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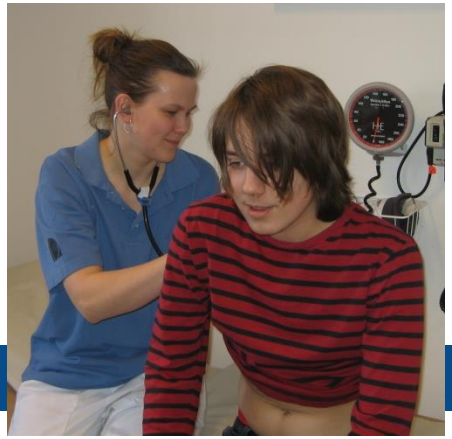
International Primary Care
IPCRG
Respiratory Group

Asthma around the World



Outline

- Introduction
- Facts and figures – Europe
- Global Burden of Asthma
- The WHO GARD initiative

The burden of asthma

GINA Global Strategy for Asthma Management and Prevention 2014

Burden of asthma

- Asthma is one of the most common chronic diseases worldwide with an estimated 300 million affected individuals
- Prevalence is increasing in many countries, especially in children
- Asthma is a major cause of school and work absence
- Health care expenditure on asthma is very high
  - Developed economies might expect to spend 1-2 percent of total health care expenditures on asthma.
  - Developing economies likely to face increased demand due to increasing prevalence of asthma
  - Poorly controlled asthma is expensive
  - However, investment in prevention medication is likely to yield cost savings in emergency care

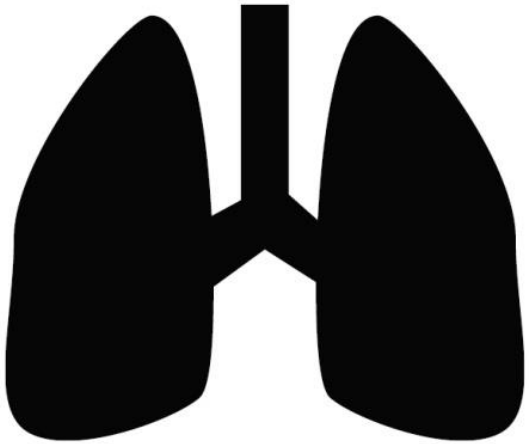
ERS

ELF

600,000 people die every year in the EU
from respiratory disease

ERS

ELF



6 million hospital admissions per year are due to respiratory diseases

ERS

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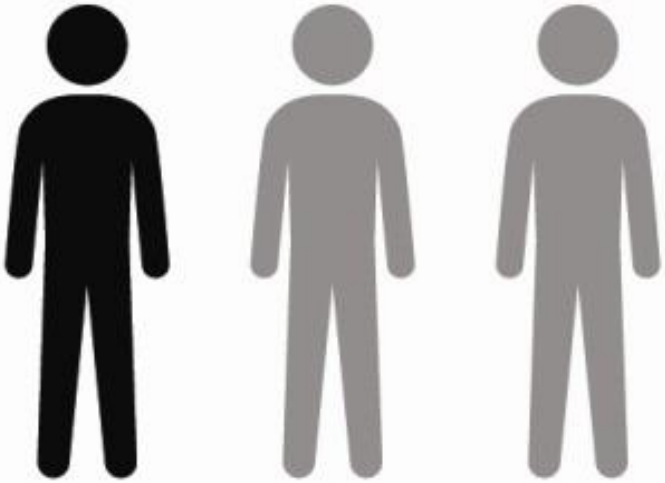
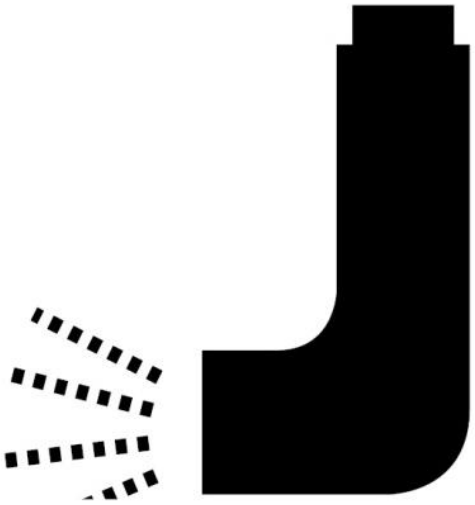
1 in 8 deaths in the EU are from respiratory diseases



Approximately one third of the population will develop asthma at some time between the ages of 5 and 80 years, most before the age of 20 years



Despite the increasing use of asthma medications asthma control remains relatively poor across Europe

ERS

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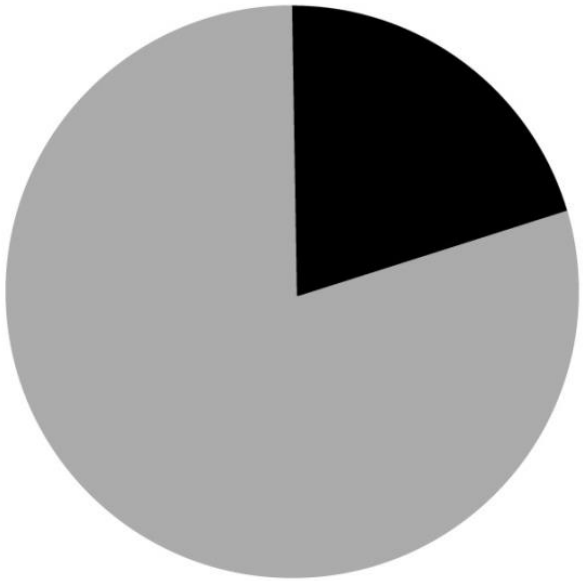
Lung problems account for about one quarter of all visits by children to a general practitioner

