

Neurological core database in The Cochrane Library: point of view from around the globe.

Background: In 2000, the **Neurological Field** created a review browse list organised as an index in a neurological textbook, to offer an easy approach to identifying Cochrane neurological reviews within the larger Cochrane Library, with the aim of achieving the maximum visibility of the proposed review and to impact on clinical practice and health policy in multidisciplinary or multi professional neurological settings.

Objectives: to understand how wide the variability is in selecting a review within the Cochrane Library for people with neurological interests, who are educated in different parts of the world, and to create a tool to facilitate access in a practical and broad virtual database of Systematic *neur* Moreover, in each of the 5 selections there are both strictly neurological reviews and reviews of interest for neurologists but with a **potential overlap with other health areas (incontinence, ear nose and throat, psychiatry, etc)**. This different perception highlights the need for a multi-professional aspect with the need to increase the channel of relationships.

To enhance global participation it is essential to be aware that “neurological interest” is different in different countries and considering these variability could help develop appropriate criteria to elaborate a comprehensive browse list of reviews, to address tagging objectives and provide an easier and quicker way for the Cochrane Library to reach new audiences.

Methods: 5 neurologists, that could be representative of different geographical areas, were contacted: Nigeria, Brazil, Germany and Italy (there were two Italian neurologists located in different parts of Italy in different work settings). They were asked to independently select reviews of neurological interest from those published in the Cochrane Library in the four issues published in 2008 (free access to the Library was provided for the year in question), and to classify them in a excel file according to the list of diseases provided by the Neurological Field, there were 30 neurological categories. Data were sent and analysed centrally by the Cochrane neurological Field statistician working in the Health Authority, Umbria Region.

Inter-observational agreements were analyzed with the Latent Class Model for Rater Agreement ¹.

Results: 344 titles of new or updated Systematic Reviews were extracted from the Cochrane Library by five neurologists in the 2008. There was a wide range between the five in selecting “neurological reviews”, going from 94 selected reviews for the Nigerian to 197 for the German and in order 115 for the Italian located in Milan, 173 for the Brazilian and 187 for the Italian located in Perugia in the between. The model with 5 latent classes was selected (Table 1), due to the best support of the data in terms of a lower Akaike Information Criterion (AIC: index rewarding goodness of fit and penalizing number of parameters). There was a wide range of variability from highest agreement in 1-Latent Class (122 Tiles, 32,6%) to lowest in 5-Latent Class where only one neurologist felt that 54 Titles (15,7%) were of neurological interest while the other 4 readers did not select them (Table 2).

Conclusions: the very slight overlap in selection between five Neurologists located in four different parts of the globe in considering meta analysis of interest for health professionals, patients and consumers (only 33% of the reviews had a global highest agreement) might reflect differences in the priorities for research, in educational background ², socio-economic resources and working expertise.

Moreover, in each of the 5 selections there are both strictly neurological reviews and reviews of interest for neurologists but with a **potential overlap with other health areas (incontinence, ear nose and throat, psychiatry, etc)**. This different perception highlights the need for a multi-professional aspect with the need to increase the channel of relationships.

ALCOHOL, ALCOHOLISM AND DRUGS
BACK
BRAIN and SPINAL CORD TUMORS
BRAIN and SPINAL INJURIES
CEREBROVASCULAR DISEASE – ACUTE TREATMENT
CEREBROVASCULAR DISEASE – PREVENTION
CEREBROVASCULAR DISEASE - REHABILITATION / POST ACUTE
CNS and SPINAL INFECTIONS
DEMENTIA
DEMYELINATING DISEASES
EPILEPSY
INTENSIVE CARE and PALLIATIVE CARE
INTOXICATIONS and POISONINGS
MIGRAINE and HEADACHE
MOTOR NEURON DISEASES
MOVEMENT DISORDERS
NEUROLOGICAL SERVICES
NEUROMUSCULAR DISORDERS
NEUROSURGERY
NUTRITIONAL DEFICIENCY DISORDERS
OTHERS (NOT CLASSIFIABLE TOPICS)
PAIN
PERIPHERAL NEUROPATHY
RARE AND HEREDITARY DISEASES
SLEEP DISORDERS
SUBARACHNOID HAEMORRHAGE
SYMPTOMATIC TREATMENT

Figure 1: Cochrane Neurological Field: Neurological browse list

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Table 1: Models, Likelihood (LL), Akaike Information Criterion (AIC)

Model	LL	AIC(LL)	Model	LL	AIC(LL)
1-Latent Class	-1110,72	2231,436	6-Latent Class	-893,802	1857,605
2-Latent Class	-949,591	1921,181	7-Latent Class	-887,597	1857,195
3-Latent Class	-920,499	1874,998	8-Latent Class	-883,367	1860,734
4-Latent Class	-907,008	1860,016	9-Latent Class	-882,929	1871,857
<u>5-Latent Class</u>	<u>-898,893</u>	<u>1855,786</u>	10-Latent Class	-882,786	1883,571

Table 2: Latent Class profiles: percentages of titles recognized as of neurological interest in each Latent Class by each reviewer and most frequent words appearing in titles.

Latent Class	Size (%)	German	Nigeria	Brazil	Milan -IT	Perugia-IT	Frequent words
1	112 (32,6)	<u>96,1%</u>	<u>99,4%</u>	<u>90,2%</u>	<u>99,0%</u>	<u>98,8%</u>	Stroke;Pain;Dementia;Chronic;Brain;Epilepsy;Sclerosis;Injury;Low-back;Palsy
2	64 (18,6)	<u>78,1%</u>	19,5%	0,3%	22,9%	44,6%	Smoking;Schizophrenia;Dependence;Exercise;Maintenance;Opioid;Angiography;Aggression;Depression;Mental Surgery;ADHD;Cell;Disability;Intellectual;Legs;Nerve;Pain;Pharmacological;Stroke
3	60 (17,4)	0,9%	0,7%	58,9%	<u>77,6%</u>	<u>70,3%</u>	Stroke;Chronic;Prevention;Corticosteroids;TENS;ElectricalStimulation;Sclerosis;Pain;Nerve;Cognitive
4	54 (15,7)	61,3%	<u>94,3%</u>	67,7%	44,6%	<u>99,9%</u>	HealthCare;Hospital;Prevention;Support;Alcohol;PersonalAssistance;Home;Impairments;Professional;Thromboembolism;Trauma
5	54 (15,7)	1,6%	0,5%	0,6%	0,9%	<u>99,8%</u>	

For each class we extracted the words appearing in the title of the systematic reviews, counting the most frequent words found. We have not taken into consideration the more foregone terms such as: **treatment, people, disease** and so on. The list of the most frequent terms helps to clarify the nature of the latent classes.

Bibliography

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