Preventing CHRONIC DISEASES
a vital investment

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a vital investment

saving 36,000,000 lives by 2015

World Health Organization
Burden of disease (DALYs) 2005

Preventing Chronic Diseases, a vital investment, WHO, 2005

Global Alliance against Chronic Respiratory Diseases
www.who.int/respiratory/gard
The 53rd World Health Assembly, May 2000

- Recognized the enormous human suffering caused by chronic diseases
- And requested the WHO Director General to continue giving priority to the prevention and control of chronic diseases
- With special emphasis on developing countries and other deprived populations

Endorsed by all 191 WHO Member States
GARD

Global Alliance against Chronic Respiratory Diseases

1- Needs for GARD

2- GARD

3- Estimate population needs and advocate for action

4- Formulate and adopt policy

5- GARD implementation steps

Global Alliance against Chronic Respiratory Diseases
www.who.int/respiratory/gard
Chronic respiratory diseases

• Everyone in the world is exposed to risk factors for CRD
  – 3 billion: urban areas (outdoor air pollution)
  – 1 billion: slum areas
  – 2 billion: biomass fuel combustion
  – 1 billion: tobacco smoke
  – 500 million: inhaled occupational agents
  – Everyone: allergens

• Over 1 billion people suffer from CRD and allergies

• 4 million die prematurely each year
# Chronic respiratory diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Year of estimate</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>2004</td>
<td>300 million</td>
</tr>
<tr>
<td>COPD</td>
<td>2007</td>
<td>210 million</td>
</tr>
<tr>
<td>Allergic rhinitis</td>
<td>1996 - 2006</td>
<td>400 million</td>
</tr>
<tr>
<td>Sleep apnea</td>
<td>1986 - 2002</td>
<td>&gt;100 million</td>
</tr>
</tbody>
</table>

In 2030

- Tobacco > 8 million deaths (Plos Med 2006)
- Biomass fuel combustion > 10 million deaths (Ezzatti, Science 2005)
- > 50% of the world population will be allergic
Global Alliance against Chronic Respiratory Diseases

1- Needs for GARD

2- GARD
Global Alliance against Chronic Respiratory Diseases

- voluntary alliance of national and international organizations, institutions, and agencies committed to the common goal to improve global respiratory health

- GARD is part of the WHO action plan against chronic diseases

- Because most of CRDs are under-diagnosed, under-treated and there is little access to essential medications in many countries, a global effort is needed
WHO major partnerships

- Alliance for Health Policy and Systems Research
- GAVI
- GARD
- Global Health Workforce Alliance
- Global Polio Eradication Initiative
- Health Metrics Network
- Intergovernmental Forum on Chemical Safety
- Partnership for Maternal, Newborn and Child Health
- Roll Back Malaria
- « Tropical Diseases »
- International Food Safety Authorities Network
- UN System Standing Committee on Nutrition
- UN Road Safety Collaboration
- « Human Reproduction »
- Initiative for Vaccine Research
- Violence Prevention Alliance
- Vision 2020, The Right to Sight
- WHO Alliance for the global elimination of Trachoma
- FCTC
- Stop TB Partnership Global Drug Facility

Global Alliance against Chronic Respiratory Diseases
www.who.int/respiratory/gard
More than 1.5 million Health Professionals together to work towards a world where all people breathe freely

