

Bangladesh

Neurology



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Disclaimer

This report was written according to the EUAA COI Report Methodology (2023). The report is based on carefully selected sources of information. All sources used are referenced.

The information contained in this report has been researched, evaluated and analysed with utmost care. However, this document does not claim to be exhaustive. If a particular event, person or organisation is not mentioned in the report, this does not mean that the event has not taken place or that the person or organisation does not exist.

Furthermore, this report is not conclusive as to the determination or merit of any particular application for international protection. Terminology used should not be regarded as indicative of a particular legal position.

'Refugee', 'risk' and similar terminology are used as generic terminology and not in the legal sense as applied in the EU Asylum Acquis, the 1951 Refugee Convention and the 1967 Protocol relating to the Status of Refugees.

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The drafting of this report was finalised on 18 December 2023. Any event taking place after this date is not included in this report.





Glossary and abbreviations

Term	Definition
BDT	Bangladeshi Taka
BIRDEM	Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders
DGDA	Director General of Drug Administration
DGHS	Directorate General of Health Services
DMCH	Dhaka Medical College Hospital
EEG	Electroencephalography
EUR	Euros
HDU	High Dependency Unit
ICU	Intensive Care Unit
IM	Intramuscular
IPD	Inpatient Department
IV	Intravenous
MOH	Ministry of Health
MOHFW	Ministry of Health and Family Welfare
NINS	National Institute of Neurosciences & Hospital





Term	Definition
OPD	Outpatient Department
Upazila	An administrative unit, which is a subdivision of a district formerly known as "thana". Bangladesh has 495 <i>Upazilas</i> .
WHO	World Health Organization





Introduction

Methodology

The purpose of the report is to provide information on access to neurology treatment in Bangladesh. This information is relevant to the application of international protection status determination (refugee status and subsidiary protection) and migration legislation in EU+ countries.

Terms of reference

The terms of reference for this Medical Country of Origin Information Report can be found in Annex 2: Terms of Reference (ToR). The initial drafting period finished on 06 October 2023, peer review occurred between 9-31 October 2023, and additional information was added to the report as a result of the quality review process during the review implementation up until 18 December 2023. The report was internally reviewed subsequently.

Collecting information

EUAA contracted International SOS (Intl.SOS) to manage the report delivery including data collection. Intl.SOS recruited and managed a local consultant to write the report and a public health expert to edit the report. These were selected from Intl.SOS' existing pool of consultants. The consultant was selected based on their experience in leading comparable projects and their experience of working on public health issues in Bangladesh.

This report is based on publicly available information in electronic and paper-based sources gathered through desk-based research. This report also contains information from oral sources with ground-level knowledge of the healthcare situation in Bangladesh who were interviewed specifically for this report. For security reasons, all oral sources are anonymised.

Quality control

This report was written by Intl.SOS in line with the European Union Agency for Asylum (EUAA) COI Report Methodology (2023),¹ the EUAA Country of Origin Information (COI) Reports Writing and Referencing Guide (2023)² and the EUAA Writing Guide (2022).³ Quality control of the report was carried out both on content and form. Form and content were reviewed by Intl.SOS and EUAA.

The accuracy of information included in the report was reviewed, to the extent possible, based on the quality of the sources and citations provided by the consultants. All the

¹ EUAA, Country of Origin Information (COI) Report Methodology, February 2023, [url](#)

² EUAA, Country of Origin Information (COI) Reports Writing and Referencing Guide, February 2023, [url](#)

³ EUAA, The EUAA Writing Guide, April 2022, [url](#)





comments from reviewers were reviewed and were implemented to the extent possible, under time constraints.

Sources

In accordance with EUAA COI methodology, a range of different published sources have been consulted on relevant topics for this report. These include: governmental publications, academic publications, reports by non-governmental organisations and international organisations, as well as Bangladeshi media.

In addition to using publicly available sources, two oral sources were contacted for this report. The oral sources are both medical doctors and they are anonymised in this report for security reasons. The sources were assessed for their background and ground-level knowledge. All oral sources are described in the Annex 1: Bibliography. Key informant interviews were carried out in June 2023.