ERS

ELF

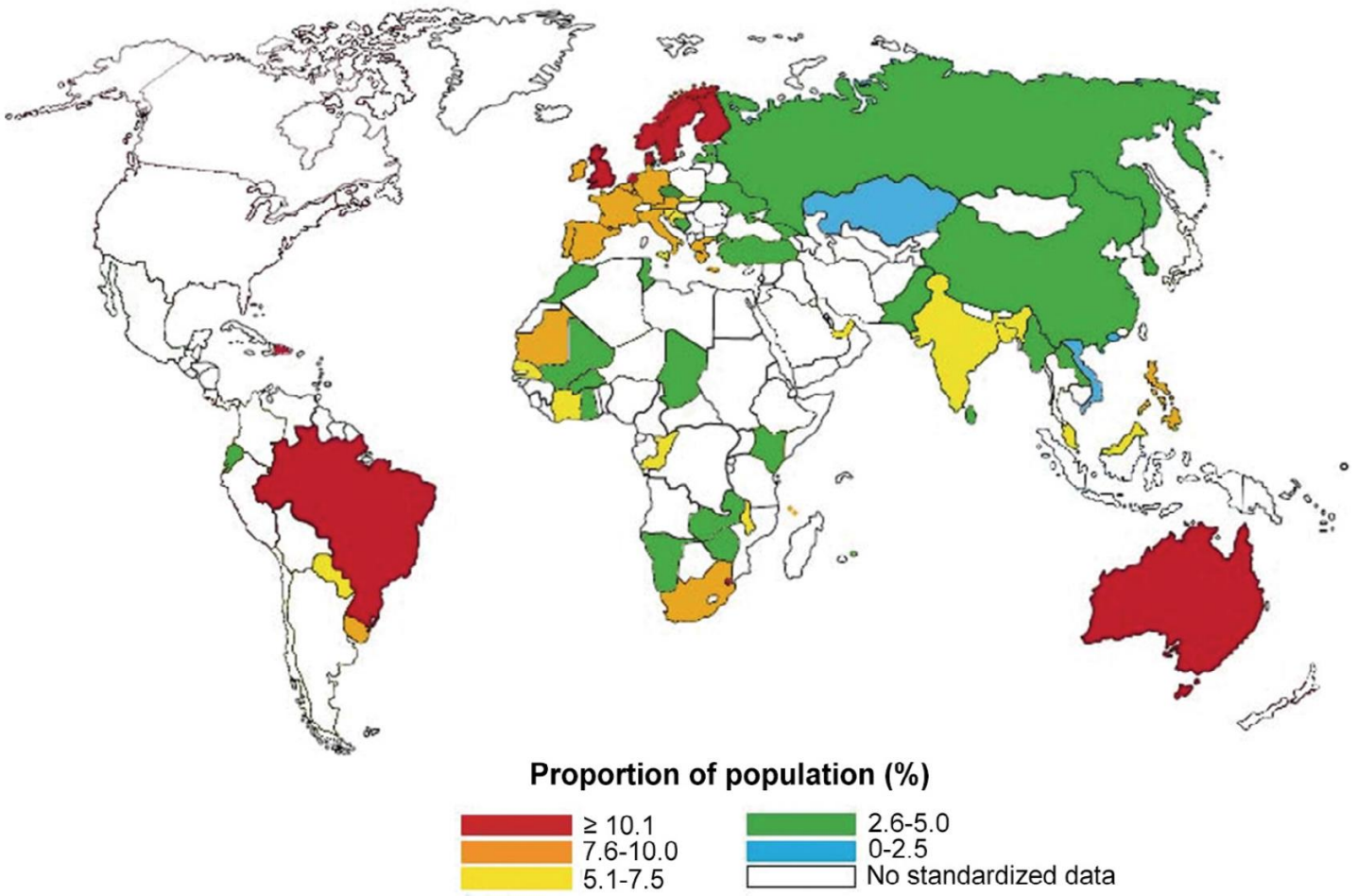
Dampness and mould increases risk of asthma-related problems by 30-50%



