

<i>ECHIM Indicator name</i>	D) Health interventions: health services																																																																																
<i>Definition of indicator</i>	70. Average length of stay (ALOS), selected diagnoses The average length of stay (ALOS) in days in a hospital per discharged in-patient, i.e. average duration of a single episode of hospitalization. Calculated and presented by the following 25 categories of the International Shortlist for Hospital Morbidity Tabulation (ISHMT).																																																																																
	<table border="1"> <thead> <tr> <th>Nr</th> <th>Description</th> <th>ICD-10 Codes</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Total (All Causes)</td> <td>A00 - Z99 excluding V, W, X & Y codes and excluding healthy newborns Z38</td> </tr> <tr> <td>2</td> <td>Infectious and Parasitic Diseases</td> <td>A00 - B99</td> </tr> <tr> <td>3</td> <td>Neoplasms</td> <td>C00 - D48</td> </tr> <tr> <td>4</td> <td>Malignant Neoplasm of Colon, Rectum & Anus</td> <td>C18 - C21</td> </tr> <tr> <td>5</td> <td>Malignant Neoplasm of Trachea / Bronchus / Lung</td> <td>C33 - 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F39</td> </tr> <tr> <td>14</td> <td>Diseases of the Nervous System</td> <td>G00 - G99</td> </tr> <tr> <td>15</td> <td>Diseases of the Circulatory System</td> <td>I00 - I99</td> </tr> <tr> <td>16</td> <td>Acute Myocardial Infarction</td> <td>I21 - I22</td> </tr> <tr> <td>17</td> <td>Cerebrovascular Disease</td> <td>I60 - I69</td> </tr> <tr> <td>18</td> <td>Diseases of the Respiratory System</td> <td>J00 - J99</td> </tr> <tr> <td>19</td> <td>Chronic Obstructive Pulmonary Disease and Bronchiectasis</td> <td>J40 - 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<i>Calculation of the indicator</i>	Average length of stay (ALOS) is computed by dividing the total number of in-patient hospital days , in all hospitals, counted from the date of admission to the date of discharge by the total number of discharges (including deaths) in all hospitals during a given year. A hospital day (or bed-day or in-patient day) is a day, during which a person admitted as an in-patient, is confined to a bed and stays overnight in a hospital. Day-cases (patients formally admitted for a medical procedure or surgery in the morning and discharged before the evening) are excluded. Patients admitted with the intention of discharge on the same day, but who subsequently stay in hospital overnight, are included. For definition of an in-patient and a hospital discharge see remarks.																																																																																
<i>Relevant dimensions and subgroups</i>	- Calendar year - Country - Region (according to ISARE recommendations; see data availability)																																																																																