1. Neurology

1.1. Prevalence of neurological diseases in Bangladesh

Rahman et al. notes that there is rising burden of neurological diseases across Bangladesh, and states that capacity and evidence needs to be developed to address and comprehend the ‘neurological epidemic in resource-poor settings in Bangladesh’.⁴

1.1.1. Stroke

In 2018, Mondal et al. conducted the first prevalence survey on stroke in Bangladesh. This was a cross-sectional study of a representative sample of adults residing in the country and it reported an overall prevalence of stroke equal to 11.4 per 1 000 adult population. The prevalence was higher among the older age groups: 30.1 per 1 000 for ages 60 and over; 25.2 per 1 000 for age group of 51-60; and 14.7 per 1 000 for ages 41-50. The prevalence of stroke was 13.8 per 1 000 for males and 8.68 per 1 000 for females. The prevalence was higher in rural than urban areas (11.85 per 1 000 and 11.07 per 1 000 respectively). Out of 25 287 respondents, the study reported 288 cases of stroke. Of these, 79.7 % were ischaemic and 20.3 % were haemorrhagic (15.7 % were related to intracerebral and 4.6 % were subarachnoid haemorrhage). The study found, in 2018, that there were geographical differences in the prevalence of stroke: Mymensingh division had the highest prevalence (14.71 per 1 000) and Rajshahi the lowest (7.62 per 1 000).⁵

1.1.2. Epilepsy

The first nationally representative survey on the prevalence of epilepsy was conducted in 2017. This found that for all ages, the prevalence of epilepsy was 8.4 per 1 000 population. The prevalence for adult males was 9.2 per 1 000 and for adult females it was 7.7 per 1 000. The prevalence was higher in rural areas than in urban areas (8.5/1 000 vs. 8.0/1 000 population).⁶

1.1.3. Patterns of neurological diseases

According to Rahman et al. who examined treatment received by a cohort of 584 adult patients between January and June 2021, the most common condition requiring hospitalisation was stroke (74 %); followed by acute confusional state (6 %); diseases of the spinal cord (3 %); peripheral neuropathy (2 %); psychiatric disorder (2 %) and

⁴ Rahman, R., et al., Socio-demographic and Clinical Profile of Neurological Patients in Chittagong Medical College & Hospital in Bangladesh, 2023, [url](#), p. 285

⁵ Mondal, M.B.A., et al., Prevalence and risk factors of stroke in Bangladesh: A nationwide population-based survey, June 2022, [url](#), pp. 2-3

⁶ Mohammad, Q.D., et al., Prevalence of epilepsy in Bangladesh: Results from a national household survey, 12 August 2020, [url](#), pp. 529-530



neurodegenerative disorder (2 %). A catch-all category ('others') accounted for 10 % of patients.⁷

A study of 335 patients presenting at the Neurology Department of Dhaka Medical College Hospital (DMCH) from July 2011 to June 2012, found the following pattern of diseases:

- Stroke (47.5 %);
- Seizure (9.3 %);
- Disease of spinal cord (7.8 %);
- Encephalopathy (6.3 %);
- Central nervous system infection (3.9 %);
- Peripheral neuropathy (3.9 %);
- Coma (3.6 %);
- Motor neurone disease (3.3 %);
- Dementia (1.5 %);
- Tumour (1.5 %); and
- Guillain-Barré syndrome (0.9 %).⁸

A study was conducted on 1 684 outpatients in 6 hospitals between March 2014 and June 2015 to look at the spectrum of diseases and prescription patterns for outpatients with neurological disorders.⁹ The pattern of neurological disorders is shown in Table 1.

