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

- Headache: 73.5%
- Epilepsy: 72.5%
- Cerebrovascular disease: 62.7%
- Neuropathies: 45.1%
- Vertebral disorders: 34.3%
- Neuroinfections: 26.5%
- Alzheimer's disease and other dementia: 22.6%
- Parkinson's disease: 19.6%
Neurological disorders most frequently reported in primary care in WHO regions
Reported by countries (%)
Presence of follow-up treatment for neurological disorders in primary care in WHO regions and the world

*N=104*

- **World**: 76%
- **Europe**: 73.2%
- **Eastern Mediterranean**: 76.5%
- **South-East Asia**: 66.7%
- **Western Pacific**: 100%
- **Americas**: 92.3%
- **Africa**: 68.8%

Present

Absent
Presence of emergency care for neurological disorders in primary care in WHO regions and the world

N=104

2.2

World: 74%

Africa: 75%
Americas: 92.3%
Eastern Mediterranean: 76.5%
Europe: 65.9%
South-East Asia: 83.3%
Western Pacific: 77.8%

Present: [Blue]
Absent: [Red]
Presence of follow-up treatment and emergency care for neurological disorders in primary care in different income groups of countries

N=104
Availability of at least one antiepileptic drug in primary care in WHO regions and the world

N=109

World: 84.4%
- Africa: 93.8%
- Americas: 78.6%
- Eastern Mediterranean: 89.5%
- Europe: 81.4%
- South-East Asia: 83.3%
- Western Pacific: 77.8%

Present
Absent
Availability of at least one antiepileptic drug in primary care in different income groups of countries

N=109

Low: 76% Present, 24% Absent
Lower middle: 90% Present, 10% Absent
Higher middle: 84% Present, 16% Absent
High: 88% Present, 12% Absent
Neurological disorders most frequently reported in specialist care by countries
Reported by countries (%) N=106

- Epilepsy: 92.5%
- Cerebrovascular disease: 84%
- Headache: 61.3%
- Parkinson’s disease: 46.2%
- Neuropathies: 35.8%
- Neuroinfections: 27.4%
- Alzheimer’s disease and other dementia: 26.4%
- Multiple sclerosis: 26.4%
Neurological disorders most frequently reported in specialist care in WHO regions
Reported by countries (%)
Number of neurological beds per 10 000 population
N=95

5.1

Information not available
Median number of neurological beds per 10,000 population in WHO regions and the world.
Median number of neurological beds per 10 000 population indifferent income groups of countries

N=95

5.3

- Low: 0.03
- Lower middle: 0.24
- Higher middle: 1.83
- High: 0.73
Median number of neurological beds per 10 000 population in different population categories of countries

N=95

5.4

Cat I: 0.63
Cat II: 0.63
Cat III: 0.1
Cat IV: 0.2

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Paediatric neurology services in WHO regions and the world

N=108

6.1

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>37.5%</td>
</tr>
<tr>
<td>Americas</td>
<td>100%</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>95.2%</td>
</tr>
<tr>
<td>Europe</td>
<td>68.4%</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>66.7%</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>88.9%</td>
</tr>
<tr>
<td>World</td>
<td>80.6%</td>
</tr>
</tbody>
</table>

Present | Absent

Neurology Atlas © 2004 WHO
Neurological rehabilitation services in WHO regions and the world

N=108

<table>
<thead>
<tr>
<th>Region</th>
<th>Present (%)</th>
<th>Absent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>18.8%</td>
<td>81.2%</td>
</tr>
<tr>
<td>Americas</td>
<td>78.6%</td>
<td>21.4%</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>73.7%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Europe</td>
<td>88.1%</td>
<td>11.9%</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>83.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>77.8%</td>
<td>22.2%</td>
</tr>
</tbody>
</table>

World: 73.2% Present, 26.8% Absent

Neurology Atlas © 2004 WHO
Neuroradiology services in WHO regions and the world
N=108

77.8% World
18.8% Africa
92.9% Americas
84.2% Eastern Mediterranean
85.7% Europe
100% South-East Asia
88.9% Western Pacific

