# NATIONAL CONSISTENCY: BELGIUM

## Class 1 – Demography and socio-economic situation

- Population data are available from the National Institute for Statistics (NIS). The population structure is stratified by age and gender as well as by the three regions of the country (Flanders, Wallonia and Brussels). No data are available about ethnicity, but there are about nationality.
- Information on socio-economic factors in the general population is available in Belgium from NIS.
- Information is more particularly available about level of education, and area of living (urban, rural, semi-urban, industrial) of asthmatic subjects through enquiries among a representative sample of G.P.'s throughout the country.
- Data on direct costs of asthma are difficult to obtain; they could from Farmanet, a division from the National Health Insurance Institute (RIZIV/INAMI), but they are merged into all costs from respiratory diseases. Annual costs of all asthma medications are available from that source. BIGE (Belgian Institute for Health Economy) has data on direct and indirect costs of asthma (including impairment of quality of life due to asthma).

## Class 2 - Health Status

**Cause specific mortality:** data are available from NIS and WIV (Scientific Institute for Public Health); the latter designed standardised procedures for mortality analysis. ICD9 codes 490-496 were used as well as 493 only. From 1998 they use ICD10 codes, more specifically codes J44, 45 and 46.

Mortality data available by gender and region are total number of deaths, crude death rate in 100.000 inhabitants, standardised death rates (SDR) by age categories (1-14, 15-24, 25-44, 45-65, above 65 years), age-specific death rates, person years of life lost (PYLL)(the latter only for asthma and COPD grouped !). In addition mortality is also available for tobacco-related COPD by gender.

**Cause specific morbidity:** Data are available from different sources, mostly from surveys carried out in the country, either on a continuous basis or intermittently as part of international or national surveys. The following can be listed :

- Information from representative G.P.'s (same as above) on prevalence of asthma: availability of base of diagnosis (history, clinical symptoms, spirometry, PEFR, non-specific challenge testing, allergy), smoking status, occupation, therapeutic trial, treatment, hospital admissions. However, no information is collected on presence of specific symptoms, asthma attacks, disease severity.

  Such information is not collected for COPD !!
- INTEGO, continuous information registry network of the University of Leuven : is only operational in some cities. Asthma registration is planned according to international classification of primary care, ICPC. Code used is R96, equivalent to J45 and J46 of the ICD10 code.

- National Health Surveys of the WIV, performed every 4 years, recording : prevalences of asthma and COPD by gender, age categories (by 10 yrs), number of asthma attacks, smoking habits.
- International health surveys carried out for Belgium by the University of Antwerp in the larger Antwerp area, respectively 1/ the ISAAC in 6-7 and 13-14 year olds in 1995-1996 and in 2001-2002; 2/ the ECRHS in 20-45 year olds in 1991-1992 and 1995-1996, also in 45-75 year olds in 1995-1996. The first 20-45 year olds cohort was again studied in 2001-2003.
- National surveys using the international questionnaires :
  - a survey carried out among school children of Brussels in 1999 using the ECRHS screening asthma questionnaire and a free running exercise test.
  - a large study of school children sponsored by the Flemish Health Ministry, carried out in 2000-2002 and published in 2003, comparing for early diagnosis of asthma the contributions of the ISAAC questionnaire and a free running exercise test.
  - The PIPO study carried out in the Antwerp area follows a birth cohort assembled in 1997-2000, includes asthma information on parents and their children.
- Minimal clinical data from hospital admissions, using ICD-9 codes, are collected by RIZIV/INAMI but are mainly used for the financial management of the hospitals. However, they could be useful assessing incidence, prevalence, mortality and treatment.
  Data collected by RIZIV/INAMI for asthma are available by 10 year age categories: number of admissions, number of emergency admissions, mean length of stay, number of hospital deaths. No information can be obtained on asthma severity, nor on the relation of emergency admissions versus length of stay and hospital death.

NOTE : data on <u>incidence</u> of asthma are difficult to obtain, but they allow to monitor possible time trends and to detect factors significantly related to asthma.

