

EAN Fact Sheet

Country profile of Lithuania

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The EAN is pleased to present this fact sheet to each and every national neurological society, offering key insights into the latest epidemiological, economic, and demographic trends. This data aims to support informed decision-making and enhance understanding of neurological conditions on both national and European level with information provided by three EAN projects: the [“Burden of Neurological Disease in Europe”](#) study, the EAN [“COst of Illness in Neurology in EUrope \(COIN-EU\)”](#) project, the EAN NNS 2021-2022 survey.



Burden of Disease in Europe – Collaboration with IHME

Neurological disorders are the second most common cause of disability and premature death in the European Region and their prevalence and burden will likely increase with the progressive ageing of the European population. Greater attention to neurological diseases must be paid by health authorities for prevention and care. For this reason, the European Academy of Neurology is conducting research on gaining and analysing reliable data on the number of patients with neurological diseases.

These data are obtained from the currently most developed data base, the [Global Burden of Disease \(GBD\)](#) study of the Institute for Health Metrics and Evaluation (IHME), University of Washington, Seattle. The burden of neurological disorders in Europe was calculated for the year 2021 as prevalence, mortality, disability-adjusted life-years (DALYs), years of life lost (YLLs), and years lived with disability (YLDs) for the countries in the EU and the WHO European region for a total of 26 neurological disorders.

The study in Europe is run by the EAN and led by Prof. Dr. Günther Deuschl, Dr. Maurizio Leone and Maria Konti, M.Sc., in close collaboration with the leading scientists of the IHME Institute.

In the table below, you will find the national total counts for DALYs, YLDs, YLLs, prevalence, and deaths, the age-standardised rates by neurological disorder category for the years 1990 and 2021, and the percentage change for both of your country and the WHO Europe.

Diseases with counts less than one have been excluded and the number of decimal points has been adjusted individually for each disease.

	Counts (thousands)		Age-standardized rate (per 100 000 people)		Percentage change, 1990-2021	
	2021	1990	2021	Lithuania	WHO Europe	
All Neurological Disorders						
DALYs	172,070	4,204	3,497	-16.8%	-29.0%	
Deaths	7,055	132	106	-19.8%	-43.2%	
Prevalence	1,298,222	42,237	42,462	0.5%	0.3%	
YLDs	62,611	1,510	1,548	2.5%	2.9%	
YLLs	109,453	2,694	1,949	-27.7%	-44.4%	
Alzheimer's disease and other dementias						
DALYs	27,738	392	393	0.5%	-2.5%	
Deaths	1,546	20.74	21.02	1.3%	-2.8%	
Prevalence	44,998	651	649	-0.3%	-2.1%	
YLDs	9,400	135	134	-0.4%	-2.6%	
YLLs	18,338	257	259	0.9%	-2.5%	
Chromosomal abnormalities						
DALYs	113	7.46	6.57	-11.9%	-12.3%	
Prevalence	1,250	84	74	-12.1%	-12.8%	
YLDs	113	7.46	6.57	-11.9%	-12.4%	
Covid-19 (neurological)						
DALYs	1,723	-	50	-	-	
Prevalence	16,707	-	498	-	-	
YLDs	1,723	-	50	-	-	
Cystic echinococcosis						
DALYs	6	0.17	0.15	-10.0%	-18.3%	
Prevalence	22	0.59	0.58	-1.6%	-9.0%	
YLDs	6	0.17	0.15	-9.8%	-18.4%	
Diabetic neuropathy						
DALYs	11,549	110	228	107.7%	98.1%	
Prevalence	91,563	868	1,801	107.5%	97.9%	
YLDs	11,549	110	228	107.7%	98.1%	

