

The following pages present  
the results of the Neurology  
Atlas by themes

## ◆ Definitions

- ◆ **Primary care** in this context refers to the provision of basic preventive and curative health care at the first point of entry into the health-care system. Usually, this means that care is provided by a non-specialist who can refer complex cases to a higher level.

## ◆ Salient findings

- ◆ Globally, headache (including migraine) is the most common neurological disorder seen in primary care settings (reported by 73.5% of respondents), followed by epilepsy and cerebrovascular disease (72.5% and 62.7% of respondents, respectively). Neuropathies (attributable to diabetes, alcohol, nutritional deficiencies and entrapment) are next in order (45.1% of respondents).
- ◆ Epilepsy, cerebrovascular disease and headache are also among the five neurological disorders most frequently encountered in primary care settings in all the regions.
- ◆ Neurological problems caused by vertebral disorders are among the top five neurological conditions encountered in primary care settings as reported by respondents in 34.3% of countries. Neuroinfections (26.5% of respondents), Alzheimer's disease and other dementias (22.6% of respondents) and Parkinson's disease (19.6% of respondents) are the other neurological disorders most frequently encountered in primary care settings.
- ◆ The top ten neurological conditions seen in primary care settings also included symptoms that had not yet led to a diagnosis such as vertigo, syncope and dizziness (17.6% of respondents).

## ◆ Limitations

- ◆ The frequency of neurological disorders in various settings is a rough estimate; data were not collected and calculated using stringent epidemiological research methods as for prevalence studies. The information is based on the experience and impression of a key person in a country and not necessarily on actual data from responding countries.
- ◆ Although this information is available from only 102 countries, the data represent 90% of the global population. Regionally, the data represent more than 80% of the population for all the regions except Africa, where they represent 52% of the population.

## ◆ Implications

- ◆ The information regarding the diseases most frequently seen in primary care settings has implications for making decisions about resource allocation for health care and prevention, research goals, and education of medical undergraduates and general practitioners.
- ◆ Treatment of common neurological disorders at primary care level would be a cost-effective way of improving the scope and utilization of neurological services.
- ◆ Integration of neurological care for common illnesses into primary health care is also essential for extending health services to underserved areas in both developed and developing countries.

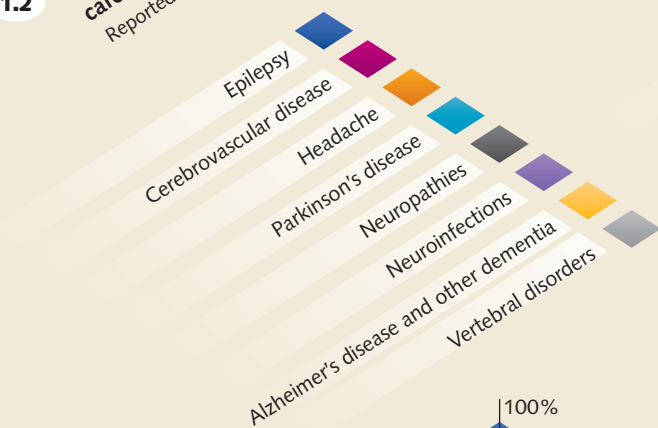
### Review of literature

Headache, epilepsy and neurological problems caused by vertebral disorders featured most frequently (82%, 64% and 64% of studies, respectively) among the top five neurological disorders in the studies describing the prevalence of neurological disorders encountered in primary care settings (7–16). Cerebrovascular disorders and dizziness or vertigo ranked next (36% each). Neuropathies, functional disorders and neuroinfections were also identified among the top five conditions each seen in primary care in 18% of the studies. Parkinson's disease, cranial trauma and psychiatric