Present
Absent

Neurology Atlas © 2004 WHO
Neurological rehabilitation services in different income groups of countries

N=108

- Low: 39.3%
- Lower middle: 77.4%
- Higher middle: 88.2%
- High: 90.6%
Median number of neurologists per 100,000 population in different income groups of countries

N=106

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Median (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0.03</td>
</tr>
<tr>
<td>Lower middle</td>
<td>0.74</td>
</tr>
<tr>
<td>Higher middle</td>
<td>3.19</td>
</tr>
<tr>
<td>High</td>
<td>2.96</td>
</tr>
</tbody>
</table>

Neurology Atlas © 2004 WHO
Median number of neurologists per 100,000 population in different population categories of countries

N=106

- Cat I: 2.3
- Cat II: 3.17
- Cat III: 0.57
- Cat IV: 0.62

7.3
Median number of neurologists per 100,000 population in each WHO region and the world

N=106

- World: 7.4
- Western Pacific: 0.77
- South-East Asia: 0.07
- Europe: 0.32
- Eastern Mediterranean: 0.89
- Americas: 0.03
- Africa: 4.84
Number of neurologists in each WHO region

- **Americas**: 22,370 (N=14)
- **Europe**: 45,839 (N=43)
- **Western Pacific**: 14,293 (N=9)
- **Africa**: 423 (N=16)
- **Eastern Mediterranean**: 1,125 (N=18)
- **South-East Asia**: 1,118 (N=6)
Median number of neurological nurses per 100,000 population in WHO regions and the world

N = 82

8.2

Africa
Americas
Eastern Mediterranean
Europe
South-East Asia
Western Pacific
World
Number of neurological nurses in WHO region

- **Americas**: 5,333 (N=10)
- **Europe**: 25,985 (N=31)
- **Western Pacific**: 20,335 (N=8)
- **Africa**: 28 (N=14)
- **Eastern Mediterranean**: 2,802 (N=14)
- **South-East Asia**: 175 (N=5)
Median number of neurosurgeons per 100,000 population in different income groups of countries

N = 103

Low: 0.03
Lower middle: 0.49
Higher middle: 0.94
High: 0.97
Median number of neurosurgeons per 100,000 population in different population categories of countries

N=103

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Neurosurgeons per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat I</td>
<td>0.94</td>
</tr>
<tr>
<td>Cat II</td>
<td>0.77</td>
</tr>
<tr>
<td>Cat III</td>
<td>0.38</td>
</tr>
<tr>
<td>Cat IV</td>
<td>0.49</td>
</tr>
</tbody>
</table>
Median number of neurosurgeons per 100 000 population in WHO regions and the world

N=103

9.4

- Africa: 0.01
- Americas: 0.37
- Eastern Mediterranean: 0.76
- Europe: 1.02
- South-East Asia: 0.03
- Western Pacific: 0.39
- World: 0.56
Number of neurosurgeons in WHO regions

- **Americas**: 8,607 (N=14)
- **Europe**: 7,321 (N=40)
- **Western Pacific**: 14,722 (N=9)
- **Africa**: 257 (N=16)
- **Eastern Mediterranean**: 1,163 (N=18)
- **South-East Asia**: 1,023 (N=6)
Median number of neuropaediatricians per 100,000 population in WHO regions and the world

10.2

Africa: 0.01
Americas: 0.06
Eastern Mediterranean: 0.47
Europe: 0.12
South-East Asia: 0.003
Western Pacific: 0.08
World: 0.1

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Median number of neuropaediatricians per 100,000 population in different income groups of countries

N=98

- Low: 0.002
- Lower middle: 0.08
- Higher middle: 0.56
- High: 10.3

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Median number of neuropaediatricians per 100 000 population in different population categories of countries

N=98

Cat I: 0.24
Cat II: 0.23
Cat III: 0.05
Cat IV: 0.01

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Median number of postgraduates specialising in neurology per year per 100,000 population in different income groups of countries

N=101

11.2
Median number of postgraduates specialising in neurology per year per 100 000 population in WHO regions and the world

N=101

- World: 0.2
- Americas: 0.04
- Western Pacific: 0.01
- Eastern Mediterranean: 0.01
- Europe: 0.08
- Africa: 0.04