15-20% of all adult asthma cases are work-related

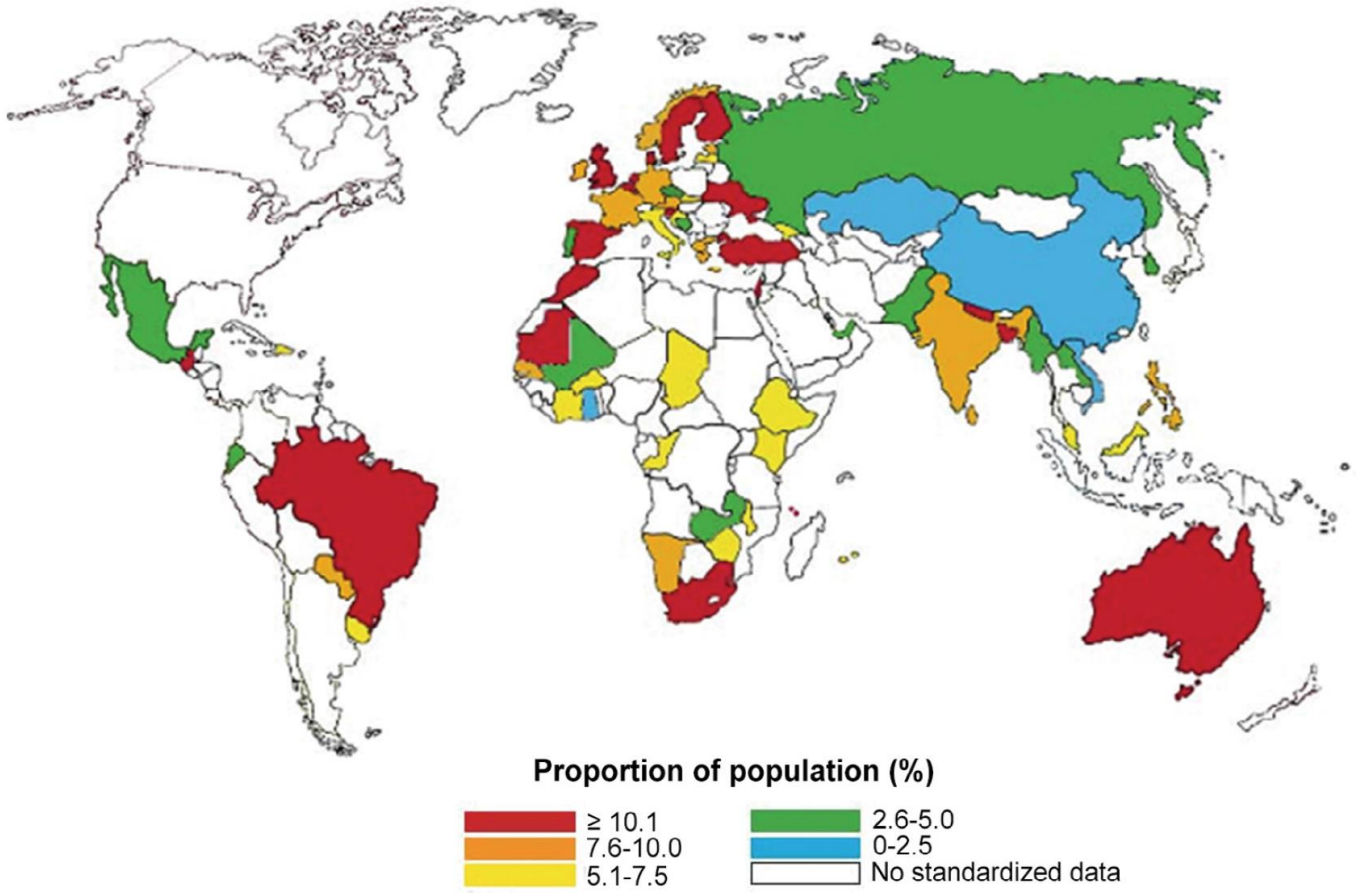
The Global Burden of Asthma

World map of the prevalence of ‘current wheezing symptoms’ among 20-44 year olds



Global Atlas of Asthma. EAACI, 2013

World map of the prevalence of ‘diagnosed asthma’



Global Atlas of Asthma. EAACI, 2013

(DALYs): years lived with disability (YLD) and years of life lost (YLL)