Down syndrome						
DALYs	59	4.30	3.44	-20.0%	-19.6%	
Prevalence	653	48	39	-20.1%	-20.7%	
YLDs	59	4.30	3.44	-20.1%	-19.8%	
Encephalitis						
DALYs	901	38	26	-31.5%	-30.1%	
Deaths	27	0.72	0.63	-12.6%	-15.9%	
Prevalence	584	24	17	-28.9%	-13.6%	
YLDs	56	2.47	1.83	-26.1%	-12.0%	
YLLs	845	36	24	-31.9%	-31.0%	
Epilepsy						
DALYs	5,860	251	197	-21.5%	-12.6%	
Deaths	67	2.72	1.92	-29.5%	3.9%	
Prevalence	11,900	365	389	6.7%	3.3%	
YLDs	3,280	110	108	-1.9%	-11.3%	
YLLs	2,580	141	89	-36.8%	-14.3%	
Guillain-Barre Syndrome						
DALYs	16	0.50	0.50	0.0%	12.4%	
Prevalence	54	1.68	1.68	0.1%	12.4%	
YLDs	16	0.50	0.50	0.1%	12.4%	
Idiopathic intellectual disability						
DALYs	263	18	11	-35.6%	-19.7%	
Prevalence	6,011	411	263	-35.9%	-21.2%	
YLDs	263	18	11	-35.6%	-19.7%	
Klinefelter syndrome						
DALYs	1	0.031	0.032	4.9%	5.7%	
Prevalence	84	4.24	4.45	5.0%	5.5%	
YLDs	1	0.031	0.032	5.0%	5.5%	

	Counts (thousands)		Age-standardized rate (per 100 000 people)		Percentage change, 1990-2021	
	2021	1990	2021	Lithuania	WHO Europe	
Meningitis						
DALYs	840	111	32	-70.8%	-80.5%	
Deaths	22	1.55	0.60	-61.4%	-75.4%	
Prevalence	1,058	119	35	-70.7%	-66.7%	
YLDs	81	9	3	-67.9%	-64.6%	
YLLs	759	101	29	-71.0%	-81.3%	
Migraine						
DALYs	14,585	491	487	-0.8%	0.04%	
Prevalence	358,843	12,351	12,245	-0.9%	0.3%	
YLDs	14,585	491	487	-0.8%	0.04%	
Motor neuron disease						
DALYs	2,011	15.30	45.68	198.6%	37.5%	
Deaths	72	0.41	1.46	258.7%	54.1%	
Prevalence	168	3.88	5.21	34.2%	19.8%	
YLDs	36	0.83	1.11	34.1%	19.5%	
YLLs	1,975	14.47	44.57	208.0%	38.5%	
Multiple sclerosis						
DALYs	982	48	27	-43.6%	-5.0%	
Deaths	24	1.08	0.58	-46.0%	-12.5%	
Prevalence	659	17	19	14.4%	26.4%	
YLDs	178	4.52	5.12	13.4%	25.5%	
YLLs	805	44	22	-49.5%	-22.2%	
Nervous system cancer						
DALYs	7,811	146	207	42.5%	-3.3%	
Deaths	265	4	6	62.7%	10.8%	
Prevalence	502	9	15	69.1%	35.9%	
YLDs	90	1.36	2.26	66.5%	25.3%	
YLLs	7,721	144	205	42.3%	-3.7%	

Neurocysticercosis						
DALYs	996	32.72	23.45	-28.3%	-42.5%	
Prevalence	4,263	127.96	99.05	-22.6%	-32.8%	
YLDs	996	32.67	23.44	-28.2%	-42.5%	
YLLs	0	0.08	0.02	-80.3%	-70.7%	
Neurosyphilis						
DALYs	4	0.14	0.10	-30.8%	-43.6%	
Prevalence	35	1.10	0.96	-13.3%	-11.7%	
YLDs	4	0.14	0.10	-30.7%	-43.4%	
Other neurological disorders						
DALYs	3,011	34	89	164.8%	25.8%	
Deaths	96	0.40	1.90	379.4%	45.0%	
YLDs	770	14	25	75.1%	62.9%	
YLLs	2,236	19	64	233.3%	14.2%	
Parkinson's disease						
DALYs	4,955	65	73	13.3%	5.6%	
Deaths	306	3.55	4.21	18.7%	4.0%	
Prevalence	5,703	88	92	4.5%	21.9%	
YLDs	800	12.50	13.03	4.2%	21.4%	
YLLs	4,155	52	60	15.5%	2.0%	
Spinal cord injury						
DALYs	2,477	108	70	-34.7%	-26.9%	
Prevalence	9,309	362	257	-29.0%	-21.9%	
YLDs	2,477	108	70	-34.7%	-26.9%	

