

## Neurological education

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### Effects of educational program on hypertension knowledge and ambulatory blood pressure in hypertensive patients with a history of stroke

G. M. Kozera<sup>1</sup>, A. Kosmol<sup>2</sup>, R. Szczech<sup>2</sup>, K. Narkiewicz<sup>2</sup>, W. M. Nyka<sup>1</sup>, D. Gasecki<sup>1</sup>, B. Krupa-Wojciechowska<sup>2</sup>, B. Wyrzykowski<sup>2</sup>

<sup>1</sup>Department of Neurology, Medical University of Gdansk, Gdansk, POLAND, <sup>2</sup>Department of Hypertension and Diabetology, Medical University of Gdansk, Gdansk, POLAND

**Introduction** Long-term hypertension control in majority of patients with a history of stroke is unsatisfactory. Lack of patient education should be taken into account in order to

improve hypertension control. We assessed effects of educational programme on basic hypertension knowledge and ambulatory blood pressure (ABPM) control in patients with a history of neurological events.

**Methods** We studied 19 hypertensive men with stroke or TIA one month prior to the study (age range 37–67, mean 54.3 yrs; 0–1 pts in Rankin scale). All patients participated in the educational programme. The teaching sessions were lead by the specially trained nurses and physicians. We evaluated basic knowledge on hypertension by questionnaire (15 questions) and measured ABPM at baseline and after one year follow-up. Recurrent stroke symptoms, BP self-measurement frequency, regular medication and diet modification were also assessed.

**Results** Education programme resulted in better hypertension knowledge (questionnaire score  $11.5 \pm 2.7$  vs.  $13.0 \pm 1.3$  points;  $P < 0.05$ ). All patients continued regular anti-hypertensive therapy during the follow-up. BP self-measurement frequency increased from  $3.4 \pm 4.6$  to  $7.8 \pm 5.7$  measurements per month ( $P < 0.05$ ). Sixteen of 19 patients reduced their salt intake ( $p < 0.05$ ). Twenty-four hour ABPM confirmed satisfactory long-term control of hypertension ( $132 \pm 10$  at baseline vs.  $131 \pm 11$  mm Hg during follow-up for SBP;  $83 \pm 7$  vs.  $82 \pm 7$  mm Hg for DBP). Only one patient presented recurrent stroke.

**Conclusion** Structured teaching program improves hypertension knowledge in stroke patients, and results in excellent compliance and good long-term BP control. These findings support the concept that educational programmes should be routinely incorporated to secondary stroke prevention in hypertensive patients.

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### Neurology for general practitioners: a new curriculum for advanced training

Y. Alekseenko

Vitebsk Medical University, Vitebsk, BELARUS

Neurological disorders are a matter of importance not only for neurologists but for general practitioners as well. A new curriculum on neurology for postgraduate advance training course for general practitioners is being worked out. The main goal of this short-term (two-weeks) course is to provide physicians with an efficient level of knowledge and practical skills for general and primary care practice which might be enough to manage some most common neurological disorders and frequent emergencies.

The general curriculum outline embraces theoretical and practical parts, using nosologic and syndromic approaches. Included in the curriculum are backgrounds of neurological examination, main neurological syndromes and neurological diseases. The problem-focused neurological examination that all trainees learn to perform should be incorporated into a general physical examination as a routine procedure. The main attention must be given to disorders that are common, preventable and treatable (cerebrovascular pathology, low back pain and lumbosacral radiculopathy, neuropathies, epilepsy, head injuries, toxic and metabolic disorders, etc). Besides all physicians have to deal with assessment and initial management of comatose patients and patients with disorders of consciousness, sudden headache, dizziness and vertigo, gait disturbances, seizures and syncope, acute muscle weakness, etc. Different teaching methods can be applied: Problem-focused lectures, workshops, demonstrations, clinical rounds, conferences and case reports. The course should be completed by computer tests, evaluation of practical skills, discussion of some questions and solving clinical case problems.

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**Survey of the accuracy of information on the apparently credible websites related to neurology**S. R. Lukic<sup>1</sup>, Z. M. Cojbasic<sup>2</sup><sup>1</sup>University Clinical Centre Nis, Clinic of Neurology, Nis, YUGOSLAVIA, <sup>2</sup>University of Nis, Faculty of Mechanical Engineering, Nis, YUGOSLAVIA

**Purpose** We determined the relation between credibility features and contents accuracy of websites that provided information on neurology health topics.

**Methods** Websites were identified either by searching each of the most commonly used search engines or by simultaneously consulting them using a meta-search engine. We selected English language websites. We each provided a subjective judgment of the overall quality of a site (score out of 10). Then we calculated an average score for each site, and analysed first 20 sites.

