of the population. Some have been used extensively to obtain information on the prevalence of chronic respiratory diseases in multiple countries in a standardized manner, such as the numerous surveys conducted by the European Community Respiratory Health Survey (ECRHS) and the International Study of Asthma and Allergy in Childhood (ISAAC). Standardized and valid questionnaires of ISAAC have been used in population-based samples and adapted to various languages. They include simple questions and are accompanied by a manual explaining how they should be used, how to analyse the results and how to avoid biases. They are recommended for surveys in places where information on the prevalence of asthma and rhinitis is not available.

For COPD, a series of population-based studies has been published recently using a standardized methodology and objective spirometric criterion for identification of cases, as in the Burden of Obstructive Lung Diseases (BOLD) and Prevalence Survey of Chronic Obstructive Pulmonary Disease in Major Latin American Cities (PLATINO).

A set of questions to distinguish COPD from asthma among subjects

with persistent cough has been studied by general practitioners in the United Kingdom of Great Britain and Northern Ireland, who found it accurate in primary care settings when spirometry may not be available. This set of questions may be adapted for local use and should always take into consideration the need to investigate pulmonary tuberculosis in a person with chronic cough.

An article referring to a questionnaire to evaluate health-care systems with regard to their preparedness to face the threat of chronic respiratory diseases, which has been investigated with the support of WHO, is also listed, as well as a study on prevalence of chronic respiratory disease in Europe, as assessed by a WHO analysis of housing and health status.

It should be noticed, however, that like any other instrument, the accuracy and external validity of measurements acquired through questionnaires will depend not only on the characteristics of the questionnaires but also on the way they are applied, requiring consistency and proper methods for interviews and planning of the sample to be surveyed.

Guidelines

Several guidelines for diagnosis and management of chronic respiratory

diseases have been prepared by international institutions containing up-to-date best evidence-based recommendations for health-care professionals, such as the Global Initiative for Chronic Obstructive Pulmonary Diseases (GOLD), Global Initiative for Asthma (GINA) and Allergic Rhinitis and its Impact on Asthma (ARIA). Unfortunately however, the availability and affordability of some of the diagnostic and therapeutic options suggested may be limited in many low income countries. The guidelines proposed for primary care by the International Primary Care Respiratory Group (IPRCG) or by the International Union Against Tuberculosis and Lung Diseases (The Union), are good alternatives, which try to make the recommendations easier to follow. WHO has also contributed to this field with a proposal called "Practical Approach to Lung Health (PAL)". This is a primary health care strategy for the integrated management of respiratory conditions in people five years of age and over, which may be more appropriate for low income countries, but requires the possibility for referrals of most difficult cases for proper management in secondary or tertiary health services. Assessment of evidence and levels of recommendation, together with the methodology for guideline development, have been a matter of discussion among the

major respiratory societies, with the participation of WHO. A proposal for evaluation and adaptation of guidelines is also under broad debate.

National evidence-based guidelines are also available in many countries. Guidelines should be adapted to national or regional realities. In general, it is accepted that family doctors or general practitioners should be prepared to provide care for mild to moderate cases of the most common chronic respiratory diseases and educate patients and their families on health promotion and disease prevention. They should also be prepared to assist severe cases before referral if there are health services of higher complexity available. Nurses should be prepared to provide general advice to patients as well as to offer inhaled bronchodilators and oxygen for exacerbations of previously-diagnosed asthma or COPD, while waiting for a medical doctor.

Spirometry should be made available in reference centres. With the increasing availability of simple, affordable and reliable instruments, spirometry could be more widely used in the near future. A task force of the Forum of International Respiratory Societies is preparing a statement on this matter. Spirometry is important for differential diagnosis of chronic respiratory diseases, early

diagnosis of COPD and follow-up of moderate to severe asthma. Bronchodilators and corticosteroids for inhalational use, but also for all other routes of administration (by mouth, intravenous, intramuscular, and subcutaneous) should be available for treatment of asthma and COPD at all levels of health care. Oxygen should be available in health facilities for treatment of severe exacerbations of asthma, COPD and other severe forms of chronic respiratory diseases, whenever possible.

Web sites

Many web sites offer up-to-date information that may be extremely useful for those health professionals, policy-makers, media professionals, educators, patients and families interested in the field of chronic respiratory disease. They all try to increase awareness, provide information on the burden of the problem, and guidance on health promotion and disease prevention. Some that are more specific to health-care professionals also give information on disease management.

The WHO web page of GARD is linked to various other pages providing useful information. It includes constantly updated notes on the activities of the Alliance.

The pages of WHO Framework Convention on Tobacco Control calls attention to the risks of second hand smoking, and the page of the Asthma Drug Facility giving information about the possibilities for countries to buy affordable medication, must be visited.

Scientific peer-reviewed articles

Many thousands of scientific articles on chronic respiratory diseases have been published in the last decade and may be of interest to health professionals and health policy-makers in various countries. Only a few such publications have been included in this list, which has to be short. They have been chosen for their global importance or for the usefulness of the knowledge presented in the context of public health. The papers deal with various matters of interest, including prevalence surveys, analysis of risk factors, natural history of diseases, health resource utilization, evaluation of effectiveness of interventions and strategies to implement health policies at country level. It is not the purpose of this text to review the subject in depth. The WHO publication entitled "Global surveillance, prevention and control of chronic respiratory diseases: a comprehensive approach" fulfils this need.