	<ul style="list-style-type: none"> - Age groups: 0-64 and 65+ <p>Age group exceptions:</p> <ul style="list-style-type: none"> - dementia: no disaggregation according to age (not relevant for population below 65) - asthma: 0-14 and 15+ (similar to asthma incidence indicator: nr 26; hospital admissions for asthma in particular relevant in children) - injury and poisoning & certain other consequences of external causes: 0-14, 15-24, 25-64, and 65+ (similar to injury incidence indicators: nr 29, 30 and 31; injuries are an important cause of burden of disease particularly in children and young adults).
<i>Preferred data type and data source(s)</i>	<p>Preferred data type:</p> <ul style="list-style-type: none"> - Registers (administrative data sources, national hospital discharge registers) <p>Preferred source:</p> <ul style="list-style-type: none"> - Eurostat
<i>Data availability</i>	<p>26 EU countries + Croatia, FYR Macedonia, Iceland, Norway, Switzerland are included in the Eurostat dataset. However, data availability varies by country and by year. Greece was the only EU-27 country not included. Regional data (NUTS II level) are available for few countries and depending on year. The ISARE project on regional data has not collected data on ALOS.</p>
<i>Data periodicity</i>	<p>Data are updated annually and available for the period 2000-2009.</p>
<i>Rationale</i>	<p>Average length of stay (ALOS) is used in assessment of quality of care, costs and efficiency. The indicator is often used for health planning purposes. But it has to be pointed out that the type of reimbursement system or health insurance plan in a country can play a significant role in the patient length of stay in hospitals.</p>
<i>Remarks</i>	<ul style="list-style-type: none"> - Average length of stay in hospital is one of the indicators of the health and long-term care strand of the Open Method of Coordination on Social Inclusion and Social Protection. - Data are not age-standardized by Eurostat. Therefore ECHIM uses breakdown in age groups (0-64, 65+). Data are available however by 5 year age groups, so age-standardized data could be computed. - ECHIM does not require disaggregation by sex for this indicator, and only by two age groups (0-64 and 65+) to reduce the number of operationalisations. Data are provided by Eurostat for total population and for 5-year age groups. So the aggregated age groups need to be computed. - A (hospital) discharge is the formal release of a patient from a hospital after a procedure or course of treatment (episode of care). A discharge occurs anytime a patient leaves because of finalisation of treatment, signs out against medical advice, transfers to another health care institution or because of death. Transfers to another department within the same institution are excluded (source Eurostat metadata). A discharge can refer to in-patients or day cases, but day treatment cases (day cases, patients admitted for a medical procedure or surgery in the morning and released before the evening) should be excluded. - Discharges by diagnosis refer to the principal diagnosis, i.e. the main condition diagnosed at the end of the hospitalisation. The main condition is the one primarily responsible for the patient's need for treatment or investigation (source Eurostat metadata). - An in-patient is a patient who is formally admitted (or 'hospitalised') to an institution for treatment and/or care and stays for a minimum of one night or more than 24 hours in the hospital or other institution providing in-patient care (source Eurostat metadata). - Two different data sets for hospital discharges by diagnosis are available: <ul style="list-style-type: none"> a) For data from 2000 onwards: according to the International Classification for Hospital Morbidity Tabulation (ISHMT). This shortlist for statistical comparison of hospital activity analysis was adopted in 2005 by Eurostat, the OECD (Organisation for Economic Co-operation and Development) and the WHO-FIC (Family of International Classifications) Network. b) For data covering the period 1989-2002: according to a Eurostat shortlist of some 60 selective diseases based on ICD-10 -The International Shortlist for Hospital Morbidity Tabulation (ISHMT) was developed by the Hospital Data Project (HDP). - Data collection takes place in agreement with the World Health Organisation (WHO) and the Organization of Economic Co-operation and Development (OECD). Where applicable, common definitions and data specifications are used in the data collection. From 2010 data collection on health care non expenditure data is made jointly with the OECD and WHO-

	Europe for human and physical resources. This joint questionnaire might be extended to include procedures and hospital patients.
<i>References</i>	<ul style="list-style-type: none"> - Health Indicators in the European Regions (ISARE) project: http://www.isare.org - Eurostat database: In-patient average length of stay (ISHMT, in days): http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_co_inpst&lang=en - Eurostat database: In-patient average length of stay (ISHMT, in days) by region: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_co_inpstt&lang=en - Eurostat metadata: Health care: resources and patients (non-expenditure data) Reference Metadata in Euro SDMX Metadata Structure (ESMS) http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/hlth_care_esms.htm - Eurostat/OECD/WHO international shortlist for hospital morbidity tabulation (ISHMT) http://www.who.int/classifications/apps/icd/implementation/hospitaldischarge.htm - Eurostat shortlist for hospital discharges (reference data 1989-2002): http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/hlth_care_esms_an1.pdf - OECD Manual 'A system of Health Accounts' (2000): http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/systemsofsh_ealthsaccount/shaenglpdf/ EN 1.0 &a=d - Eurostat. Definitions and data collection specifications on health care statistics (non-expenditure data) Version 21 May 2008 http://circa.europa.eu/Public/irc/dsis/health/library?l=/methodologiessandsdatasc/health_care/estat-oecd-definitions-c/ EN 1.0 &a=d - Hospital Data Project 2 (HDP2): http://ec.europa.eu/health/ph_projects/2004/action1/docs/action1_2004_frep_32_en.pdf - Eurostat OMC: http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_and_social_policy_indicators/omc_social_inclusion_and_social_protection/health_long_term_care_strand
<i>Work to do</i>	<ul style="list-style-type: none"> - Ask Eurostat to compute age-standardized rates. If these are available, ECHIM can consider skipping the breakdown by age group, as to limit the number of operationalizations. - Monitor developments Open Method of Coordination.