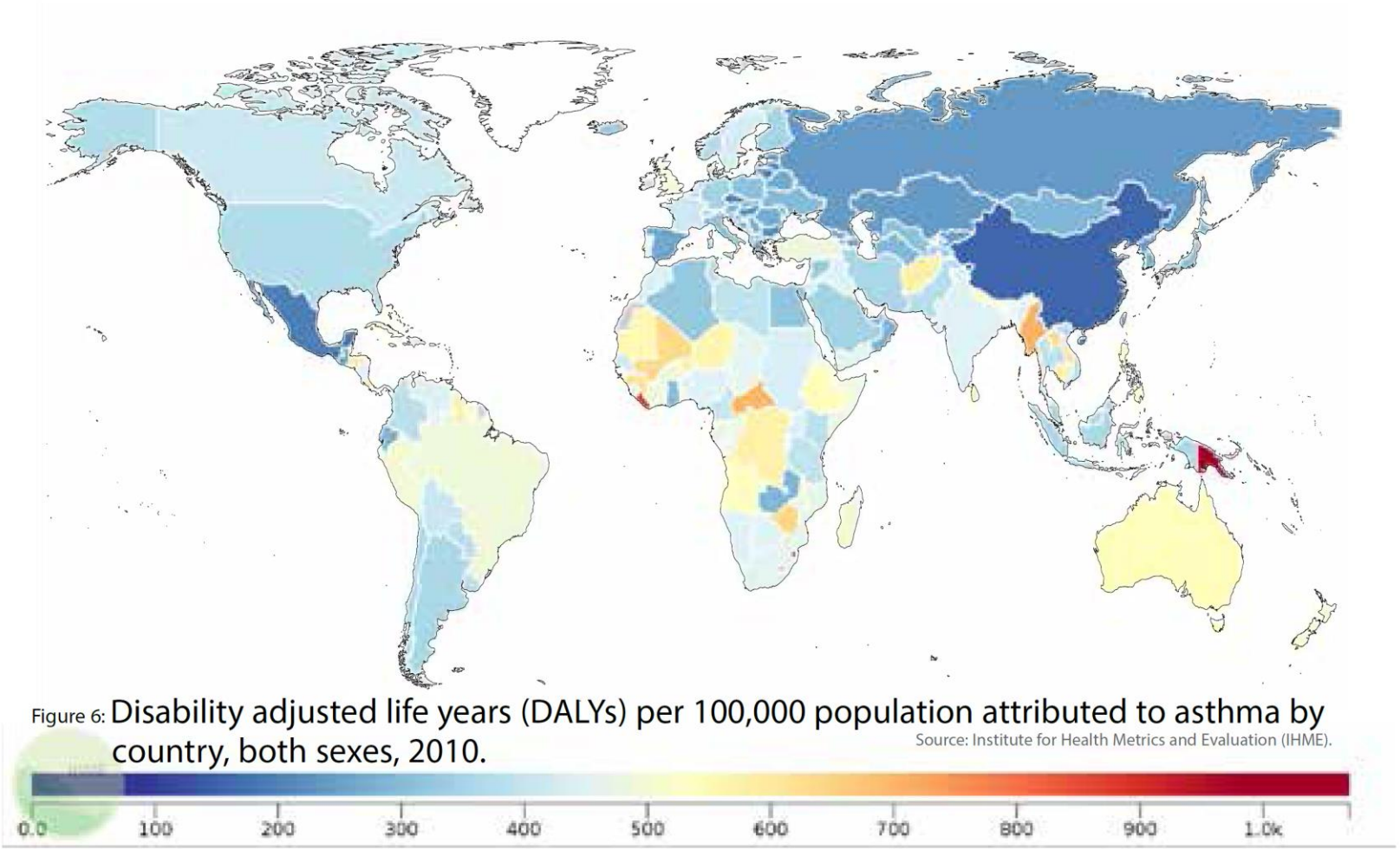


Figure 6: Disability adjusted life years (DALYs) per 100,000 population attributed to asthma by country, both sexes, 2010.

Source: Institute for Health Metrics and Evaluation (IHME).