Table 1. Foremost neurological disorders at outpatient departments (OPDs)¹⁰

Neurological disorders	%
Headache	22.98
Migraine	6.77
Ischaemic stroke	17.64
Haemorrhagic stroke	6.29
Subarachnoid haemorrhage	1.13

⁷ Rahman, R., et al., Socio-demographic and Clinical Profile of Neurological Patients in Chittagong Medical College & Hospital in Bangladesh, 2023, [url](#), pp. 286-287

⁸ Chowdhury R.N., et al., Pattern of neurological disease seen among patients admitted in tertiary care hospital, 2014, [url](#), p. 2

⁹ Uddin M.S. et al., Spectrum of disease and prescription for outpatient with Neurological Disorders: An Empirical pilot Study in Bangladesh, April 2018, [url](#), p. 25

¹⁰ Uddin M.S. et al., Spectrum of disease and prescription for outpatient with Neurological Disorders: An Empirical pilot Study in Bangladesh, April 2018, [url](#), p. 29





Neurological disorders	%
Transient ischaemic attack	0.95
Focal seizure	3.98
Primary generalised seizure	3.09
Alzheimer's disease	5.29
Parkinson's disease	1.66
Dystonia	1.43
Peripheral neuropathy	3.92
Hydrocephalus	0.89
Myopathy	1.54
Paraplegia	1.90
Cranial nerve palsy	1.07
Lumber spondylosis	2.55
Cerebral palsy	1.37
Potts disease	1.01
Meningitis	1.31
Brain tumour	1.96
Encephalopathy	1.13
Cervical spondylosis	1.30
Transverse myelitis	2.08





Neurological disorders	%
Disc prolapse	2.90
Undiagnosed	2.49
Others	1.37

1.2. Organisation of healthcare for neurology

Neurology as a separate speciality came into being during the 1960s in Bangladesh.¹¹ In 2017, B. Alam, Professor of Neurology and Joint Director at the National Institute of Neurosciences & Hospital (NINS), explained that even though neurologic disorders are quite common among medical admissions in tertiary care hospitals, there is an absence of facilities across the country. Neurological problems are referred to the tertiary referral neurological hospital, NINS.¹² The National Mental Health Strategic Plan cites the Shishu Bikash Kendro, a child development centre situated within the acute care unit of Dhaka Shishu Hospital. This centre provides services for developmental disabilities and neurological impairments both in the OPD and for children being discharged from neonatal and inpatient units. The Shishu Bikash Kendro is run by the Neurology, Child Development & Child Psychology Unit. It provides services, including outpatient neurodevelopmental screening and care of acute neurological cases and follow-up.¹³ The Bangladesh Society of Neurosurgeons lists other public sector facilities where neurological services are available and states that various private sector facilities provide neurology service as well.¹⁴

The Ministry of Health and Family Welfare (MOHFW) states that mental health conditions include neurodevelopmental disorders.¹⁵ There is a National Strategic Plan for Neurodevelopmental Disorders (2016-2021),¹⁶ which the MOHFW describes as being implemented by different ministries.¹⁷ The World Health Organization (WHO) prepared a mental health situational analysis for Bangladesh.¹⁸ This led to a national strategy for mental health.¹⁹ Mental health is being integrated into primary healthcare.²⁰ In the context of EUAA topical MedCOI reports, psychiatric care is presented in a separate report.

¹¹ Alam, B., Neurological Disease Burden: Bangladesh Perspective, 2017, [url](#), p. 31

¹² Alam, B., Neurological Disease Burden: Bangladesh Perspective, 2017, [url](#), p. 31

¹³ Bangladesh, Government of the People’s Republic of Bangladesh, National Mental Health, Strategic Plan 2020-2030, n.d., [url](#), p. 27

¹⁴ Bangladesh Society of Neurosurgeons, n.d., [url](#)

¹⁵ Bangladesh, MOHFW, DGHS, Health Bulletin 2020, 2022, [url](#), p. 155

¹⁶ Bangladesh, SHED, National Strategic Plan for Neurodevelopmental Disorders (2016-2021), n.d., [url](#)

¹⁷ Bangladesh, MOHFW, DGHS, Health Bulletin 2020, 2022, [url](#), p. 155

¹⁸ WHO, Bangladesh, Special Initiative for Mental Health Situational Analysis, 2021, [url](#)

¹⁹ Bangladesh, Government of the People’s Republic of Bangladesh, National Mental Health Strategic Plan 2020-2030, n.d., [url](#)

