

National Consistency: Luxembourg

Class 1 - Demography and socio-economic situation

- **Population Status:** Well stratified data exist and are annually provided by STATEC.) "Statec" is the acronym for the Central Service for Statistics and Economic Studies Of course these data are essential for IMCA, as they are for other diseases. These data are stratified by age groups with data for 5-year periods from 0 to 94. There is then a single category for 95 and upwards. The same data are available by gender.

Deaths are available as total number and rates and by ICD-10 code for all causes of death. These are also available by gender and for the principal ICD-groups by age groups (5 year periods from 0 to 94). These data are published by the Department of Statistics of the Ministry of Health (www.ms.etat.lu/SRV_STAT). Hospital admissions are recorded by the UCM (Union des Caisses de Maladie) and are available by ICD-10 code for the main diagnosis at discharge, age, gender, and length of stay. DRG data are not available. These data are available for each hospital and summarised on a national and regional level. They are published by the Ministry of Health annually within the "Carte Sanitaire".

- **Socio-economic factors:** There is one recent surveys available on the level of education. Social class is routinely available as defined by ISCED and ISCO. Ethnicity is not covered. Ethnicity is probably not an independent risk factor for asthma and COPD and seems to be an negligible indicator in Europe and namely in Luxembourg. More useful indicators are those pointing out migration, as are the nationality and the country of birth. Migration is a relevant factor in Luxembourg, where more than 38 % of the population have a foreign nationality. GDP is available and there is a poverty index available

Class 2 – Health Status

- **Mortality by cause specific:** Deaths are available by ICD codes. Crude and standardized death rates are annually provided by the Department of Statistics of the Ministry of Health. Causes of death are listed according to ICD-10 since 1998. These codes poorly agree with a correct classification of severity of COPD. Data of respiratory diseases as contributing cause of death are not reliably available in Luxembourg. The validity of the mortality data in Luxembourg is not assured, as they are exclusively linked to the production of death certificates.
- ? **Morbidity respiratory system: 1) Prevalence.** There are no national agreed prevalence data. Recent prevalence data concerning asthma in adults (20-44 year old) are available in Luxembourg from a national survey I coordinated. They include prevalence data for

bronchial hyper-responsiveness, atopy (total and specific IgE) No data concerning asthma in children and concerning COPD have ever been collected. **2) Severity.** No data of severity are available in Luxembourg. However assessment of severity of asthma and COPD by classification in stages is a pragmatic approach to management and may be of accessory interest in monitoring these diseases. **3) Prevalence of treatment.** There are unpublished data of the total number of units of each drug sold by pharmacies, according to the ATC code, but without any indication of the diagnosis of the persons treated and the compliance to treatment .

Class 3 – Determinants of health

- ? **Biological Risk Factors:** Recent prevalence data for bronchial hyper-responsiveness, atopy (total and specific IgE), BMI and family history in adults (20-44 year old) are available in Luxembourg. Again, no data for children are available.
- ? **Health Behaviours:** No specific comments.
- ? **Living and Working Conditions:** Data concerning the exposure to NO₂, SO₂, O₃ and PM₁₀ are currently available.

Class 4 – Health Systems

- ? **Health promotion:** Monitoring health promotion is of course of an important interest in order to be able to evaluate the needs in actions and their impact on the targeted population, namely in relation with the struggle against tobacco consumption. No data in this context actually exist in Luxembourg.
- ? **Health Protection:** It may be of interest to assess the relative role and impact of different allergens on a national level (for example cockroach, pet allergens ..) in asthma. The implementation of smoking cessation programs should be assessed on a national level. Luxembourg still has efforts to make in terms of protection from tobacco exposure namely in workplace and public places.
- ? **Health Care Resources:** The health system in Luxembourg is characterized by a compulsory public health insurance which covers the great majority of the inhabitants. The insurance is run by the union of public health agencies, called the Union des Caisses de Maladie (UCM). Hospital budgets are annually negotiated between each individual hospital and the UCM. This statutory insurance system is the main source of finance for health care in Luxembourg. All doctors are paid on a fee-for-service basis, but have to accept the fixed statutory fee level negotiated collectively with the UCM.

Health care resources data are available by the “Carte sanitaire” and by the UCM (unpublished data). Primary health care centres are not a feature of Luxembourg medicine. The number of hospital units is

defined by the national hospital plan edited by the ministry of Health. Officially there are 2 specialised pneumology units in Luxembourg, but every hospital presents one more or less structured pneumology unit, as there is no clear definition of the term and restriction in their development. There is one official national allergy unit in Luxembourg, but without any official link to respiratory medicine. The number of pneumologists is known; the number of allergologists is not published as this is not an officially recognised discipline in Luxembourg. There are some projects including specialised nurses, but no good data are available. There are no data about management plans. The activity of allergy testing and pulmonary function testing exists and are annually collected (unpublished data in the statistics of UCM).

The hospital activity statistics are yearly published by the Ministry of Health. The number of admissions and the length of stay stratified by ICD-10 code is known. No information exists about under-diagnosis, treatment or prevalence of wheeze in emergency rooms visits where any documentation is not codified.

The main medicines used in asthma and COPD are reimbursed at 100 % in Luxembourg. However, much more data are needed to elucidate and monitor the access of patients with asthma and COPD to these drugs.

The total cost of medicines prescribed is known, but not stratified for different diseases. No overall cost for asthma health care is available, the part of private health expenditure is small but again exact data are not available.

Main national data sources :

- 1) Statistical information is provided by Statec (www.statec.lu). "Statec" is the acronym for the Central Service for Statistics and Economic Studies which was founded in 1962 as a result of the merger between General Statistics Office and the Economic Studies and Documentation Service. Although standing under the authority of the Minister of the Economy, Statec operates autonomously with respect to professional and scientific standards.
- 2) Statistics of death causes. Ministry of Health. (www.ms.etat.lu/SRV_STAT)
- 3) Asthmalux-study : Prevalence of respiratory symptoms, bronchial responsiveness and atopy in adults in Luxembourg (Nati R et al., in work).
- 4) Carte sanitaire. Ministry of Health : Annual publication about health care resources and utilization in Luxembourg hospitals. (www.ms.etat.lu).

- 5) Air pollution monitoring in Luxembourg : Ministry of Environment (www.environnement.public.lu/air_bruit)
- 6) Health care resources and utilization : unpublished data collected by the Union des Caisses de Maladie (UCM)(www.secu.lu/cv/UCM.htm)

No structured monitoring of respiratory diseases currently exists in Luxembourg.

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