Asthma & Allergic Rhinitis
Epidemiology in Bulgaria

T. A. Popov
Medical University, Sofia

Kosta Kostov
Military Medical Academy, Sofia

tedpop@rtb-mu.com
koro_55@mail.bg
women

NOBEL PRIZE WINNER for Physiology and Medicine 2004 г.
LINDA BUCK!

She is the 7-th female winner in the history!
Europe & the Balkan countries
Demographic / health indicators

- Total population: 7,866,000
- GDP per capita (Intl $): 5,021
- Life expectancy at birth m/f (years): 68.4/74.8
- Healthy life expectancy at birth m/f (years): 60.8/65.2
- Child mortality m/f (per 1000): 18/16
- Adult mortality m/f (per 1000): 221/99
- Total health expenditure per capita (Intl $): 198
- Total health expenditure as % of GDP: 3.9
Basic Statistics of the Bulgarian Scientific Community:

- Number of research staff (lecturers and scientists) - 24,200
- Research staff only - 17,000

% of active population - 0.7%
Physicians:

- Total number of physicians: 33,300
- GPs: 5,600
- Allergologists / Clinical Immunologists:
  - certified specialist: 71
- Pulmonologists:
  - certified specialist: 340
  - engaged in pulmonary medicine: 541
Allergology and Clinical Immunology (ACI) and Pulmonary Diseases (PD) in Bulgaria

- ACI exists for 38 years
- PD exists for 37 years
- Independent specialities
- Pending on 4 main specialties:
  - Internal Medicine (PD and ACI)
  - Pediatrics (PD and ACI)
  - Otorhinolaryngology (only for ACI)
  - Dermatology (only for ACI)
Epidemiological Study on Asthma & Allergies in BG

- Cohort study (20-44 yrs)
- Questionnaires
- Even territorial distribution
- Random selection (voting rolls)

Mileva J et al., 2001
Questionnaires:

• Translation of the ECRHS original

• Asthma diagnosis: if positive answers were given to the questions:
  
  Q 5. Have you had asthma attacks in the past 12 months?

  Q 6. Are you presently using any asthma medication?

• Additional questions

Mileva J et al., 2001
Epidemiological study of asthma & allergic diseases in BG

Mileva J et al., 2001
Asthma prevalence in Bulgaria according to geographic regions

- Mountains: 3.8%
- Lowlands: 3.9%
- Sea coast: 8.3%

$p < 0.001$

Mileva J et al., 2001
Prevalence of Asthma and Rhinitis in Bulgaria

Mileva J et al., 2001
New Studies:

A Study on the Relation of Allergy / Asthma and Indoor Air Quality in Homes in Bulgaria
ALLOHOME epidemiological study

12,816 parents
6,520
6,296

350 km

Sofia
Burgas

Mustakov et al., in preparation
Wheezing and asthma symptoms in Sofia & Burgas

\[
\begin{align*}
\text{Sofia} & \quad 35
diagnosed asthma & 5 \\
\text{Burgas} & \quad 40
diagnosed asthma & 5 \\
\end{align*}
\]

Mustakov et al., in preparation
ALLOHOME epidemiological study

Asthma, Allergic Rhinitis and Eczema in Sofia & Burgas

% 

Sofia

Burgas

Diagnosed asthma
Diagnosed Allergic rhinitis
Eczema

Mustakov et al., in preparation
ALLOHOME epidemiological study

Causes for wheezing in Sofia & Burgas

- Common cold
- Exercise
- Laughing & weeping
- Playing outdoors

Mustakov et al., in preparation
Conclusion: The higher prevalence of asthma and rhinitis in Burgas (at the see) is probably due to specific environmental factors, which need to be identified.

Mustakov et al., in preparation
Multicenter multinational epidemiological study of the prevalence of asthma, allergic rhinitis and atopic dermatitis on the basis of unified written and video questionnaire in children aged 6-7 and 13-14 years.
ALLHOME compared with ISAAC
ISAAC phases:

Phase 1: 1992
(questionnaire)

Phase 2: 1997
(questionnaire + objective assessments)

Phase 3: 2002
(questionnaire)
ISAAC Phase 1: Results for prevalence of asthma symptoms

56 countries
5 continents

International Study of Asthma and Allergy in Children
Bulgaria in ISAAC – phase 3:

\[ n = 2780 \]

21 schools in Sofia

Boys

Girls

Mustakov et al., in preparation
ISAAC Phase 3 methods:

(6-7 year-olds)

- Written questionnaire:
- 3 parts:
  - asthma
  - allergic rhinitis
  - eczema
- Parents administered
ISAAC Phase 3 methods:

(13-14 year-olds)

- Written questionnaire:
- 4 parts:
  - asthma
  - allergic rhinitis
  - eczema
  - video questionnaire
- Children administered
Summary:

Symptom-based disease prevalence was 4-6 time higher than doctor-based prevalence of asthma and allergic rhinitis: this did not apply to atopic dermatitis / eczema, where symptom / doctor prevalence were basically the same. Mustakov et al., in preparation
Conclusion:

With asthma prevalence of 4.7% (doctor’s diagnosed asthma), Bulgaria positions itself in close to the other Balkan countries (Greece, Roumania and Albania) on the ISAAC world list.

Mustakov et al., in preparation
SUCCESS FOR GARD

“We dance round in a ring and suppose, but the secret sits in the middle and knows”

Robert Frost
Thank you Poland for:

- Your proud and praiseworthy position during the II World War
- Your long-standing striving for democracy and the wisdom of Karol Wojtyla.
- The historical example of distinguished kings Mieszko I (966), Stefan Batory and Jagiello
- Fryderyk Shopen (1810-1849)
- Writers and Nobel prize winners Henryk Sienkiewicz (1846-1916), Wladislaw Rejmont (1867-1925) and Wislawa Szymborska (1923)
- Filmmakers R. Polanski, A. Wajda (1926, Oscar 2000), K. Kieshlowski and K. Zanussi
Thank you for the attention!

koro_55@mail.bg

Mobile: +359 888231921