WHO
AAA (D. Vervloet, France)
AAAAl (E. Simon, CAN)
AAAF (R. Pawankar, JAP)
ACAAI (M. Blaiss, USA)
AIMAR (C. Donner, ITA)
ALAT (C. Luna, ARG)
ALLERG.O.S
APAACI (T. Fukuda, JAP)
APSR (Y. Fukuchi, JAP)
ARIA (J. Bousquet, FRA)
ATS (P. Wagner, USA)
CCM (D. Greco, ITA)
CNR-INMM (G. Rasi, ITA)
DLHA (DK)
EAACI (U. Wahn, GER)
ECARF (T. Zuberbier, GER)
EFA (S. Palkonen, FIN)
ERS (R. Dahl, DK)
FEMTEC (U. Solimene, ITA)
FILHA (M. Nieminen, FIN)
FIRS (A. Turnbull, SWI)
GA2LEN (P. Van Cauwenberge, BEL)
GINA (P. O’Byrne, CAN)
GOLD (L. Fabbri, ITA)
GRA (I. Chkhaidze, GEO)
ICC (L. Grouse, USA)
INTERASMA (I. Ansotegui, SPA)
IPRAIS (J. Warner, UK)
IPCRG (A. Ostrem, UK)
IUATLD (N. Bille, FRA)
KAF (Y. Kim, KOR)
KTL (P. Puska, FIN)
NHLBI (B. Alving, USA)
PSA (P., POL)
RSP (A. Chuchalin, RUS)
SFAIC (G. Pauli, FRA)
SIMER (J. ITA)
SPAIC (M. Morais de Almeida)
SPLF (B. Housset, FRA)
TNSACI (TUR)
TTS (J. Kroot, HUN)
WAO (C. Bacha-Cagnani, ARG)
WHO-CC DU (S. Makino, JAP)
WHO-CC GU (G. Joos, BEL)
WONCA (A. Loh, SIN)
Allergy Research Foundation
Asthma Society of Canada
Belgian Thoracic Society
Czech Initiative for Asthma
Chest Research Foundation, India
Education for Health, United Kingdom
Egyptian Society of Allergy and Immunology
Egyptian Society of Allergy, Asthma and Immunology
Egyptian Society of Chest Diseases and Tuberculosis
International Federation of Oto-Rhino-Laryngological Societies
International Rhinologic Society
Japanese Society of Allergology
Libra Project
Macedonian Society of Thoracic Medicine
Norwegian Society of Allergology and Clinical Immunopathology
Pulmonary Hypertension Association
Public Health Agency of Canada
Pan African Thoracic Society
Société Française d’Asthmologie, d’Allergologie et d’Immunologie Clinique
Société Libanaise d’Allergie et d’Immunologie
Tunisian Society of Thoracic Medicine
Union of the Bulgarian Medical Societies
University of Montpellier
Yugoslav Association for Asthma and COPD
Wyeth Foundation

Global Alliance against Chronic Respiratory Diseases
www.who.int/respiratory/gard

World Health Organization

World Health Organization

World Health Organization
Global Alliance against Chronic Respiratory Diseases

1- Needs for GARD
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GARD Evaluation Framework

A matrix for evaluation of the burden of CRD and the impact of GARD at the country level by using tangible indicators

- Phases: baseline situation, GARD process, GARD output, and outcome

- Baseline and outcome indicators: burden, risk factors, awareness, health promotion, disease prevention and diseases control

- To (Toronto) to be submitted to WHO

Draft proposal in preparation for analysis

Global Alliance against Chronic Respiratory Diseases
www.who.int/respiratory/gard
<table>
<thead>
<tr>
<th>phases</th>
<th>tangible indicators</th>
<th>means for measuring</th>
<th>assumptions</th>
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<tr>
<td>baseline situation</td>
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<tr>
<td>GARD process</td>
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<td>GARD output</td>
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<td>outcome</td>
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"GARD will provide an effective form in which health care workers, institutions and governments from all countries may jointly work to mobilize the entire population in efforts to prevent and control chronic respiratory diseases"

Dr Longde Wang, Vice Minister of Health, People's Republic of China
GARD is a voluntary alliance of national and international organizations, institutions, and agencies committed towards the common goal to improve global lung health.

The Global Alliance is part of the World Health Organization’s (WHO) global work to prevent and control chronic diseases. Because most of the chronic respiratory diseases are under-diagnosed, under-treated and the access to essential medications in many countries is poor, a global effort to improve the diagnosis and the medical care is needed.