	Counts (thousands)		Age-standardized rate (per 100 000 people)		Percentage change, 1990-2021	
	2021	1990	2021	Lithuania	WHO Europe	
Stroke						
DALYs	79,174	2,082	1,335	-35.9%	-52.6%	
Deaths	4,628	98	68	-30.2%	-55.6%	
Prevalence	49,790	1,092	1,019	-6.7%	-19.2%	
YLDs	9,147	197	185	-6.1%	-18.9%	
YLLs	70,028	1,885	1,151	-39.0%	-55.3%	
Tension-type headache						
DALYs	2,618	81.06	81.03	-0.04%	-1.6%	
Prevalence	924,766	31,728	31,730	0.01%	-0.8%	
YLDs	2,618	81.06	81.03	-0.04%	-1.6%	
Tetanus						
DALYs	11.81	0.39	0.21	-44.4%	-97.3%	
Deaths	0.59	0.02	0.01	-42.4%	-95.8%	
YLDs	11.79	0.38	0.21	-44.5%	-97.5%	
Traumatic Brain Injury						
DALYs	4,363	170	108	-36.7%	-28.2%	
Prevalence	30,241	1,156	735	-36.4%	-28.0%	
YLDs	4,363	170	108	-36.7%	-28.2%	

Table 1: National total counts for DALYs, YLDs, YLLs, prevalence, and deaths, age-standardised rates by neurological disorder category for 1990 and 2021, and percentage change of 1990-2021. Diseases with counts less than one have been excluded and the number of decimal points has been adjusted individually for each disease.

Neurological conditions

In figure 1 below, the top 20 neurological disorders are ranked based on the national age-standardised rate of DALYs per 100 000 population in 2021 for all age groups.

