Using AGREE II tool to evaluate methodological rigour and transparency of Croatian clinical practice guidelines in neurology

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Methodological Rigour and Transparency of Clinical Practice Guidelines Developed by Neurology Professional Societies in Croatia

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Review

Clinical guidelines in the European Union: Mapping the regulatory basis, development, quality control, implementation and evaluation across member states

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Most European Union countries have an established national, regional or local clinical guideline programme, and a substantial proportion have developed guidelines on the prevention and management of chronic diseases.

Several countries have mechanisms in place to ensure the quality of scientific evidence used for the development of guidelines is high and that the process is consistent and transparent. Others are only now taking an interest in guideline development and are taking the first steps towards establishing ways of implementing them.
Clinical guidelines in the European Union: Mapping the regulatory basis, development, quality control, implementation and evaluation across member states

Helena Legido-Quigley a,*, Dimitra Panteli b, Serena Brusamento c, Cécile Knai a, Vanessa Saliba a, Eva Turk d, e, Meritxell Solé f, Uta Augustin b, Josip Car c, g, Martin McKee a, h, Reinhard Busse b, h

• The majority of countries have no legal basis for the development of guidelines and those that have well established systems mostly implement them on a voluntary basis.
• The process of guideline development varies in its degrees of decentralisation across countries with many different types of organisations taking on this responsibility.
There is general acceptance of the value of the instrument developed by the AGREE collaboration for evaluating the methodological robustness of guidelines.

However, the extent to which guidelines are implemented in Europe is unknown, as there is no systematic data collection and, in most countries, no structure to enable it. There are few examples of formal evaluations of the development, quality, implementation and use of guidelines.
• 7 clinical practice guidelines in neurology, available in public domain.
Appraisal of Guidelines for Research and Evaluation (AGREE) instrument II

- http://www.agreetrust.org/agree-ii/

AGREE II
AGREE II is the new (2010) international tool to assess the quality and reporting of practice guidelines. You may access the PDF copy of the AGREE II here.

Please use the following reference when citing the AGREE II:

Appraisal of Guidelines for Research and Evaluation (AGREE) instrument II

- 23 items, grouped in 6 quality domains:
  - 1) Scope and Purpose (items 1-3)
  - 2) Stakeholder Involvement (items 4-6)
  - 3) Rigour of Development (items 7-14)
  - 4) Clarity of Presentation (items 15-17)
  - 5) Applicability (items 18-21)
  - 6) Editorial Independence (items 22-23).
- Overall quality score (overall assessment)
  Each item is rated on a 7-point scale: from 1 – strongly disagree to 7 – strongly agree.
Appraisal of Guidelines for Research and Evaluation (AGREE) instrument II

- Two assessors independently performed the rating of guidelines.
- The third rater calculated the overall scores.

The scaled domain score =
\[
\frac{\text{Obtained score} - \text{Minimum possible score}}{\text{Maximum score} - \text{Minimum possible score}} \times 100
\]
The inter-rater agreement (weighted kappa) between the two raters ranged from good (0.725, standard error 0.1449) to very good (0.949, standard error 0.051) across domains in individual guidelines.
Evidence base

• Searched the Cochrane Database of Systematic Reviews to identify any potential change of recommendation from the version of the Cochrane systematic reviews included in guideline preparation.
Evidence base

• In 3 out of 7 assessed guidelines, recommendations were partially based on evidence from Cochrane systematic reviews.

• 2 Cochrane reviews whose results were included in EFNS guideline on treatment of neuropathic pain and Recommendations for neuropathic pain treatment were withdrawn and split into new reviews and their findings were considered to be out of date.

• A single guideline had a procedure for updating the evidence for the recommendations.
## Characteristics of Croatian neurology guidelines

<table>
<thead>
<tr>
<th>Guideline</th>
<th>Year of publication</th>
<th>Update/period</th>
<th>Development method</th>
<th>Number of references</th>
<th>Topics covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consensus opinion on diagnosing brain death – Guidelines for use of confirmatory tests</td>
<td>2005</td>
<td>Not mentioned</td>
<td>Not mentioned</td>
<td>58</td>
<td>Diagnosis</td>
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<tr>
<td>Recommendations for neuropathic pain treatment</td>
<td>2008</td>
<td>Not mentioned</td>
<td>Not mentioned</td>
<td>122</td>
<td>Treatment</td>
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<tr>
<td>Recommendations for stroke management, 2006 update</td>
<td>2006</td>
<td>First published in 2001</td>
<td>Literature review and consensus</td>
<td>507</td>
<td>Diagnosis/Treatment</td>
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<tr>
<td>Evidence based guidelines for treatment of primary headaches</td>
<td>2005</td>
<td>Not mentioned</td>
<td>Literature review and consensus</td>
<td>235</td>
<td>Diagnosis/Treatment</td>
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<td>Guidelines for preoperative diagnostic evaluation of patients with pharmacoresistant epilepsy</td>
<td>2010</td>
<td>Not mentioned</td>
<td>Not mentioned</td>
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<td>Diagnosis</td>
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<tr>
<td>Epilepsy – therapeutic guidelines</td>
<td>2010</td>
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<td>Not mentioned</td>
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<td>Treatment</td>
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<tr>
<td>EFNS guidelines on pharmacological treatment of neuropathic pain*</td>
<td>2006</td>
<td>2 year update period announced in the article</td>
<td>Literature review and consensus</td>
<td>142</td>
<td>Treatment</td>
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</table>
## Domain scores for 7 neurology clinical guidelines

<table>
<thead>
<tr>
<th>Guideline*</th>
<th>Scope and purpose</th>
<th>Stakeholder involvement</th>
<th>Rigor of development</th>
<th>Clarity and presentation</th>
<th>Applicability</th>
<th>Editorial independence</th>
<th>Overall assessment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consensus opinion on diagnosing brain death</td>
<td>97</td>
<td>47</td>
<td>38</td>
<td>100</td>
<td>25</td>
<td>0</td>
<td>78.5</td>
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<tr>
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<td>19</td>
<td>13</td>
<td>89</td>
<td>15</td>
<td>0</td>
<td>78.5</td>
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<tr>
<td>Recommendations for stroke management, 2006 update</td>
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<td>46</td>
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<td>25</td>
<td>0</td>
<td>85.7</td>
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<tr>
<td>Evidence based guidelines for treatment of primary headaches</td>
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<td>14</td>
<td>10</td>
<td>97</td>
<td>35</td>
<td>0</td>
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<tr>
<td>Guidelines for preoperative diagnostic evaluation of patients with pharmacoresistant epilepsy</td>
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<td>25</td>
<td>67</td>
<td>29</td>
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<td>Epilepsy – therapeutic guidelines</td>
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<td>EFNS guidelines on pharmacological treatment of neuropathic pain</td>
<td>100</td>
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<td>94</td>
<td>100</td>
<td>52</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>
Median scores of 7 neurology guidelines in five domains of AGREE II instrument
Conclusions

• Professional societies should take seriously the finding from our and other studies on the methodological quality of clinical practice guidelines.
• AGREE instruments and other relevant tools should be a part of professional training.
• Professional associations could provide leadership for such training and for systematic collection of data on the development and quality of guidelines.
• Teaching EBM and research methodology at medical schools.