The Global Alliance was officially launched on 28 March 2006 in Beijing, People’s Republic of China.

www.who.int/gard
• Global surveillance, prevention and control of chronic respiratory diseases: a comprehensive approach
GARD

Global Alliance against Chronic Respiratory Diseases

1- Needs for GARD
2- GARD
3- Estimate population needs and advocate for action
4- Formulate and adopt policy
5- GARD implementation steps
Formulate and adopt policy

WG.3- Prevention and health promotion (M Boland, A Custovicn, T Haahtela)
Formulate and adopt policy

WG.3- Prevention and health promotion (M Boland, A Custovic)

WG.4- Diagnosis of CRD and allergy (K Rabe, R Perez-Padilla, GW Canonica)

WG.5- Control of CRD and allergies, Availability and affordability of drugs (J Bousquet, E Bateman, L Fabbri, C van Weel, N Zhong, N Aït-Khaled)

WG.6- Pediatric asthma (C Baena-Cagnani, E Mantzouranis, FER Simons, E Valovirta)
WG5 Control of CRDs and drug accessibility

- Stepwise approach
- GARD designed as a public health program
- Where appropriate
  - PAL and PALSA used at the local PHC levels
  - The GIFT WHO program will also be used for an optimal accessibility and availability of drugs against CRDs
  - ADF (Asthma Drug Facility): UNION
- GARD demonstration projects
Efficacy of the Finnish asthma plan
Haahtela et al, Thorax 2006

Diagram showing the trend of share of asthmatics, drug costs per patient, deaths, and number of hospital days from 1981 to 2003. The values increase steadily over time, indicating the efficacy of the Finnish asthma plan.

Finnish Asthma Programme 2005
Efficiency of the Finnish asthma plan
Haahtela et al, Thorax 2006

% change 1993-2003

-70  -60  -50  -40  -30  -20  -10  0  10  20  30  40  50  60

asthma prevalence  hospital days  disability pension  total costs  cost per pt per year
Brazil (Belo Horizonte): Programme Criança que Chia (Wheezing Child)

Brazil (Bahia): Pilot project on control of severe asthma
Table I. Asthma hospitalization rates per 10,000 inhabitants in Salvador City and Recife City, in Brazil, from 1998 to 2006.

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<td><strong>Salvador</strong></td>
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<tr>
<td>Frequencies</td>
<td>2,894</td>
<td>2,188</td>
<td>2,230</td>
<td>611</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Hospitalization rates</td>
<td>12.72</td>
<td>8.68</td>
<td>8.72</td>
<td>2.25</td>
<td>(-31.76%)</td>
<td>(-74.2%)</td>
<td>(-82.31%)*</td>
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<tr>
<td><strong>Recife</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Frequencies</td>
<td>4,230</td>
<td>3,834</td>
<td>3,205</td>
<td>2,585</td>
<td>-</td>
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<tr>
<td>Hospitalization rates</td>
<td>30.92</td>
<td>26.45</td>
<td>21.93</td>
<td>17.06</td>
<td>(-14.45%)</td>
<td>(-22.20%)</td>
<td>(-44.82%)*</td>
</tr>
</tbody>
</table>
Economic status areas in countries

- Low income area
- Middle income area
- High income area

Sub-urban areas

Low-income country
Middle-income country
High-income country

« inner city asthma »

Global Alliance against Chronic Respiratory Diseases
www.who.int/respiratory/gard
In high income countries
- patients can receive adequate diagnosis and treatment
- but they are insufficiently diagnosed and treated
- a disease-specific approach is mostly needed
- the goals of GARD are to better diagnose, treat and educate patients

In middle and low income countries
- few or very few patients can receive adequate diagnosis and treatment
- the first goals of GARD are to reduce under-diagnosis
- the second goals of GARD are to provide accessible, affordable and acceptable treatment for all patients
- a syndromic approach (PAL/PALSA) is needed in many or most places

In all countries, health promotion and prevention are essential
Global Alliance against Chronic Respiratory Diseases

1. Needs for GARD
2. GARD
3. Estimate population needs and advocate for action
4. Formulate and adopt policy
5. GARD implementation steps
GARD national coordination

• GARD action plan to be applied at the country level.
• Need to establish national working groups with a national coordinator
• The national coordination group will:
  • Provide existing national statistics on CRD and allergies
  • Assess the specific needs for the given country
  • Review the GARD action plan
  • Determine the relevant issues for the country action plan
  • Develop a country-specific action plan
GARD national action plan

GARD Action plan
MOH
Country WHO representative

GARD National Action plan endorsed by Ministry of Health

Test in the country with indicators of success

respiratory
allergy
ENT
gps
pharmacists
others
Members of NGOs
Patients
Member of Health Ministry
Others if required