**Class 3 – Determinants of health**

- **Biological risk factors :**

- Information on birth weight, prematurity and education of the mother can be obtained from the Centre of Perinatal Epidemiology. The same centre could be requested to collect information on asthma family history.
- Childhood infections : information on this is not routinely available, but may be obtainable through 'Child and Family', a state-supported organisation for family and early childhood care.
- Information on prevalence of allergic sensitisation was collected by research teams of Antwerp university.

- **Health behaviours :**

- Smoking : data are available from yearly surveys from the Consumers Organisation on age- and gender-related smoking habits. The

information is also collected in the four yearly national health surveys, carried out by WIV among 15-20 years olds and in all ages above 15, as well as categorised by level of education.
Information on mother smoking during pregnancy was collected in the adult and childhood surveys carried out in Antwerp.

- Nutrition and Alcohol intake: some information on this was systematically collected in the four yearly national health surveys.
- Physical activity : information by gender and age, level of education and urban versus non-urban residence, belgian versus non-belgian origin, collected in the four yearly national health surveys. This information is not available for persons with COPD !

? **Living and working conditions :** Air pollution by NO2, SO2, O3, PM10, PM2,5 is monitored all over Belgium and assembled by CELINE/IRCEL. Concerning occupation there are statistics from the Fonds des Maladies Professionnelles.

**Class 4 - Health systems**

**Health promotion:** is mainly supported for asthma by medical doctors, health insurance companies, non-governmental organisations (VRGT, FARES), patients' support groups (Astma- en Allergiekoepel) and to a limited extent in Flanders by VIG (Flemish Institute for Health Promotion). For COPD health promotion is limited to efforts of medical doctors. In the french-speaking part information of the public regarding avoidance of indoor air pollution is provided by a project named 'La santé et l'habitat', supported by physicians and archtitects.

**Health protection:** is mainly directed towards the effects of smoking. Non-smoking areas are obligatory in restaurants and pubs. Smoking is not permitted in public places and in trains. In a near future a complete ban on smoking will be enforced in all working places.
Information is provided by WIV's division on mycology regarding pollen counts in summer and on interventions to avoid indoor air pollution.

? Health protection on the workplace is ensured by the ARAB and regulations are enforced by the obligatory presence of health advisers.

**Health care resources (facilities, manpower, education, technology):** Primary care in Belgium is especially delivered through general practitioners, working either alone or in group practice. Few of these single or group practices perform spirometry. Peak flow measurements are more readily performed. Few practices have nurses, even less have nurses specialised in asthma education ! The number of GP units is known to the health authorities and can be provided.
Rehabilitation programmes for COPD and chronic asthma are usually started by specialised pulmonary departments. G.P.'s are mostly not involved in the support of these programmes.
The number of pneumologists per 100.000 population is known by the health authorities and could be provided.
Oxygen therapy for COPD is usually started by pulmonologists, who enter a motivated request for this with the RIZIV; this organisation gives

permission if the necessary conditions regarding PO2 level during the day or nocturnal oxygen saturation are met; patients still smoking cannot qualify for this treatment. The number of COPD patients receiving long term oxygen therapy is known by the RIZIV and could be provided.
Regarding accessability of lung function tests for COPD patients, it is clear that those be followed by pulmonologists usually have lung function tests performed regularly, possibly at least three times a year. However, many COPD patients are only followed by GP's and only have rarely PFT's performed.
Via RIZIV all PF-tests performed in Belgium are recorded and the total number of tests performed annually can almost surely be provided.
Some data are known to us regarding education about use of inhalers; one can assume that all patients seen by a pneumological department receive a satisfactory demonstration on how to use these inhalers.

**Health care utilisation (In-patient, out-patient, and medicine use):** Obligatory health insurance companies cover most of the health care utilisation in Belgium and their data are centralised by RIZIV. Minimal clinical data from hospital admissions and medicine use is also centrally recorded and can even be traced for the prescription by individual physicians. (cfr Class 2)

**Health care expenditure:** As most (in-patient and out-patient) health care is paid by the public health insurance companies, these data should be retrieved easily and specific costs of asthma and COPD are difficult to obtain because they are merged into the costs of all respiratory diseases. Class 1)

**Health outcomes:** School absenteeism and sick leave are partly documented by BIGE.