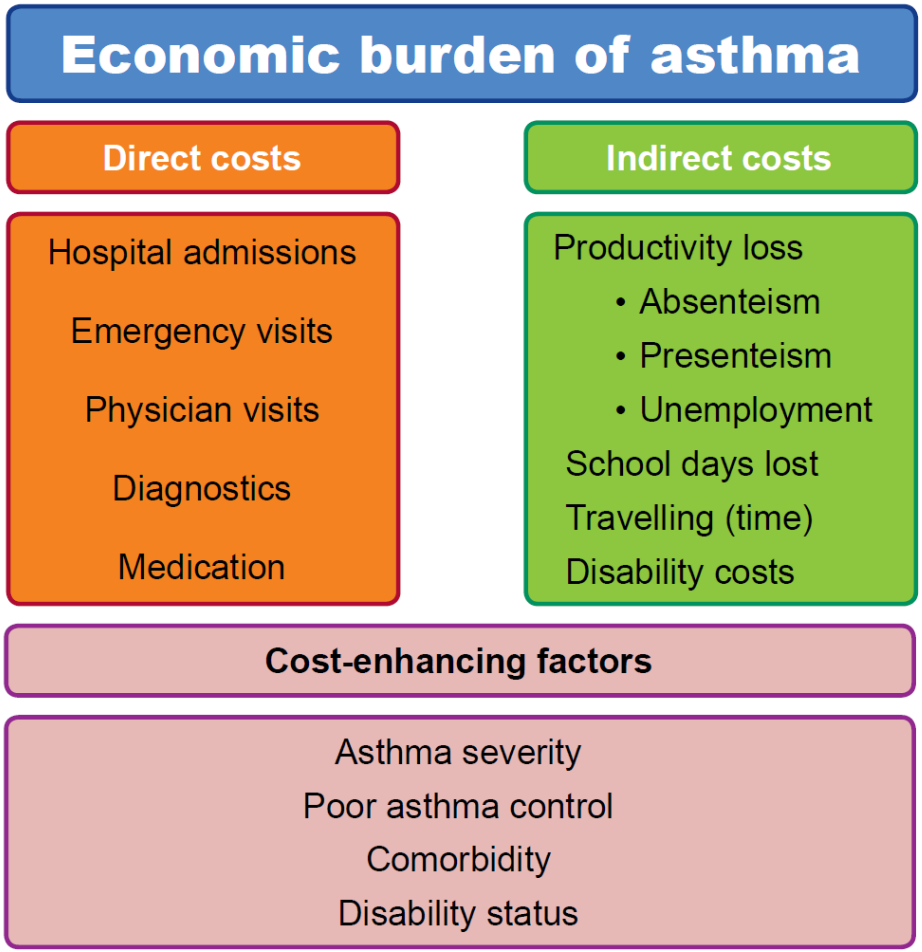
Global Asthma Report, 2014

Socio-economic costs of asthma

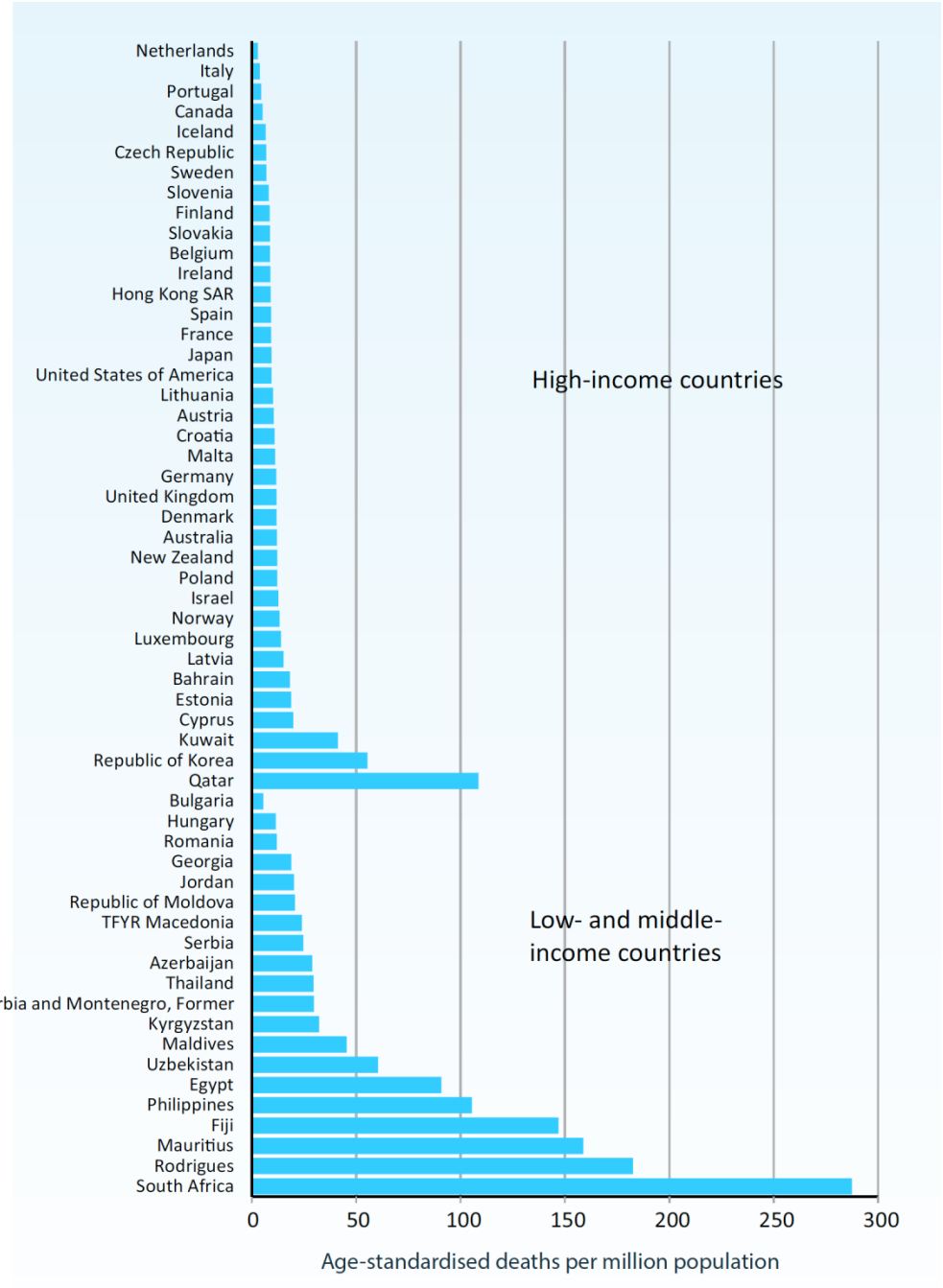
- The economic burden of asthma is substantially high
- Uncontrolled asthma is an important cost-enhancing factor
- Hospital admissions and medication costs are the major components of direct costs
- A national approach may be useful in reducing the burden of asthma
- Indirect costs of asthma are substantial and for a major part caused by productivity losses
- Increase of asthma prevalence and costs of medication are responsible for the rise in the cost of illness

Global Atlas of Asthma. EAACI, 2013

Direct and indirect costs of asthma



Age-standardised asthma mortality rates for all ages 2001-2010, ordered by mortality rate and country income group



The WHO GARD initiative

The WHO Global NCD Action Plan

http://www.who.int/gard/en/

GLOBAL ALLIANCE AGAINST CHRONIC RESPIRATORY DISEASE

A world where all people breathe freely

Search

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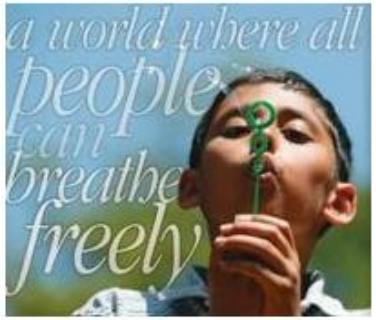
Global Alliance against Chronic Respiratory Diseases

About us



GARD is a voluntary alliance of national and international organizations, institutions, and agencies commited towards the common goal to reduce the global burden of respiratory diseases.