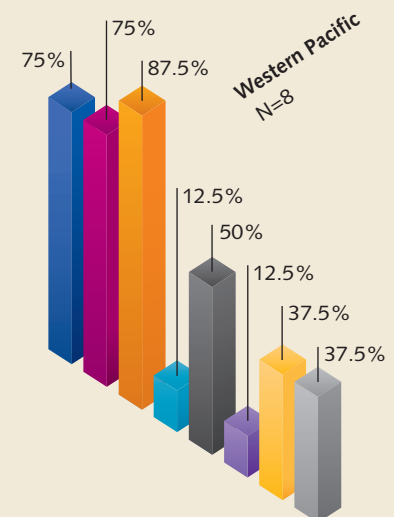
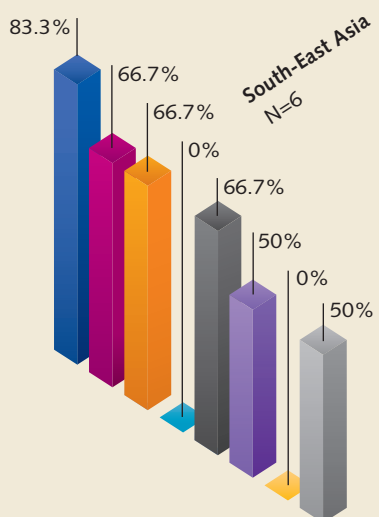
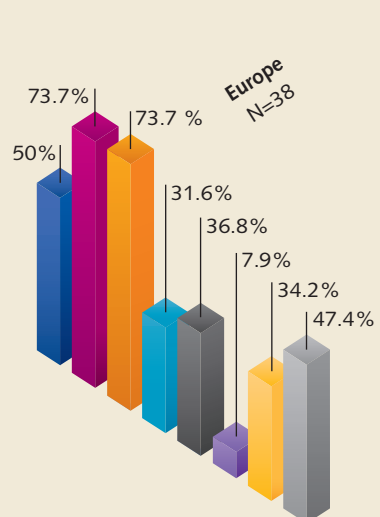
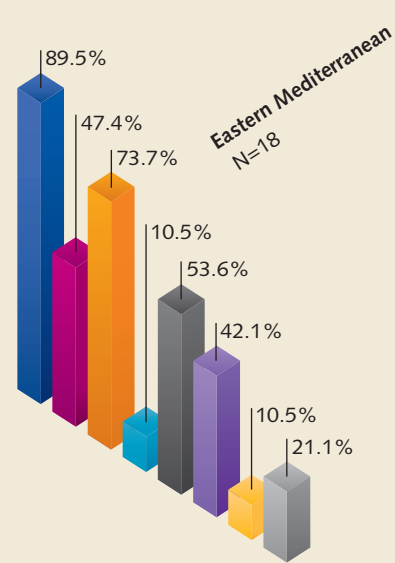
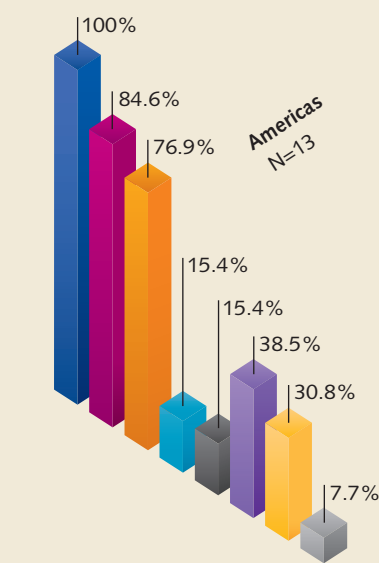
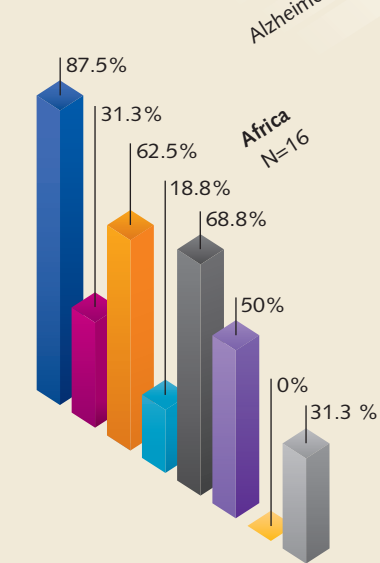
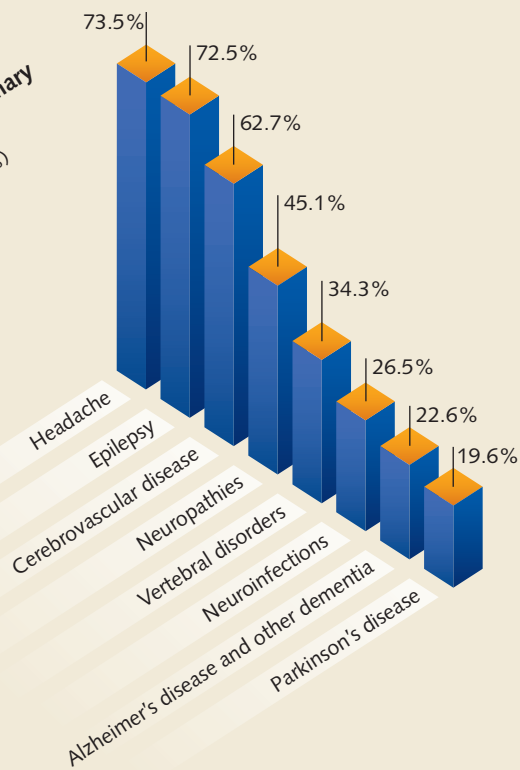
disorders (9% each) also featured among the top five neurological disorders seen in primary care settings in some studies.