We assessed the credibility features of the web sites: evidence hierarchy, source and currency as well as accuracy of contents. Relation between features of web site credibility and level of accuracy of contents were expressed by cross tabulation. The strength of association was assessed with Kendall's rank correlation, which adjusts for tied ranks in the data.

Confidence intervals (CI) and significance levels were calculated for alpha=0.05.

**Results** In selected cases, 45% (CI 23.06%–68.47%) websites described currency, 65% (CI 40.78%–84.61%) source and 20% (CI 5.73%–43.66%) evidence of hierarchy. Kendall's rank correlations were 0.17, 0.27, and 0.17 for the source, currency, and evidence hierarchy respectively, without significance level.

**Conclusions** Our study shows that features of website credibility have moderate correlation with accuracy of information in neurology health topics. Websites with description of credibility features tended to have higher levels of accuracy of contents, but this relationship was not strong. Thus, apparently credible websites may not necessarily provide higher levels of accurate health information.

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**Delivery of neurological care in Europe**

F. Jungmann

Neurologist, Saarbrücken, GERMANY

The UEMS neurology section was anxious to determine patterns of delivery of neurological care in Europe, particularly in regard to systems of private and public funding of the speciality. There are many overlaps of public and private medicine, hospital and office medicine. A complete overview and a consensus on definitions and concepts are not possible. Differences are in administration, intensity of care, severity of illness, and freedom of decision-making, manpower, brainpower, and money power. In Europe, the vast majority of neurologists work in hospitals. In 5 out of 14 countries, neurologists in private office play a major role in out patient care. In 7, they do not. Group offices exist in 7 countries. Most neurologists in private practice are privately paid; second line financing is being done by insurance. Income is equal or slightly above income of other comparable university graduates, but there is also a tendency to lower upper middle class. With the exception of France and Germany, all ancillary examinations including neuroimaging and botulinum injections are done in hospital. In many countries, neurologists in private practice have no major role in relation to inpatient or outpatient health care in medical institutions. There appears to be very little competition between those

in private practice and hospital or institutional medicine. Out of hospital, neurology—as a private office or a consortium of specialists—may well have a greater role in patient care. It is closer to ambulatory patients; it might be more economical and flexible for them. Both areas have to be evaluated more thoroughly.

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**Manpower situation in European neurology**E. Jungmann<sup>1</sup>, R. Galvin<sup>2</sup><sup>1</sup>Saarbrücken, GERMANY; <sup>2</sup>Department of Neurology, Cork University Hospital, Wilton, Cork, IRELAND

The UEMS neurology section/board was anxious to determine manpower levels of neurologists in Europe. This was done by means of a questionnaire to the national specialist delegates. There was large variation in the numbers of neurologists in the different countries varying from 1:7,500 to 1:320,000 of population. These figures are difficult to explain on the basis of the present study. They may be partly accounted for by different patterns of referral (direct versus through a primary physician) and by different spectra of disease treated by neurologists in different countries. The figures are discussed on the basis that neurologists best manage all neurological diseases and that patients are entitled to easy and rapid access to the speciality. On this basis, a reasonable number of neurologists would be in the range of 1:25,000–40,000 and probably better at the lower end of this range. This problem merits more study that is detailed.

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**The EFNS Education Committee**W. Grisold<sup>1</sup>, J. Afrá<sup>2</sup>, M. Donaghy<sup>3</sup>, R. Galvin<sup>4</sup>, P. Kalvach<sup>5</sup>, J. M. Lopes Lima<sup>6</sup>, E. Sipido<sup>7</sup>, E. Müller<sup>8</sup><sup>1</sup>Neurological Department, Kaiser Franz Josef Spital, Vienna, AUSTRIA, <sup>2</sup>National Institute of Neurosurgery, Budapest, HUNGARY, <sup>3</sup>Department of Neurology, University of Oxford, Oxford, UNITED KINGDOM, <sup>4</sup>Department of Neurology, Cork University Hospital, Wilton, Cork, IRELAND, <sup>5</sup>Neurological Department, Hospital St. Antonio, Porto, PORTUGAL, <sup>6</sup>Department of Neurology, 3rd Medical Faculty, Prague, CZECH REPUBLIC, <sup>7</sup>EFNS Branch Office, Florence, ITALY, <sup>8</sup>EFNS Head Office, Vienna, AUSTRIA

The EFNS Education Committee is planning on educational items for the future, assessing education in neurology in East and West European countries and to contribute to harmonize local and national aspects in particular with the UEMS (Union Européenne des Médecins Spécialistes)

Pregraduate education:

Pregraduate education is an important aspect of neurology training. Presently in many countries, the numbers of hours dedicated to neurology are still low. A guideline about the basic neurology training for students will be elaborated. Also, the exchange of students will need support. Cooperation with the “European Federation of Medical Students” will be sought.