²⁰ Bangladesh, MOHFW, DGHS, Health Bulletin 2020, 2022, [url](#), p. 157





The MOHFW identifies district hospitals as the referral hospitals for the corresponding *Upazila* health complexes²¹ and so, in theory, patients are referred to district hospitals or higher and then to NINS for admission and treatment. In practice, as the Directorate General of Health Services (DGHS) states in its 2016 Health Bulletin, there is no functioning referral system.²² This holds true for neurological disorders.²³ Due to lack of skilled manpower and logistical resources, the referral system does not work well in the country.²⁴ Alam noted that patients with neurological problems are often addressed by internists and other medical doctors from different specialities,²⁵ but the source did not make clear whether this referred to the treatment provided in neurological hospitals or more widely across the healthcare system. Alam also noted that the number of neurologists increased from 2007 to 2017, but that the number of specialist personnel continues to be low across the country.²⁶

1.2.1. National Institute of Neurosciences & Hospital (NINS)

NINS is the apex body for treating neurological diseases.²⁷ It provides outpatient, inpatient, emergency and intensive care services.²⁸ The institute currently has 450 beds and, at the time of writing, it is undergoing construction to add beds and to upgrade the facilities. Current specialities that are already operational include neurology, neurosurgery, paediatric neurology, paediatric neurosurgery, neurophysiology, neurointervention, neurorehabilitation, neuroradiology, neuropathology that conducts biopsies, transfusion medicine and critical care medicine.²⁹

The website for NINS states that it has well-equipped laboratory services, operating theatre, neuroradiology, neurophysiology, intensive care unit (ICU) and high dependency unit (HDU).³⁰ The diagnostic facilities that are provided and their prices are available on the NINS website.³¹

²¹ Bangladesh, MOHFW, 4th Health, Population and Nutrition Sector Program 2017-2022, Operational Plan, Hospital Services Management (January 2017-June 2022), April 2017, [url](#), pp. 9-10

²² Bangladesh, MOHFW, DGHS, Health Bulletin 2016, [url](#), p. 38

²³ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.

²⁴ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.

²⁵ Alam, B., Neurological Disease Burden: Bangladesh Perspective, 2017, [url](#), p. 32

²⁶ Alam, B., Neurological Disease Burden: Bangladesh Perspective, 2017, [url](#), pp. 31-32

²⁷ NINS, Home, n.d., [url](#)

²⁸ NINS, Services, n.d., [url](#)

²⁹ NINS, Departments, n.d., [url](#)

³⁰ NINS, Home, n.d., [url](#)

³¹ NINS, n.d., [url](#) [click on the tab for 'diagnostic facilities' and then on each test]





2. Access to treatment

Patients suffering from neurological diseases can access treatment at NINS. NINS does not have a regional or divisional set-up elsewhere in the country, and this limits referral to other health facilities and to the level of services offered across the country.³² An interviewee for this report explains that the government intends to increase expertise in neurology and to expand the capacity of district and general hospitals to provide neurological treatment.³³

Private facilities provide neurological services, for example, spinal surgery and physiotherapy for neurological disorders.³⁴

Due to patient load, follow-up treatments for neurological diseases are performed in a slow-paced fashion. Patients and their attendants face long waiting times. This applies more to the public than the private sector.³⁵

3. Cost of treatment

In general, the government does not provide insurance coverage for neurological diseases. Government hospitals and other healthcare facilities have Social Welfare Departments, which can evaluate and certify individuals for exemption from payment of OPD or IPD charges, admittance fees, bed charges and laboratory charges if they are unable to afford healthcare. Private facilities have no provision to exempt patients from payment for any hospital service charge.³⁶

Inpatient treatment cost includes the cost of accommodation (bed/daily rate for admittance), as well as charges for biochemical, pathological, neuroradiological, neurophysiology, neurointerventional and imaging tests.³⁷ As will be seen in the below table, there is a general

³² Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.

³³ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.

³⁴ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.

³⁵ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.

³⁶ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.