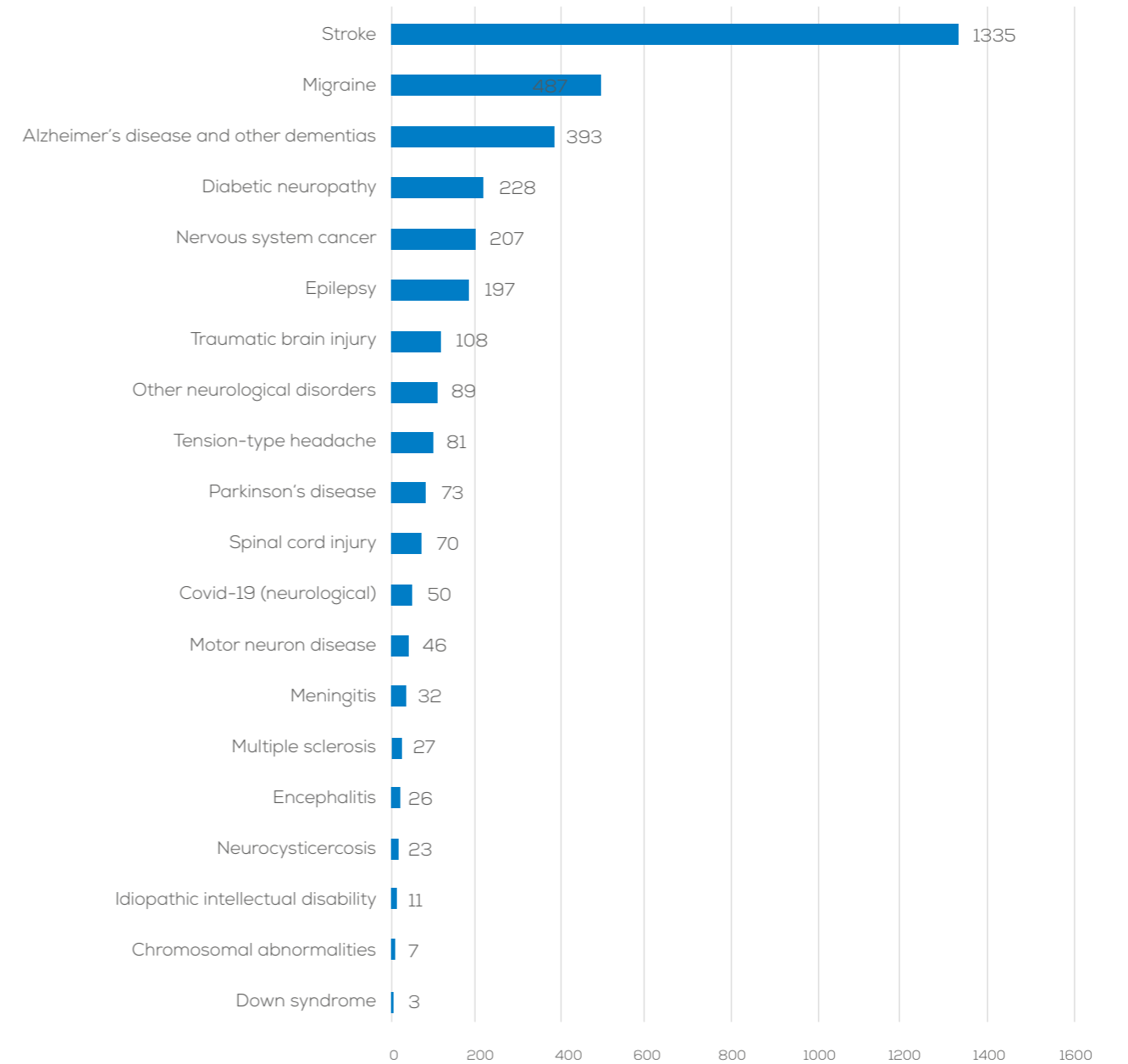


Figure 1: National age-standardised DALYs per 100 000 population by neurological disorder in 2021.

DALYs per 100 000 population

In order to show how the diseases are evolving both in **Lithuania** and the European Region, we present the temporal pattern of DALYs per 100 000 population over the last three decades in the figure below:

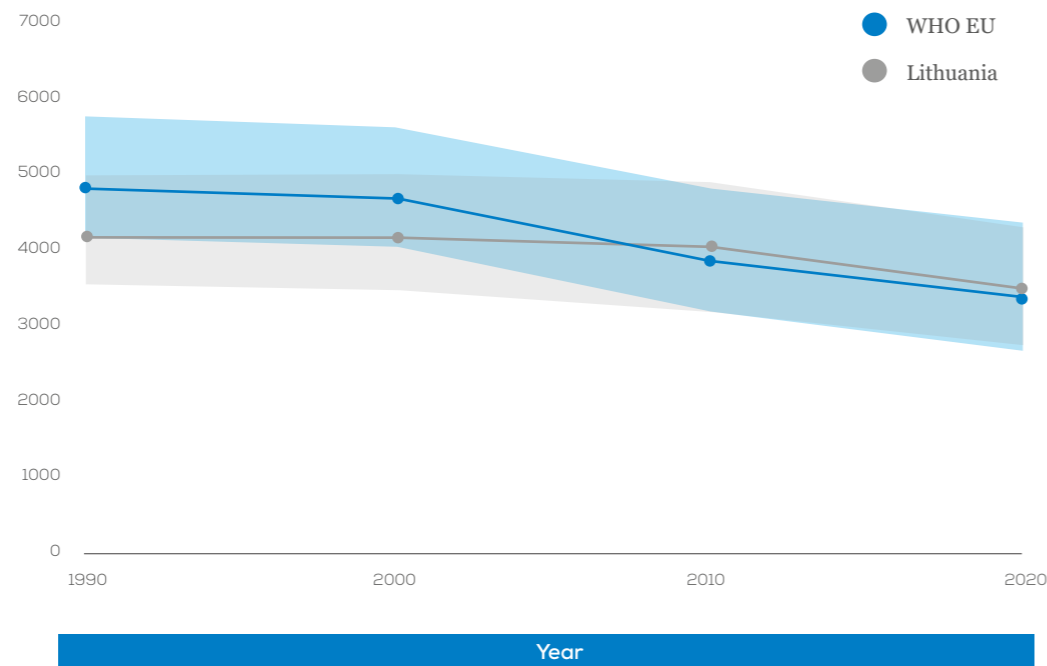


Figure 2: Age-Standardized DALYs per 100 000 population over the last 3 decades.

In figure 3 we show the distribution of DALYs rate per 100 000 population by age group divided in female and male:

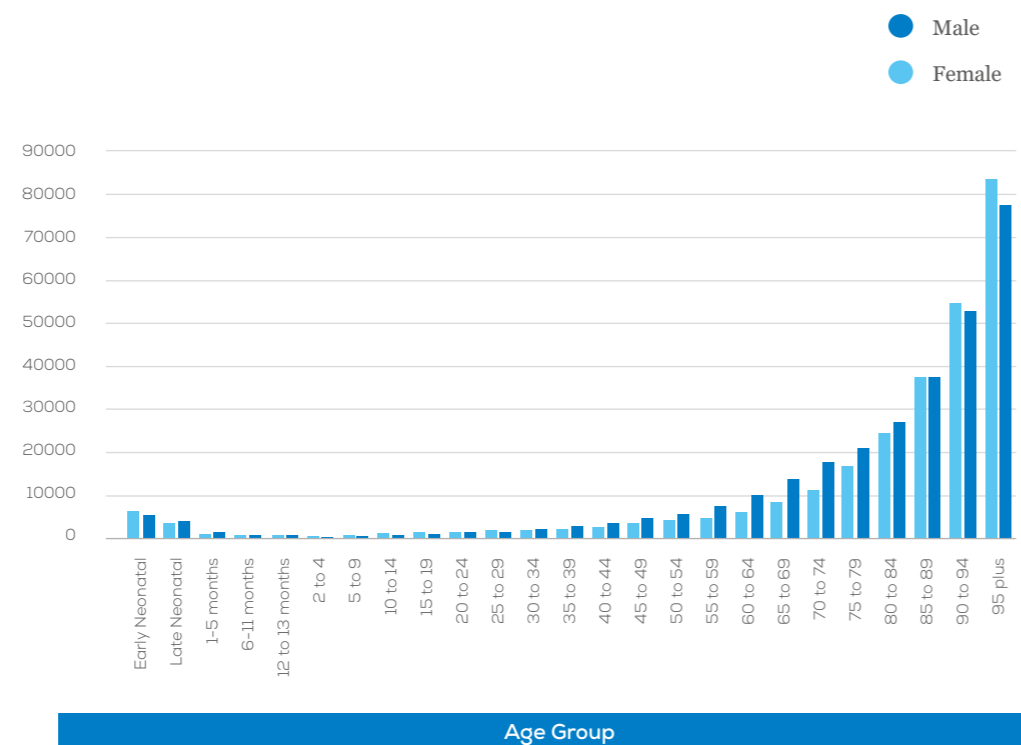


Figure 3: National DALYs per 100 000 population by age group and sex in 2021.

Extensive data and analyses are provided in the published paper and it will be communicated to the National Neurological societies.

COIN-EU (Cost of Illness in Neurology in Europe)

The Cost of Illness in Neurology in Europe (COIN-EU) project, which was launched in 2021, is run by EAN and led by Prof. Richard Dodel, Prof. Uwe Siebert and Prof. Günther Deuschl. This project is overseen at the EAN by Prof. Paul Boon, Prof. Claudio Bassetti and Prof. Thomas Berger.

The aim of the study is to assess disease- and country-specific annual costs for 12 categories of neurological diseases in Europe with a focus on the prevalent adult patient population. Costs have been calculated in three main categories: a) direct health care costs (i.e., all goods and services related to the prevention, diagnosis and treatment of a disorder; e.g. physician visits, hospitalizations and pharmaceuticals), b) informal care costs (i.e. other goods and services related to the disorder; e.g. social services, special accommodation and informal care), and c) indirect costs (i.e., lost productivity due to work absence or early retirement).

As the literature review revealed many gaps in research for many diseases and many countries, the group has developed a method to provide estimations of the above cost categories for the cases where no data are available. Data are imputed for those countries which belong to the same GNI category with countries that do present data. In case none of the countries which belong to the same GNI category present data, then an imputation is not possible.

In the table below, costs for **Lithuania** have been calculated for the diseases with available data, in three main categories where the numbers represent millions € PPP 2019.

million € PPP
2019

Informal Care

Neurological Disorder	Total Costs	Direct Costs	Informal Care Costs	Indirect Costs
Headache disorders	1,316.8	301.2	321.5	694.2
Sleep disorders	1,262.9	722.4	-	540.5
Alzheimer's disease and other dementias	664.5	286.8	377.6	0.1
Traumatic brain injury	284.3	120.7	72.9	90.8
Stroke	130.7	56.8	50.0	23.9
Polyneuropathies	88.5	50.4	-	38.1
Idiopathic epilepsy	33.2	9.0	-	24.2
Parkinson's disease	32.6	21.9	8.8	2.0
Multiple sclerosis	9.9	6.0	1.4	2.5
Brain and central nervous system cancer	3.2	1.9	1.3	-
Motor neuron disease	1.3	0.8	0.4	0.1
Meningitis	1.3	1.3	-	-
Total Costs:	3,829.3	1,579.1	833.8	1,416.3

Table 2: Total, direct, informal care and indirect costs per neurological disorder. Number of diseases depends on the availability of original studies and imputation of data.