Global Alliance against Chronic Respiratory Diseases
www.who.int/respiratory/gard
GARD demonstration projects

- Ryazan
- Tbilissi
- Tunis
- USA
- Cape Verde
- Finland
- Norway
- Philippines
- Salvador
- Bello Horizonte
- PALSA
• GARD starts with pilot projects in Georgia
• Family Medicine Centre in Sagarejo selected as first screening hospital

• **Stage 1: Filling in a questionnaire**
• **Stage 2: Spirometry tests**
• Following the commitment of Georgia to GARD pilot projects on the surveillance of chronic respiratory diseases at primary health care level, interviews and screenings of patients have begun at the Family Medicine Centre in Sagarejo, Georgia.

• Family Medicine Centre in Sagarejo, Georgia
The centre has been selected as the first place where GARD Georgia started with the pilot project on surveillance of chronic respiratory diseases at primary health care level. Other pilot projects within the country are foreseen in Mtskheta.
GARD national coordinations

- Global Alliance against Chronic Respiratory Diseases

Countries included:
- Canada
- Mexico
- Costa Rica
- Brazil
- Cape Verde
- Argentina
- Portugal
- Portugal
- Italy
- Algeria
- Tunisia
- Egypt
- Pakistan
- Emirates
- Philippines
- Colombia
- Peru
- Kyrgyzstan
- Vietnam
- Korea
- China
- Iran
- Spain
- Portugal
- Finland
- Kazakhstan
- Korea
- Egypt
- Mozambique
- Indonesia
- Mexico
- Argentina
- Kenya
- Ethiopia
- South Africa
- Nigeria
- Afghanistan
- Bangladesh
- Pakistan
- India
- Nepal
- China
- Thailand
- Malaysia
- Singapore
- Japan
- Taiwan

Legend:
- GARD national coordination
- GARD NC + MOH
- GARD NC + MOH agreement
Koreans are given healthier breathing thanks to national alliance against chronic respiratory diseases

In the Republic of Korea, we are experiencing rapid change both in terms of the population's health and social transition. Many people are migrating to cities, changing occupational patterns, and adopting new lifestyles. Populations are growing older. These factors directly impact on the risk and prevalence of chronic respiratory diseases.

*Professor You-Young Kim, Chair of GARD Republic of Korea*

One million people in the Western Pacific Region die each year from environmental health risks, and the World Health Organization (WHO) predicts a worsening scenario if effective measures to deal with growing industrialization and urbanization are not taken now (1). In the Republic of Korea only, 6% of all deaths in 2002, or 16 500 people, were due to chronic respiratory diseases.

Alarmed by this growing threat to health, the Republic of Korea launched in Seoul on 31 May 2007 its Alliance against Chronic Respiratory Diseases.
Address of the President of Algeria at the International Congress of Allergology and Clinical Immunology, Algiers, 13-15 June 2007

Abdelaziz Bouteflika, President of Algeria, addressed the International Congress of Allergology and Clinical Immunology last June in Algiers, Algeria.

Dr Bouteflika confirmed that "Algeria will, as in the past, continue to support this work to fight against respiratory diseases which represents a health priority for the whole of the African Continent."

He added that "in the fight against all diseases in general and against allergic and chronic respiratory diseases in particular, we call upon the rulers, the health professionals and society as a whole. We are striving to find the best solutions to the given problems. We are working with open minds and in close collaboration with health services, health professionals and patient associations, and we are considering the human and material resources available on a long term basis in each country.