Cerebrovascular disorders (100% of studies) followed by epilepsy (83%), neuropathies and neuroinfections (67% each) were among the top five admitting diagnoses in the studies concerning the neurological content of general hospital admissions (14, 17–21). The other common reasons for admission included cranial trauma (33%), dementia including Alzheimer's disease (33%), tumours of the central nervous system (17%) and degenerative and demyelinating disorders (17%).

**1.2** Neurological disorders most frequently reported in primary care in WHO regions  
Reported by countries (%)



**1.1** Neurological disorders most frequently reported in primary care by countries (%)  
Reported by countries (%)  
N=102



## ◆ Definitions

- ◆ **Neurological services in primary care** refer to the provision of basic preventive and curative health care for neurological disorders at the first point of entry into the

health-care system. The respondents were asked specifically about availability of follow-up treatment and emergency care in primary care settings.

## ◆ Salient Findings

- ◆ Follow-up treatment for neurological disorders is available in 76% of the responding countries.
- ◆ Follow-up treatment facilities for neurological disorders at primary care level are not available in 33.3% of the responding countries in the Western Pacific, 31.2% in Africa, 26.8% in Europe, 23.5% in the Eastern Mediterranean and 7.7% in the Americas.

- ◆ Emergency care for neurological disorders at primary care level is available in 74% of responding countries.
- ◆ No emergency care for neurological disorders at primary care level is available in 34.1% of the responding countries in Europe, 25% in Africa, 23.5% in the Eastern Mediterranean, 22.2% in the Western Pacific, 16.7% in South-East Asia, and 7.7% in the Americas.

## ◆ Limitations

- ◆ The question specifically requested information about the presence of follow-up treatment and emergency care for neurological disorders in primary care settings. The availability of other basic preventive and curative services was not asked for.
- ◆ In the event of availability of follow-up treatment facilities and emergency care for even one neurological disorder in primary care settings, it is likely that the question was answered positively. Therefore, the above numbers might be an overestimate regarding neurological services provided

in primary care settings. Information on the quality of services and their availability within each country was also not obtained.

- ◆ The percentage of countries in Europe with follow-up treatment facilities and emergency care at primary care level is low. It is possible that, in many of these countries, the first level of contact as well as follow-up may occur in a specialist rather than a primary care setting.

## ◆ Implications

- ◆ Integration of neurological care into primary care is essential in order to extend services to remote and resource-poor areas. The availability of neurological services at primary care level would help in lessening the complications and disability, thus decreasing the burden attributable to neurological disorders.

- ◆ Many neurological disorders require long-term treatment with drugs and rehabilitation, together with extended and regular health-care contact. Provision of neurological services at primary care level can reduce the burden of these conditions and enhance patients' quality of life.