NNS Survey 2021

In December 2021, the EAN conducted a survey among the national neurological societies. By combining the data from the Burden of Disease in Europe study across all European Region countries, we can provide demographic data regarding the workforce of neurologists in Europe for the 37 countries who took part in the survey.

The figure below represents the number of neurologists, fully specialised and in training per 100 000 population.

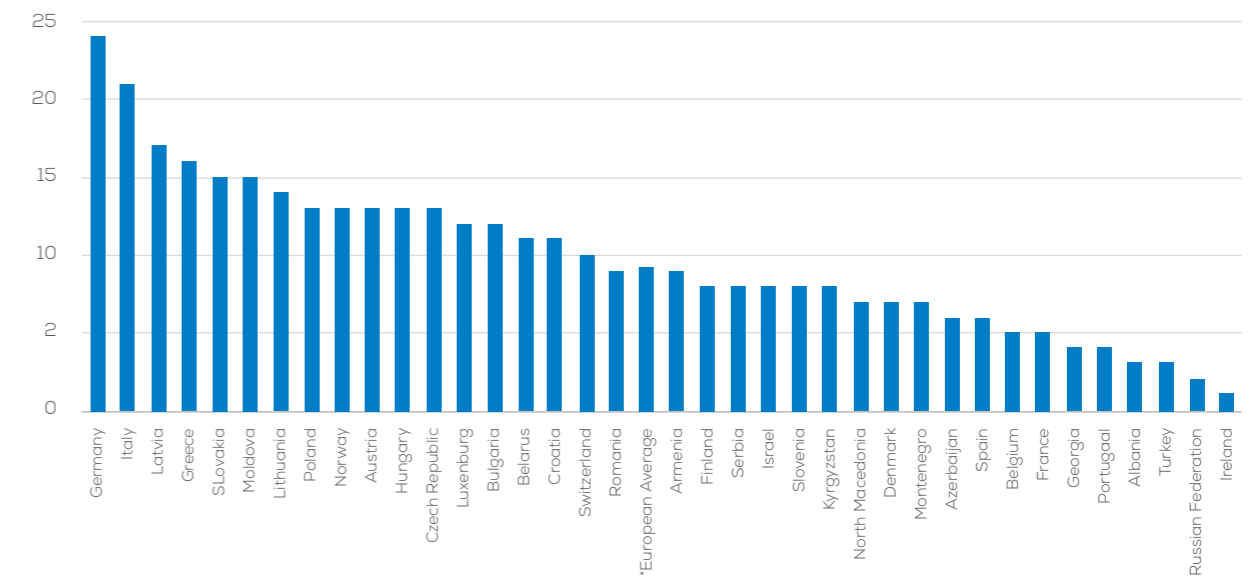


Figure 4: Number of neurologists (fully specialised and in training) per 100 000 population.

In the last figure the number of patients per neurologist is displayed:

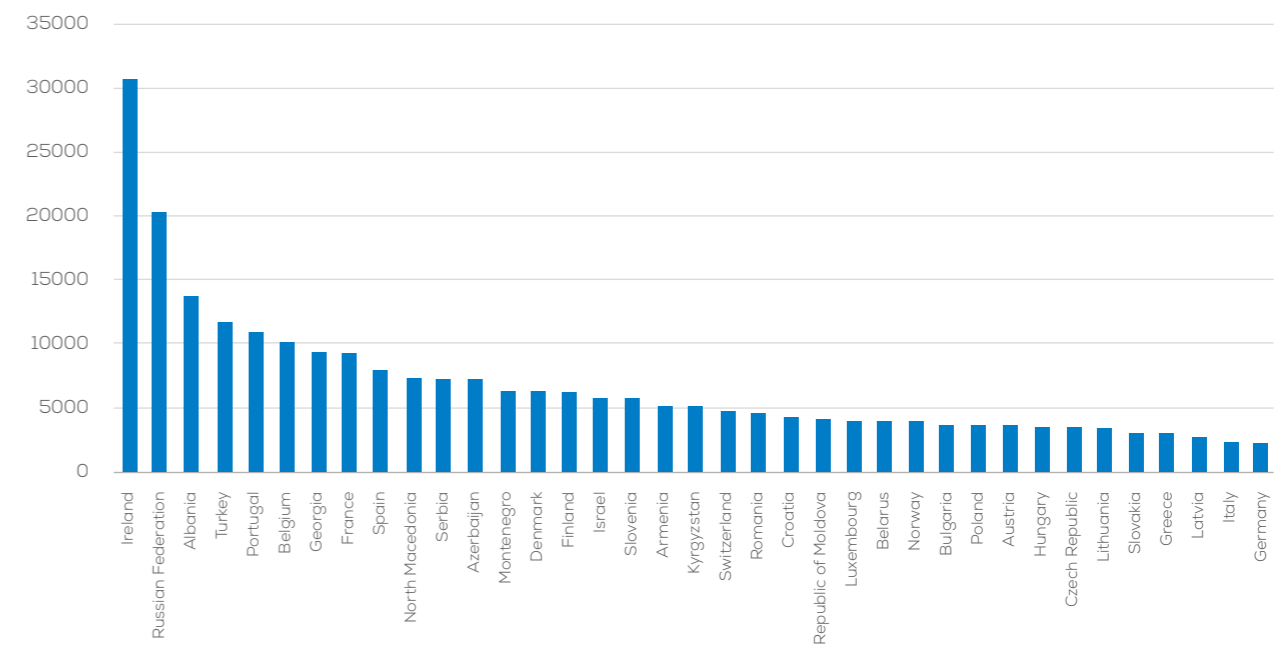
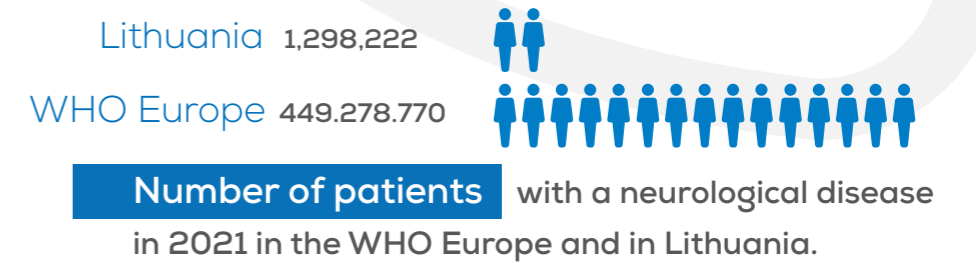
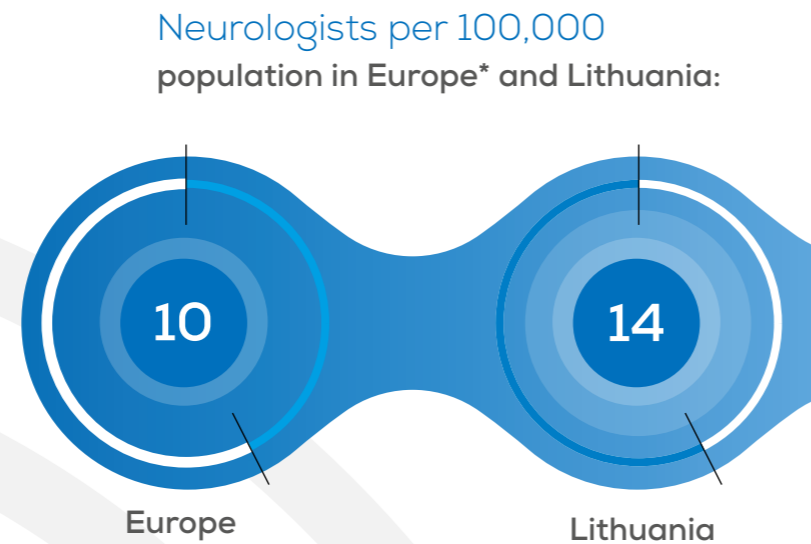
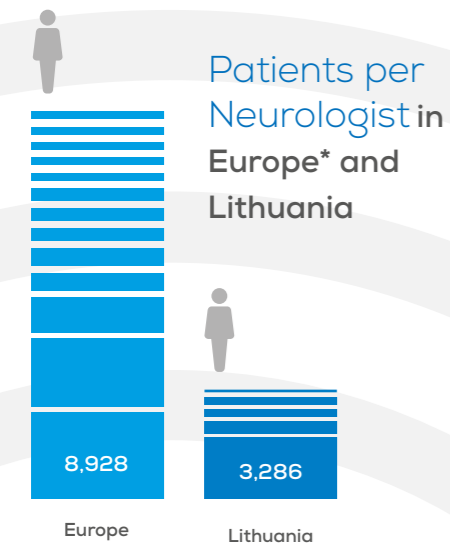


Figure 5: Number of patients per neurologist (fully specialised and in training).