The Global Alliance is part of the 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.

- More about chronic respiratory diseases
- A world where all people breathe freely

Highlights

- The 8th GARD General Meeting in Astana, Kazakhstan
  3-4 July 2013
- Report of the 8th General Meeting
  pdf, 1.08Mb
- Meeting of GARD Executive Committee (ExCOM)
  pdf, 138kb
  7 September 2013
- GARD Country report 2013
  This paper aims to evaluate the GARD activities 2013 member countries while emphasizing the importance of CRDs.

Main documents

GARD Action Plan 2008-2013

GARD basket: A package of information, surveillance tools and guidelines

List of all publications

Contacts us

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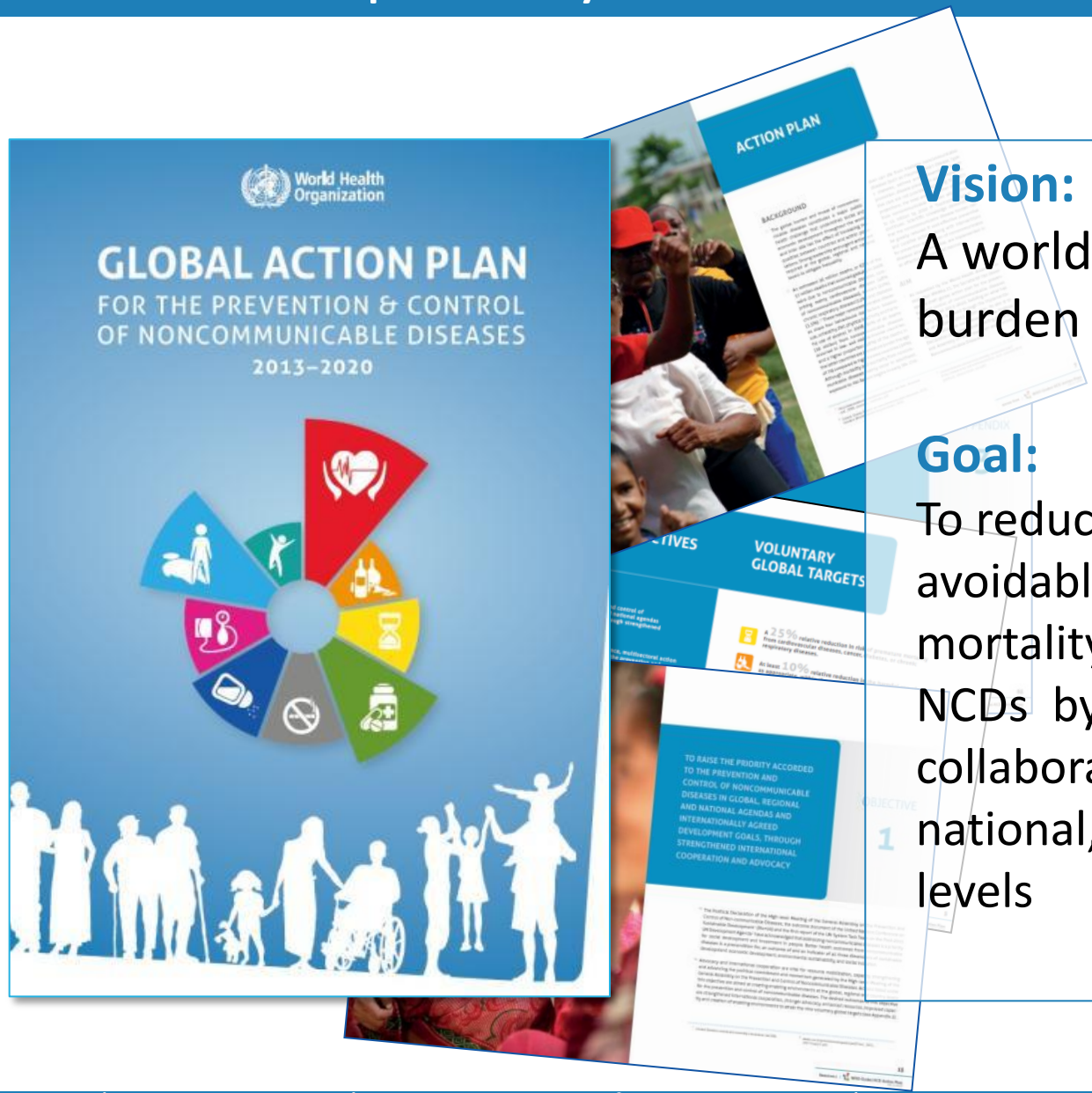
What is GARD?

- **Global Alliance against Chronic Respiratory Diseases**
- GARD is a voluntary alliance of national and international organizations, institutions, and agencies committed towards the common goal to reduce the global burden of respiratory diseases.
- The Global Alliance is part of the 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.