³⁷ NINS, Pathology Tests, List of Pathological test performed in NINS at Dept. of Neuropathology, Department of Neuropathology (Price List), n.d., [url](#); NINS, Department of Interventional Neurology, Test Price, n.d., [url](#); NINS, All Tests, n.d., [url](#)



difference in prices between the private and public facilities. Public health facilities adhere to official prices in their practice.³⁸

Treatment costs have been added as per the interviews and the NINS website.

Table 2. Prices for consultation³⁹

Specialist	Public outpatient treatment price in BDT	Public inpatient treatment price in BDT	Private outpatient treatment price in BDT	Private inpatient treatment price in BDT	Reimbursement/ special programme/ free/ comments
Consultation by neurologist	200	500	1 000	1 500	Usually there is no exemption but the Social Welfare Department in a hospital can recommend free or partial payment
Consultation by neurosurgeon	400	500	1 000	1 500	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Consultation by an internist	30	500	1 000	1 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Consultation by rehabilitation specialist	400	500	1 000	1 500	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment

Note: Prices are for each day of treatment.

³⁸ Source B, interview, 7 June 2023, Dhaka. Source B is an Associate Professor at NINS. The person wishes to remain anonymous.

³⁹ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.



Table 3. Prices for treatments and diagnostic tests⁴⁰

	Public treatment price in BDT	Private treatment price in BDT	Reimbursement/ special programme/ free/ comments
Laboratory test			
Laboratory test: medication level in the blood (e.g. for specific antiepileptics)	770	4 500	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Laboratory test of blood; INR e.g. in case of acenocoumarol anticlotting	2 000	5 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Medical imaging			
Diagnostic imaging by means of EEG (electroencephalogram)	2 000	3 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Diagnostic imaging by computed tomography scan	2 000	6 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Diagnostic imaging by magnetic resonance imaging scan	4 000	10 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment

⁴⁰ Source A, interview, 7 June 2023, Dhaka. Source A is a Professor of Neurosurgery at NINS. The person wishes to remain anonymous.



	Public treatment price in BDT	Private treatment price in BDT	Reimbursement/ special programme/ free/ comments
Diagnostic imaging: Angiography (=arteriography) of cerebral arteries	16 000	22 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Treatment			
Clinical admittance in neurology department (daily rates)	300	5 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Clinical admittance in neurosurgery department (daily rates)	500	5 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Clinical admittance in (neuro) rehabilitation department (daily rates)	500	6 000	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment
Outpatient treatment by physical therapist	200	1 500	Usually there is no exemption but the Social Welfare Department can recommend free or partial payment



4. Cost of medication

Medicines produced in Bangladesh are registered with the Director General of Drug Administration (DGDA) to protect against fake medication and to ensure quality.⁴¹ The national Essential Drugs List is set out in the 2016 National Drugs Policy.⁴² Annex 3 of the National Mental Health Strategic Plan provides a suggested national essential medicines list for common neurological disorders for Bangladesh.⁴³ Uddin et al. provide a list of medicines for neurological disorders prescribed for outpatients across six hospitals.⁴⁴

The patient is required to pay for medicine, unless deemed to be eligible for support by the Social Welfare Department.⁴⁵ Prices from online medicine shops are provided in Table 5. These are taken from the following websites:

Table 4. Online medicine websites

Website name	Web address
MedEasy	https://medeasy.health
Osudpotro	https://osudpotro.com
Lazz Pharma Limited	https://www.lazzpharma.com
MedEx	https://medex.com.bd
ePharma	https://epharma.com.bd
Arogga	https://www.arogga.com

⁴¹ Source B, interview, 7 June 2023, Dhaka. Source B is an Associate Professor at NINS. The person wishes to remain anonymous.

⁴² Bangladesh, MOHFW, জাতীয় ওষধ নীতি ২০১৬ [Gazette on National Drug Policy 2016], 2017, [url](#)

⁴³ Bangladesh, Government of the People's Republic of Bangladesh, National Mental Health Strategic Plan 2020-2030, n.d., [url](#), p. 114

⁴⁴ Uddin, M.S. et al, Spectrum of disease and prescription for outpatient with Neurological Disorders: An Empirical Pilot Study in Bangladesh, April 2018, [url](#), p. 34

⁴⁵ Source B, interview, 7 June 2023, Dhaka. Source B is an Associate Professor at NINS. The person wishes to remain anonymous.