Neurological Diseases in Europe and Lithuania:

Key Data and Trends from 2021



Percentage change of age-standardised DALYs, Deaths and prevalence from 1990 to 2021:

	WHO Europe	vs	Lithuania
DALYs	-28.98%		-16.82%
Deaths	-43.19%		-19.76%
Prevalence	0.34%		0.53%

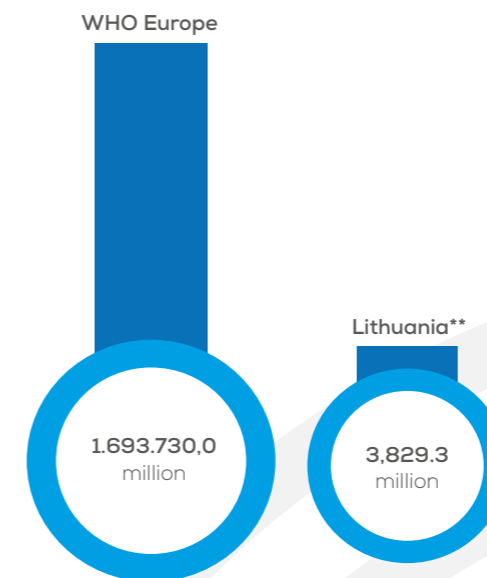
Most prevalent neurological diseases in Lithuania in

2021

- 1 Tension-type headache
- 2 Migraine
- 3 Diabetic neuropathy
- 4 Stroke
- 5 Alzheimer's disease and other dementias

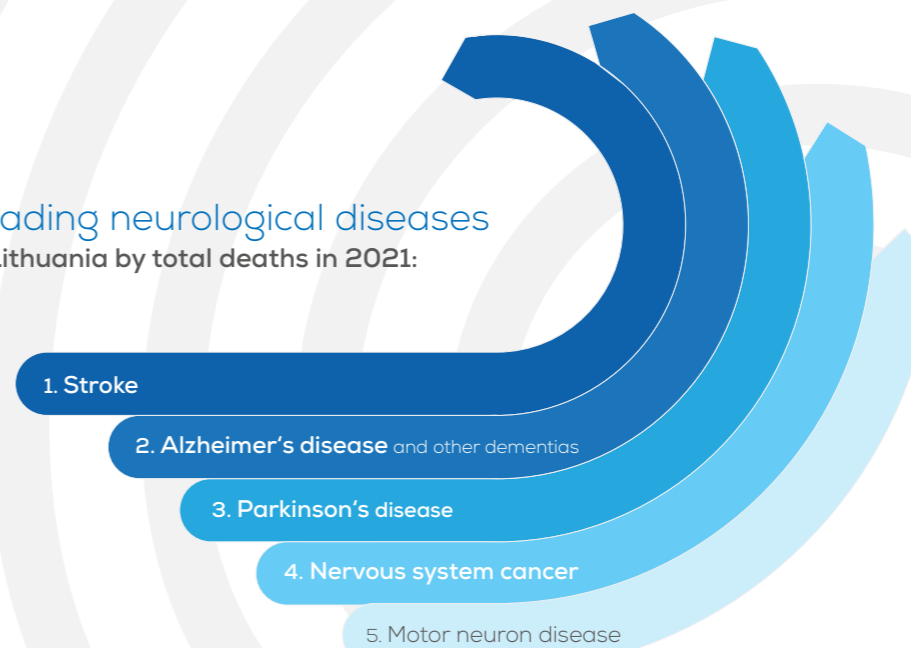
	WHO Europe	Male	Female
WHO Europe	3.513	3.351	
Lithuania	3,948	3,180	

Age-standardised DALYs rate per 100,000 population in 2021 by sex



Annual total costs (in million € PPP 2019) for 12 major neurological diseases:

Leading neurological diseases in Lithuania by total deaths in 2021:



*Based on data from 37 countries of the WHO European region
**Cost estimates are derived from country-specific data available for specific diseases.