GARD: Participating Organisations

- Allergic Rhinitis and its Impact On Asthma (ARIA)
- American Thoracic Society (ATS)
- Global Allergy and Asthma European Network (GA_2LEN)
- Global Initiative for Asthma (GINA)
- Global Initiative for Chronic Obstructive Pulmonary Disease (GOLD)
- International Primary Care Respiratory Group (IPCRG)
- International Union Against Tuberculosis and Lung Diseases (The Union)
- National Heart Lung and Blood Institute (NHLBI)
- Turkish National Society of Allergy and Clinical Immunology
- Turkish Thoracic Society (TTS)
- World Allergy Organization (WAO)

Guidance provided by the WHO Global NCD Action Plan 2013-2020



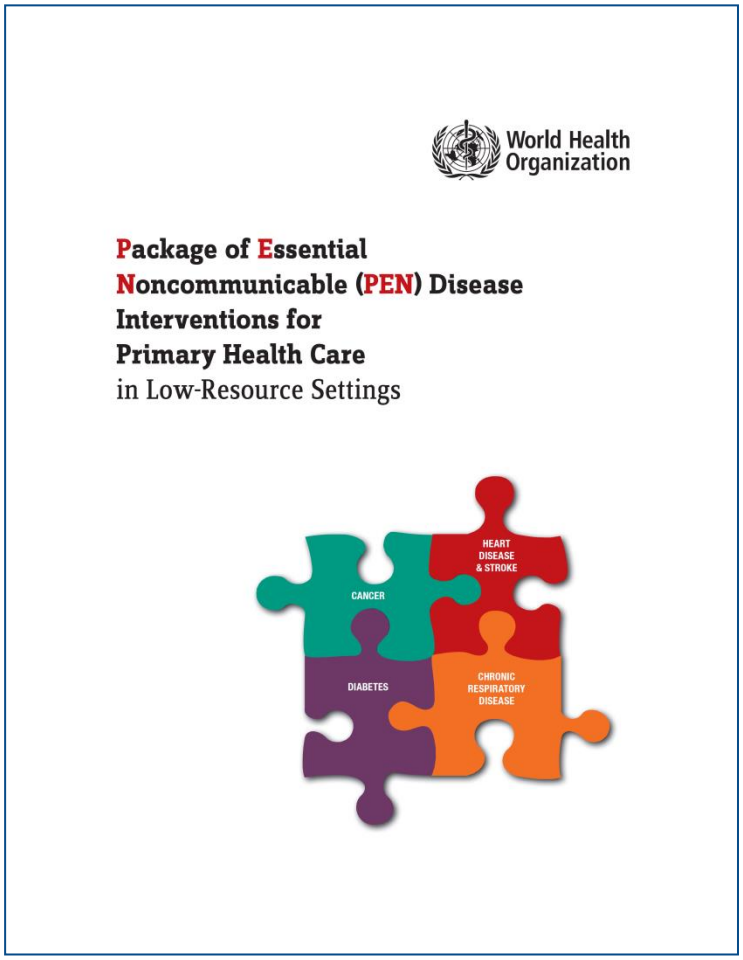
Vision:

A world free of the avoidable burden of NCDs

Goal:

To reduce the preventable and avoidable burden of morbidity, mortality and disability due to NCDs by means of multisectoral collaboration and cooperation at national, regional and global levels

Package of Essential Noncommunicable (PEN)



World Health Organization

Implementation tools

Package of Essential Noncommunicable (PEN) disease interventions for primary health care in low-resource settings

I. Protocols for primary care

for management of hypertension, diabetes, raised cardiovascular risk, asthma, chronic obstructive pulmonary disease and referral of suspected breast and cervical cancer through an integrated approach

WHO PEN Protocol 1
Prevention of Heart Attacks, Strokes and Kidney Disease through Integrated Management of Diabetes and Hypertension

WHO PEN Protocol 2
Health Education and Counseling on Healthy Behaviours (to be applied to ALL)

WHO PEN Protocol 3
3.1 Management of Asthma
3.2 Management of Chronic Obstructive Pulmonary Disease (COPD)

4.1 Assessment and referral of women with suspected breast cancer at primary health care

WHO PEN Protocol 4
4.2 Assessment and referral of women with suspected cervical cancer at primary health care

WHO PEN Protocol 3
3.1 Management of Asthma
3.2 Management of Chronic Obstructive Pulmonary Disease (COPD)

ASK

Asthma and COPD can both present with cough, difficult breathing, tight chest and/or wheezing

DIAGNOSIS

The following features make a diagnosis of asthma more likely:

- previous diagnosis of asthma;
- symptoms since childhood or early adulthood;
- history of hayfever, eczema and/or allergies;
- intermittent symptoms with asymptomatic periods in between;
- symptoms worse at night or early morning;
- symptoms triggered by respiratory infection, exercise, weather changes or stress;
- symptoms respond to salbutamol.