Table 5. Cost of medications

Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box in BDT	Place (pharmacy, hospital,...)
Carbamazepine	Anleptic [®]	200 mg	Tablet	50	195	Pharmacy
Clobazam	Keolax [®]	10 mg	Tablet	100	402	Pharmacy
Clonazepam	Xetril [®]	0.5 mg	Tablet	100	300	Pharmacy
Gabapentine	Gabapentin [®]	300 mg	Tablet	30	482	Pharmacy
Lamotrigine	Lamogin [™]	25 mg	Tablet	30	360	Pharmacy
Levetiracetam	Iracet [™]	250 mg	Tablet	30	488	Pharmacy
Pregabalin	Nervalin [®]	75 mg	Capsule	30	483	Pharmacy
Valproic acid OR valproate OR Depakine [®]	Valoate [®]	200 mg	Tablet	100	300	Pharmacy
Diazepam (IV injection for epileptic attacks)	Sedil [®]	10 mg /2ml	Injection	10	36	Pharmacy
Diazepam (rectiole / rectal suppository for epileptic attacks)	Sedil [®] suppositories	10 mg	Suppository	1	3	Pharmacy
Midazolam (IM injection for epileptic attacks)	Dormax [®]	15 mg /3ml in ampoule	Injection	1	120	Pharmacy
Midazolam (IV injection for epileptic attacks)	Dormax [®]	15 mg /3ml in ampoule	Injection	1	120	Pharmacy
Acetylsalicylic acid (Aspirin [®])	Ecosprin [®]	300 mg	Tablet	100	60	Pharmacy
Apixaban	Pixorel [™]	5 mg	Tablet	10	250	Pharmacy
Clopidogrel	Anclog [®]	75 mg	Tablet	30	330	Pharmacy

Generic Name	Brand name	Strength of unit	Form	Number of units in the container	Price per box in BDT	Place (pharmacy, hospital,...)
Dabigatran	Dabigat [®]	75 mg	Capsule	10	750	Pharmacy
Enoxaparin	Parinox [®]	4000 anti - XaIU/ 0.4ml	Injection	1	200	Pharmacy
Heparin	Heparin [®]	25 000 iu/ 5 ml	Injection	1	397.72	Pharmacy
Prasugrel	Prapid [®]	10 mg	Tablet	20	400	Pharmacy
Rivaroxaban	Rivaban [®]	2.5 mg	Tablet	20	240	Pharmacy
Warfarin	Warin [®]	2 mg	Tablet	100	200	Pharmacy
Bromocriptine mesylate	Bromolac [™]	2.5 mg	Tablet	30	360	Pharmacy
Levodopa + carbidopa + entacapone	Tridopa [®]	Levodopa 50mg + carbidopa 12.5 mg + entacapone 200 mg	Tablet	20	802.40	Pharmacy
Pramipexole	Parixol [®]	180 mcg	Tablet	30	181.20	Pharmacy
Ropinirole	Perkirol [®]	1 mg	Tablet	30	181.22	Pharmacy

Note: Medication prices are not reimbursed by any public health insurance mechanisms.

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Oral sources, including anonymous sources

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Annex 2: Terms of Reference (ToR)

Topical report: Neurology

Note for drafters: These are guidelines on the information to be included. If one aspect is not relevant, e.g., there is no national institute to treat this disease or no international donor programme, there is no need to mention it. Keep the focus on treating medicine – preventive care can be mentioned but is of less interest to the target group.