**Postgraduate education** The 2<sup>nd</sup> draft of the core curriculum for specialist training programme in neurology has been distributed, and will be submitted to the European Journal of Neurology. Also, the UEMS – EBN Chapter n° 6, the Charter on training of medical specialists was updated in 2001.

OFTEN – Open facilities for training in European neurology is a list of high quality departments that are willing to receive trainees from abroad (on UEMS/EBN Website).

A charter for visitation of training centres, can be viewed on the UEMS website.

Training courses with the EFNS Academy for young neurologists and trainees have become an institution.

Much structural input was obtained at the "Trest meeting", which was first held in 2000, and to which 15 East European countries / 5 PAX from each country, were invited. *Department - Department Co-operation*: The department-to-department programme shall facilitate visits from neurologists from the East at Western departments.

**CME** The Education Committee has developed guidelines for European approval of CME in neurology. ([www.efns.org](http://www.efns.org)) and is in close co-operation with UEMS - EACCME.

New input can be expected from a tendency to shift from CME to CPD (continuous Personal/professional development), which will change the future continuous education from the "classic" passive participation (lectures, courses) into more active methods (reading, teaching, online education). This movement can be seen as an influence of consumerism on the social context of medical services.

**Migration** All topics related not only to national problems, but also international and migrational aspects. This will be of vital importance for the new EU member states and their connection in the medical fields.

**Health groups** Future educational activities within the EFNS will not be strictly confined to physicians. The Education Committee suggests that health groups, patient oriented organisations will be an integral part of future neurology education. An already established link is the EFNS Liaison Committee/EFNA (European Federation of Neurological Associations - patient/lay organisations).

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##### **UEMS Neurology Section on-line forum**

R. Galvin

*Department of Neurology, University Hospital, Cork, IRELAND*

The neurology section/board of the UEMS has developed a website to facilitate communication between members of the UEMS and their affiliates. For the first time, colleagues will be able to benefit from each other's experience and knowledge in an easy to use forum that will serve as a central repository for information. The site has been designed for both broadcast and individual communications, of simple messages as well as office documents. The main features of this website are:

- (1) A staggered security model allowing different groups of people to view and insert different data depending on their level of authorisation.
- (2) A document archive with facility to post documents online, including minutes and published UEMS papers. A searchable archive is planned in future development.
- (3) An automated mailing facility enables users to broadcast emails to registered members.
- (4) A discussion forum allows the exchange of public and private messages and review of posted documents.

(5) "Uems.org" email addresses can be set up for individual members and can forward messages to their current email addresses.

(6) Member contact details are listed for all members with varying levels of access for different website visitors.

(7) A section is devoted to details of training institutions willing to facilitate movement of young neurologists in Europe.

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##### **Understanding the neurologist's way of thinking An educational framework for the instruction of neurological reasoning**

N. C. Veltman<sup>1</sup>, A. Keyser<sup>2</sup>, P. F. de Vries Robbé<sup>1</sup>

<sup>1</sup>*Department of Medical Informatics University Medical Centre St. Radboud, THE NETHERLANDS,* <sup>2</sup>*Department of Neurology, University Medical Centre St. Radboud, THE NETHERLANDS*

**Introduction** In academic medicine emphasis exists on the teaching of diagnostic reasoning with students and interns (1). Two frameworks for diagnostic reasoning are being used to this end in our medical institution, Clinical Problem Analysis (CPA) in a general sense (2) and the Clinical Method of Neurology (CMN) more specifically for neurology (3). However, they are taught independently of each other. For a complete understanding and comprehensive teaching of this important characteristic of medical practice an integrated view is demanded.

**Methods** The CPA model of diagnosing in general medicine and the CMN model of diagnosing in neurology are described and compared using a two dimensional "matrix of concepts" with the various identified steps within the two models set out on the horizontal and vertical axes of the matrix respectively.

**Results** It is found that CPA defines the procedural characteristics of diagnostic reasoning (syntax), while CMN defines the characteristics of the neurological content of diagnostic reasoning (semantics).

**Conclusion** Based on this result a two-dimensional grid can be generated which defines diagnostic reasoning in neurology in a complete and comprehensive manner. We believe that the use of this framework in medical education will assist in the development of a well-structured neurological knowledge base with students which they can apply to any neurological case.

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