List of GARD Basket materials

1. Burden, risk factors and surveillance



WHO publications and documents

Essential

- Global surveillance, prevention and control of chronic respiratory diseases: a comprehensive approach. Geneva, World Health Organization, 2007. (http://www.who.int/gard/publications/GARD_Manual).
- Preventing disease through healthy environments. Towards an estimate of the environmental burden of disease. Geneva, World Health Organization, 2006 (http://www.who.int/quantifying_ehimpacts/publications/preventingdisease/en/index.html).
- The world health report 2006 - working together for health. Overview. Geneva, World Health Organization, 2006 (<http://www.who.int/whr/2006/overview>).
- Preventing chronic diseases, a vital investment. Geneva, World Health Organization, 2005 (<http://www.who.int/chp>).
- Indoor air pollution from solid households fuels. In: Comparative quantification of health risks. Geneva, World Health Organization, 2004 (<http://www.who.int/publications/cra>).
- Indoor smoke from solid fuels: assessing the environmental burden of disease. Geneva, World Health Organization, 2004 (<http://www.who.int/indoorair/publications/indoorsmoke>).
- Smoking and oral tobacco use. In: Comparative quantification of health risks. Geneva, World Health Organization, 2004 (<http://www.who.int/publications/cra>).
- The world health report 2002 - Reducing risks, promoting healthy life. Geneva, World Health Organization, 2002 (<http://www.who.int/whr/2002>).
- WHO Indoor air pollution (<http://www.who.int/indoorair>).

Complementary

- Respiratory care in primary care services - a survey in 9 countries (PAL). Geneva, World Health Organization, 2004 (http://whqlibdoc.who.int/hq/2004/WHO_HTM_TB_2004.333.pdf).
- WHO Global InfoBase (http://www.who.int/ncd_surveillance/infobase).
- WHO Occupational Health information (http://www.who.int/occupational_health).

Other publications and documents

Essential

- Boutin-Forzano S, et al. Reported prevalence and co-morbidity of asthma, chronic bronchitis and emphysema: a pan-European estimation. *International Journal of Tuberculosis and Lung Diseases*. 2007; 11:695–702.
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- Bruce N, et al. Indoor air pollution. In: Jamison et al., eds. *Disease control priorities in developing countries*. 2nd ed., World Bank and Oxford University Press, 2006:793–815. (<http://www.dcp2.org/pubs/DCP>).
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- Driscoll T, et al. The global burden of non-malignant respiratory disease due to occupational airborne particulates. *American Journal of Industrial Hygiene*. 2005; 48:432–445.*
- Indicators for monitoring COPD and asthma in the EU. European Commission, Directorate for Public Health and Safety Work (DG-SANCO), 2005.

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Complementary

- Ait-Khaled N, et al. Prevalence of symptoms of asthma, rhinitis and eczema in 13- to 14-year-old children in Africa: the International Study of Asthma and Allergies in Childhood Phase III. *Allergy*. 2007; 62:247–258.
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ADRA
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2. Awareness and advocacy



WHO publications or documents

Essential

- Global Alliance against Chronic Respiratory Diseases General Meeting Report. Seoul, Republic of Korea, 1-2 June 2007. Geneva, World Health Organization, 2007. (http://www.who.int/entity/gard/publications/MtgReport_GMSeoul_Final.pdf).
- Statement of Global Alliance against Chronic Respiratory Diseases General Meeting. Seoul, Republic of Korea, 1-2 June 2007. Geneva, World Health Organization, 2007. (http://www.who.int/entity/gard/publications/statement_website.pdf).
- Stop the Global Epidemic of Chronic Diseases. A practical guide to successful advocacy. Geneva, World Health Organization, 2007. (<http://www.who.int/entity/chp/advocacy/chp.manual.EN-webfinal.pdf>).
- Fuel for life: household energy and health. Geneva, World Health Organization, 2006 (<http://www.who.int/indoorair/publications/fuelforlife>).
- Practical Approach to Lung Health (leaflet). Geneva, World Health Organization, 2003.
- WHO Framework Convention on Tobacco Control. Geneva, World Health Organization, 2003 (<http://www.who.int/tobacco>).
- Chronic diseases and health promotion. Geneva, World Health Organization (<http://www.who.int/chp>).
- WHO Global Alliance against Chronic Respiratory Diseases (<http://www.who.int/gard>).

Complementary

- The millennium development goals and tobacco control. Geneva, World Health Organization, 2004.
- WHO Guidelines on developing consumer information on proper use of traditional, complementary and alternative medicine. Geneva, World Health Organization, 2004.

Other publications and documents

Essential

- Bousquet J, Dahl R, Khaltayev N. Global Alliance against Chronic Respiratory Diseases. *European Respiratory Journal*. 2007; 29:233–239.

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- American Lung Association (<http://www.lungusa.org>).
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- Consiglio Nazionale delle Ricerche - Italy (<http://www.cnr.it>).
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- Asociacion Latinoamericana del Torax (<http://www.alatorax.org>).
- Asthme & Allergies Association (<http://www.asmanet.com>).
- Danish Lung Association (<http://www.lungeforening.dk>).
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- Sociedade Portuguesa de Alergologia e Imunologia Clínica (<http://www.spaic.pt>).
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3. Prevention and health promotion



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Essential

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WHO publications or documents

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Essential

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Medicines for asthma



Preventer medicines are used every day to prevent attacks



Preventer medicines are used every day to prevent attacks

The Truth about Steroids in Asthma

- 1. Steroids are used to reduce inflammation in your airways
- 2. Corticosteroids are different to anabolic steroids used by athletes and body builders
- 3. Steroids work over a period of time, so selecting your asthma medicine that fits your needs is important

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6. Paediatrics



WHO publications or documents

Essential

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- Healthy environments, healthy children. Tool kit for teachers. Washington, Pan American Health Organization - World Health Organization, 2004.
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Acknowledgements

The Global Alliance against Chronic Respiratory Diseases gratefully acknowledges the generous financial contribution towards the production of this publication that was received from the Public Health Agency of Canada.

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**A world where
all people
breathe freely**

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ISBN 978 92 4 159679 4