General information

- Briefly describe prevalence and incidence of neurological diseases / types of neurological diseases (epidemiologic data).
- How is the health care organized for neurological diseases (Epilepsy, Cerebrovascular Accident (Stroke), Multiple Sclerosis and Parkinson's Disease)?
- How are neurological diseases treated – at specific centres, in primary health care centres, secondary care / hospitals, tertiary care etc.?
- Which kinds of facilities can treat the disease [public, private not for profit (e.g., hospitals run by the church), private for-profit sector]? Include links to facilities' websites if possible.
- How are the resources organized in general to treat patients with this disease? Are there sufficient resources available to treat all patients?
- Is there a particular type of this disease for which no (or only partial) treatment exists in the country?
- Is there a (national) institute specialised in treating this disease?
- Are there any national or international plans or (donor) programmes for certain diseases; if yes, could you elaborate on such programme(s) and what it entails?

Access to treatment

- Are there specific treatment programmes for neurological diseases? If so, what are the eligibility criteria to gain access to it and what they contain?
- Are there specific government (e.g., insurance or tax) covered programmes for this disease? If so, what are the eligibility criteria to gain access to it?
- Are there any factors limiting the access to healthcare for patients? If so, are they economic, cultural, geographical, etc.? Are there any policies to improve access to healthcare and/or to reduce the cost of treatments and/or medication? What is the number of people having access to treatment? Keep focus on e.g., waiting times rather than the exact number of specialists in the field.
- If different from information provided in the general section; is the treatment geographically accessible in all regions?
- What is the 'typical route' for a patient with this disease (after being diagnosed with the disease)? In other words: for any necessary treatment, where can the patient find help and/or specific information? Where can s/he receive follow-up treatment? Are there

waiting times for treatments (e.g., consultation by neurologist/neurosurgeon, EEG, CT Scan, MRI, etc)?

- What must the patient pay and when?
- Is it the same scenario for a citizen returning to the country after having spent a number of years abroad?
- What financial support can a patient expect from the government, social security or a public or private institution? Is treatment covered by social protection or an additional / communal health insurance? If not, how can the patient gain access to a treatment?
- Any occurrences of healthcare discrimination for people with neurological diseases?

Insurance and national programmes

Include if relevant, otherwise delete section.

- National coverage (state insurance).
- Programmes funded by international donor programmes, e.g., UNICEF, Gates foundation, Clinton foundation etc.
- Include any insurance information that is specific for patients with this disease.

Cost of treatment

Guidance / methodology on how to complete the tables related to treatments:

- Do not delete any treatments from the tables. Instead state that they could not be found if that is the case.
- In the table, indicate the price for inpatient and outpatient treatment in public and private facility and if the treatments are covered by any insurance or by the state.
- For inpatient, indicate what is included in the cost (bed / daily rate for admittance, investigations, consultations...). For outpatient treatment, indicate follow up or consultation cost.
- Is there a difference in respect to prices between the private and public facilities?
- Are there any geographical disparities?
- Are the official prices adhered to in practice?
- Include links to online resources used, if applicable (e.g., hospital websites).

Note: a standardised list of treatments was also included in the original ToR, as can be viewed in the report.

Cost of medication

Guidance / methodology on how to complete the tables related to medications:

- Do not delete any medicines from the tables. Instead, state that they could not be found if that is the case.
- Are the available medicines in general accessible in the whole country or are there limitations?

- Are the medicines registered in the country? If yes, what are the implications of it being registered?
- Indicate in the tables: generic name, brand name, dosage, form, pills per package, official prices, source, insurance coverage.
- Are (some of the) medicines mentioned on any drug lists like national lists, insurance lists, essential drug lists, hospital lists, pharmacy lists etc.?
- If so, what does such a list mean specifically in relation to coverage?
- Are there other kinds of coverage, e.g., from national donor programmes or other actors?
- Include links to online resources used, if applicable (e.g., online pharmacies).

Note: a standardised list of medication was also included in the original ToR, as can be viewed in the report.

NGOs

Include if relevant, otherwise delete section.

- Are any NGOs or international organisations active for patients with neurological diseases? What are the conditions to obtain help from these organisations? What help or support can they offer?
- Which services are free of charge and which ones are at a cost? Is access provided to all patients or access is restricted for some (e.g., in case of faith-based institutions or in case of NGOs providing care only to children for instance).