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Number of postgraduates specializing in neurology per year in WHO regions

- **Americas**: 715 (N=14)
- **Europe**: 1,177 (N=39)
- **Western Pacific**: 284 (N=8)
- **Africa**: 18 (N=15)
- **Eastern Mediterranean**: 108 (N=18)
- **South-East Asia**: 104 (N=6)
Primary method of financing neurological care in WHO regions and the world

N=82

12.1

Out-of-pocket: 37.8%
Tax-based: 35.4%
Social insurance: 25.6%
Private insurance: 1.2%

Africa: Out-of-pocket (17%), Tax-based (83%)
Eastern Mediterranean: Out-of-pocket (58%), Tax-based (21%)
South-East Asia: Out-of-pocket (40%), Tax-based (21%)
Europe: Out-of-pocket (33%), Tax-based (59%)
Western Pacific: Out-of-pocket (33%), Tax-based (50%)

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Primary method of financing neurological care in different income groups of countries

N=82

Low:
- Out-of-pocket: 11.5%
- Tax-based: 5.3%
- Social insurance: 0%
- Private insurance: 0%

Lower middle:
- Out-of-pocket: 19.1%
- Tax-based: 38.1%
- Social insurance: 0%
- Private insurance: 0%

Higher middle:
- Out-of-pocket: 42.9%
- Tax-based: 0%
- Social insurance: 3.6%
- Private insurance: 0%

High:
- Out-of-pocket: 50%
- Tax-based: 42.9%
- Social insurance: 3.6%
- Private insurance: 3.6%
Disability benefits available to people with neurological disorders in the world

N=105

13.1
Disability benefits in WHO regions and the world

N=103

70.5% World

92.3% Americas

66.7% Eastern Mediterranean

85.4% Europe

33.3% South-East Asia

77.8% Western Pacific

25% Africa

Present

Absent
Disability benefits in different income groups of countries

N=105

Low

Lower middle

Higher middle

High

Present

Absent

67.9%

27.6%

17.6%

3.2%

96.8%

82.4%

32.1%

72.4%
Reporting system for neurological disorders in different income groups of countries

N=105

- Low: 71.4%
- Lower middle: 79.3%
- Higher middle: 94.1%
- High: 74.2%
Data collection system for neurological disorders in WHO regions and the world

N=103

- World: 48.5%
  - Africa: 43.8%
  - Americas: 63.6%
  - Eastern Mediterranean: 41.2%
  - Europe: 64.3%
  - South-East Asia: 0%
  - Western Pacific: 22.2%
Data collection system for neurological disorders in different income groups of countries

N=103

- Low: 35.7%
- Lower middle: 44.8%
- Higher middle: 73.3%
- High: 51.6%
National Neurological Association in WHO regions and the world

N=108

15.1

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>100%</td>
</tr>
<tr>
<td>Americas</td>
<td>56.3%</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>97.7%</td>
</tr>
<tr>
<td>Europe</td>
<td>73.7%</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>88.9%</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>100%</td>
</tr>
<tr>
<td>World</td>
<td>87%</td>
</tr>
</tbody>
</table>
Activities of National Neurological Associations
N=92

- Organizing meetings: 100%
- Advising government: 70.7%
- Curriculum for postgraduate training: 44.6%
- Granting degree: 31.5%
- Accrediting postgraduate training: 30.4%
- Curriculum for undergraduate training: 28.3%
- Accrediting undergraduate training: 21.7%
Nongovernmental organizations for neurological disorders in WHO regions and the world

N=106

71.7%

Africa: 81.3%
Americas: 85.7%
Eastern Mediterranean: 47.1%
Europe: 76.2%
South-East Asia: 83.3%
Western Pacific: 66.7%
Activities of Nongovernmental organizations for neurological disorders

N=76

92.1%

15.4

69.7%

65.8%

61.8%

Awareness and advocacy
Treatment
Rehabilitation
Prevention
Nongovernmental organizations for neurological disorders in different income groups of countries

N=106

- Low: 66%
- Lower middle: 76.7%
- Higher middle: 75%
- High: 71%