He called attention to the fact that "we have to first of all rely on our own efforts and means and join the international partnership with a perspective of developing national human resources."
On 9 March 2007, Prof Baena-Cagnani (World Allergy Organization, WAO), Dr Anahí Yáñez (former President of the Argentinean Allergy, Asthma and Clinical Immunology Association), Dr. Guillermo Arbo (Paraguayan Society of Tuberculosis and Respiratory Medicine), Dr. Jaime Guggiari, (President of the Paraguayan Society of Allergy, Asthma and Immunology) met in Asunción, Paraguay, with Dr Martínez Doldán, Minister of Public Health and Social Welfare of Paraguay to discuss the possible development of GARD in Paraguay. In collaboration with the Ministry of Health and both Paraguayan societies, GARD could contribute to reduce the morbidity and mortality of chronic respiratory diseases in the country. The discussion included the following starting points:

- creating a GARD core group of interested parties in Paraguay
- providing for free beclomethasone and short-acting beta-agonists bronchodilator medicines to low-income patients as well as patients without any medical insurance (essential medicines)
- setting up, with support of the Ministry of Health, an educational programme on the diagnosis and treatment of chronic respiratory diseases for general practitioners, family doctors, paediatricians, nurses and pharmacists, and
- distributing free educational material for patients and parents.
• **Oslo, Norway, 15 November 2007**
  
  The Nordic seminar "Strategies to combat chronic respiratory diseases" took place in the Norwegian Ministry of Health, Oslo, on 15 November 2007. It was opened by Dr Vegard Harsvik, Deputy Minister of Health and State Secretary of Health. The seminar was organized by the Norwegian Society of Allergology and Immunopathology (NSAI).

  Different organizations working in the field of chronic respiratory diseases participated in the seminar, such as the Norwegian Medical Association, the Norwegian Asthma and Allergy Association, the Finnish Allergy Programme, the European Lung Foundation and the European Federation of Asthma and Allergy Patients.

  The representatives of these organizations recognized the dimension of the problem of chronic respiratory diseases and suggested that a partnership of medical societies, patients, Ministry of Health and other potential interested parties might be the best way for effective immediate action for prevention and control of chronic respiratory diseases.
• The GARD Symposium for Eastern European countries was organized from 23 - 24 March 2007 by the National Institute of Tuberculosis and Lung Diseases under the auspices of Professor Zbigniew Religa, Minister of Health, Poland.

• **Purpose of the Symposium**
• The purpose of the Symposium was to explore the possible contribution of the Global Alliance against Chronic Respiratory Diseases to the surveillance, prevention and control of chronic respiratory diseases in Eastern European countries. In particular, the approach of building Alliances against Chronic Respiratory Diseases at country level was proposed to the participants for their consideration.
The Turkish Thoracic Society, a GARD participant, took the lead to initiate discussions on GARD Turkey. The next step was to prepare a proposal for the National Control Program in Chronic Airway Diseases (Asthma – COPD).

For this purpose, a committee was set up to prepare a draft project that was presented to the Ministry of Health for approval. The Ministry of Health approved the project via signing a letter of support to GARD and its work in the country.

GARD Turkey was therefore established. The first GARD Turkey General Meeting was held in Ankara on 19 October 2007 with the participation of various interested parties in the field of chronic respiratory diseases, including the Turkish National Society of Allergology and Clinical Immunology, another GARD participant. Other scientific organizations, representatives of institutions of the government and representatives of various departments in the Ministry of Health are currently GARD Turkey collaborating parties.

GARD Turkey launch will be held on 29 May 2008 in Istanbul.
GARD Portugal launched

- **20-21 October 2007, Estoril, Portugal**
- In September 2007 an exploratory meeting on GARD was held under the coordination of José Rosado Pinto, GARD initiator in Portugal, Mário Morais-Almeida, President, Portuguese Society of Allergology and Clinical Immunology (SPAIC), and of António Segorbe Luis, President, Portuguese Society of Pneumology (SPP). This meeting gathered potential partners from different sectors of society working in the field of chronic respiratory diseases.
- The launch of GARD Portugal was held in Estoril on 20 October 2007 at the presence of Francisco George, National Health Director (representing the Ministry of Health), with the participation of Jean Bousquet, GARD Chairperson, Álvaro Cruz, WHO, Nikolai Khaltaev, GARD Adviser, national coordinators of asthma and COPD programs and more than 30 professional health societies and patients associations, health governmental departments, nongovernmental organizations, universities, pharmaceutical and industry representatives. Representatives of Portuguese speaking countries, such as Cape Verde and Mozambique, were also present.
The cost of inaction is clear and unacceptable

We work for and with the patients for

A world where all people breathe freely