The following features make a diagnosis of COPD more likely:

- previous diagnosis of COPD;
- history of heavy smoking, i.e. >20 cigarettes per day for >15 years;
- history of heavy and prolonged exposure to burning fossil fuels in an enclosed space, or high exposure to dust in an occupational setting;
- symptoms started in middle age or later (usually after age 40);
- symptoms worsened slowly over a long period of time;
- long history of daily or frequent cough and sputum production often
- starting before shortness of breath;
- symptoms that are persistent with little day-to-day variation.

TEST

Measure Peak Expiratory Flow rate (PEFR)

- Give two puffs of salbutamol and remeasure in 15 minutes
- If the PEF improves by 20%, a diagnosis of asthma is very probable.
- Smaller response makes a diagnosis of COPD more likely

WHO PEN Protocol 3.1
Management of Asthma

ASK

Is asthma well controlled or uncontrolled?

Asthma is considered to be well controlled if the patient has:

- daytime asthma symptoms and uses a beta agonist two or fewer times per week;
- night time asthma symptoms two or fewer times per month;
- no or minimal limitation of daily activities;
- no severe exacerbation (i.e. requiring oral steroids or admission to hospital) within a month;
- a PEFR, if available, above 80% predicted.

If any of these markers are exceeded, the patient is considered to have uncontrolled asthma.

TREAT

Increase or decrease treatment according to how well asthma is controlled using a stepwise approach

Step 1. Inhaled salbutamol prn
Step 2. Inhaled salbutamol prn plus low-dose inhaled beclometasone, starting with 100ug twice daily for adults and 100ug once or twice daily for children
Step 3. Same as step 2, but give higher doses of inhaled beclometasone, 200ug or 400ug twice daily
Step 4. Add low-dose oral theophylline to Step 3 treatment (assuming long-acting beta agonists and leukotriene antagonists are not available)
Step 5. Add oral prednisolone, but in the lowest dose possible to control symptoms (nearly always less than 10mg daily)

At each step, check the patient's adherence to treatment and observe their inhaler technique.

REFER

Review asthma control every 3-6 months and more frequently when treatment has been changed or asthma is not well controlled.

Referral for specialist:

- when asthma remains poorly controlled;
- when the diagnosis of asthma is uncertain;
- when regular oral prednisolone is required to maintain control.

WHO PEN Protocol 3.1
Management of exacerbation of Asthma

ASSESS

Assess severity

Severe
- PEFR 33-50% best or predicted.
- Respiratory rate more than 25 breaths/minute (adult).
- Heart rate ≥110 beats/minute.(adult)
- Inability to complete sentences in one breath.

Very severe
altered conscious level, exhaustion, arrhythmia, hypotension, cyanosis, silent chest, poor respiratory effort.
- Sp02 <92%

TREAT

First-line treatment

- prednisolone 30–40mg for five days for adults and 1mg per kg for three days for children, or longer, if necessary, until they have recovered;
- salbutamol in high doses by metered dose inhaler and spacer (e.g. four puffs every 20 minutes for one hour) or by nebulizer;
- oxygen, if available, and if oxygen saturation levels are low (below 90%).

Reassess at intervals depending on severity.

Second-line treatment to be considered if the patient is not responding to first-line treatment

- Increase frequency of dosing via an metered dose inhaler and spacer or by nebulizer, or give salbutamol by continuous nebulization at 5–10mg per hour, if appropriate nebulizer available;
- for children, nebulized ipratropium, if available, can be added to nebulized salbutamol.

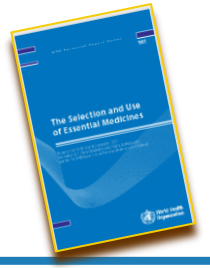
ADVICE

Asthma - Advice to patients and families

Regarding prevention:
- avoid cigarette smoke and trigger factors for asthma, if known;
- avoid dusty and smoke-filled rooms;
- Avoid occupations that involve agents capable of causing occupational asthma
- reduce dust as far as possible by using damp cloths to clean furniture, sprinkling the floor with water before sweeping, cleaning blades of fans regularly and minimizing soft toys in the sleeping area;
- It may help to eliminate cockroaches from the house (when the patient is away) and shake and expose mattresses, pillows, blankets, etc. to sunlight.

Regarding treatment, ensure that the patient or parent:
- knows what to do if their asthma deteriorates;
- understands the benefit from using inhalers rather than tablets, and why adding a spacer is helpful;
- is aware that inhaled steroids take several days or even weeks to be fully effective.

Essential Medicines



Guiding principle: A limited range of carefully selected essential medicines leads to better health care, better medicines management, and lower costs

Definition: Essential medicines are those that satisfy the priority health care needs of the population

Selection: Selected with due regard to disease prevalence, evidence on efficacy and safety, and comparative cost-effectiveness.

World Health Organization

Essential medicines

- In 1977, the World Health Organization (WHO) published the first Model List of Essential Medicines (Essential Medicines List, EML).
- It introduced the idea that some medicines are more important than others.
- Many later considered the first EML ‘a revolution in public health’.

‘t Hoen EFM., et al
A quiet revolution in global public health:
The World Health Organization’s Prequalification of Medicines Programme
Journal of Public Health Policy, 2014


GARD
2015 JULY 03-04
SANA LISBOA HOTEL
PORTUGAL
World Health
Organization

Thank you for your attention!