A new approach to CPG adaptation in Saudi Arabia:

Adaptation of practice guidelines to a country-specific context using the GRADE/DECIDE evidence to decision framework

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Disclosure of Interests (last 3 years)

Zulfa Al Rayess (Saudi Centre for Evidence Based Health Care):
  • No conflicts of interest in relation to the work and views presented

Wojtek Wiercioch (McMaster University):
  • Member of GRADE Working Group
  • No other conflicts of interest in relation to the work and views presented
Outline

Saudi Center for Evidence Based Health Care (EBHC):
(Presented by Dr. Zulfa Al Rayess)
1. Project description
2. Collaboration model, roles & responsibilities
3. Results, dissemination and conclusions

McMaster University Guideline Working Group:
(Presented by Wojtek Wiercioch)
1. Methodology
2. Evidence-to-Decision Framework
Saudi Arabia
Saudi Arabia

- Largest Arab state in Western Asia by land area
- Population: 29 million
- Largest oil reserves, producer and exporter of petroleum in the world
Our mission at the Saudi Center for EBHC

To promote the awareness and practice of Evidence-based medicine across the Kingdom, through training, awareness campaigns, and the creation of robust and nationally agreed on clinical practice guidelines (CPGs)

Initiative
The Ministry of Health of Saudi Arabia (KSA) partnered with McMaster University to develop multiple CPGs for the local healthcare setting based on the GRADE approach and the GRADE/DECIDE evidence to decision (EtD) framework

Target
Produced 10 CPGs in a 4-month time period (Sep – Dec 2013)
Collaboration Model

Saudi Center for EBHC

Project Management & Facilitation

- Project coordination (e.g. workshops, panel meetings, communication etc.)
- Facilitate guideline topics selection by stakeholders and decision makers
- Recruit panel members
- Facilitate communication with panels
- Review final reports
- Disseminate guidelines (website, mobile apps, print media, BMJ, newsletters)
How were the CPG topics selected?

1. Number of topics suggested by individual departments of the Ministry of Health

2. Suggested topics screened by McMaster Group for feasibility of adaptation

3. Screened topics presented to Ministry decision makers for final selection of guideline topics

4. Recruited multidisciplinary panel of local experts relevant to each CPG topic
Results

• Produced 10 CPGs with 80 recommendations achieved in 4 month time period
• Produced a Manual for CPG development for Saudi Arabia
<table>
<thead>
<tr>
<th>CPG topic</th>
<th>Society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis of Deep Vein Thrombosis</td>
<td>Saudi Scientific Hematology Society</td>
</tr>
<tr>
<td>Anticoagulant Therapy for Atrial Fibrillation</td>
<td>Saudi Heart Association</td>
</tr>
<tr>
<td>Anticoagulant Therapy for Venous Thromboembolism</td>
<td>Saudi Scientific Hematology Society</td>
</tr>
<tr>
<td>Anticoagulant Therapy for Acute Stroke Management</td>
<td>Saudi Stroke Association</td>
</tr>
<tr>
<td>Venous Thromboembolism prevention in Stroke</td>
<td>Saudi Stroke Association</td>
</tr>
<tr>
<td>Allergic Rhinitis in Asthma</td>
<td>Saudi Allergy, Asthma and Immunology Society</td>
</tr>
<tr>
<td>Cervical Cancer Screening and Treatment</td>
<td>Saudi Obstetric and Gynecology Society</td>
</tr>
<tr>
<td>Breast Cancer Screening</td>
<td>Saudi Oncology Society</td>
</tr>
<tr>
<td>Role of Vitamin D, Calcium, and Exercise in Fracture Prevention</td>
<td>Saudi Osteoporosis Society</td>
</tr>
<tr>
<td>Timing of Initiation of Hemodialysis</td>
<td>Saudi Society of Nephrology and Transplantation</td>
</tr>
</tbody>
</table>
Dissemination

Printed CPGs

EBHC website

Mobile apps

Newsletters

BMJ Best Practice
Conclusions

• In this unique collaboration, we established and applied a methodology for adaptation of CPGs in 4-month period

• The experience to produce adapted CPGs in a short period is feasible but challenging

• We succeeded because we had:
  o Committed stakeholders
  o Strong scientific support (McMaster Group)
  o Effective project management (EBHC and McMaster Group)
Acknowledgement

• Dr. Mohamad Zamakhshary, Deputy Vice minister for Training & Planning, Ministry of Health

• Colleagues from the Saudi Centre for EBHC
  ▪ Dr. Yaser Adi (Scientific Advisor)
  ▪ Dr. Amena Munshi (Project Manager)
  ▪ Nourah Al Mufarreh (Project Coordinator)

• Support from GE Healthcare
Project Methodology

Adaptation  Development

Adoption  Adolopment

Adolopment
Guideline ‘Ad-o-lopment’

• Ad-o-lopment = Adaptation + Adoption + Development

• Approach to the development of guidelines that begins with identifying existing evidence syntheses, including systematic reviews, HTAs, and evidence reports, which may have been produced to support previous guidelines and address specific clinical questions.

• Followed by the updating of the evidence syntheses and development of guideline recommendations specific to the healthcare setting.
### Evidence Synthesis

#### Home treatment compared to hospital treatment for patients with DVT

**Patient or population:** patients with DVT

**Settings:**

**Intervention:** home treatment

**Comparison:** hospital treatment


<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Illustrative comparative risks* (95% CI)</th>
<th>Relative effect (95% CI)</th>
<th>No of Participants (studies)</th>
<th>Quality of the evidence (GRADE)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>48 per 1000 (21 to 53)</td>
<td>RR 0.72 (0.45 to 1.15)</td>
<td>1708 (6 studies)</td>
<td>low^1,5,6</td>
<td></td>
</tr>
<tr>
<td>Recurrent VTE</td>
<td>25 per 1000 (33 to 71)</td>
<td>RR 0.65 (0.44 to 0.94)</td>
<td>1769 (7 studies)</td>
<td>moderate^3,4,6</td>
<td></td>
</tr>
<tr>
<td>Major bleeding</td>
<td>21 per 1000 (7 to 29)</td>
<td>RR 0.67 (0.33 to 1.36)</td>
<td>1708 (6 studies)</td>
<td>low^4,5,6</td>
<td></td>
</tr>
<tr>
<td>Quality of life</td>
<td>-</td>
<td>-</td>
<td>0 (3 studies^7)</td>
<td>low^4,5,6</td>
<td></td>
</tr>
<tr>
<td>Post thrombotic syndrome - not reported</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
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</tbody>
</table>

*The basis for the assumed risk (e.g. the median control group risk across studies) is provided in footnotes. The corresponding risk (and its 95% confidence interval) is based on the assumed risk in the comparison group and the relative effect of the intervention (and its 95% CI).

CI: Confidence interval; RR: Risk ratio.

**GRADE Working Group grades of evidence**

- **High quality:** Further research is very unlikely to change our confidence in the estimate of effect.
- **Moderate quality:** Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
- **Low quality:** Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
- **Very low quality:** We are very uncertain about the estimate.

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1. RCTs included recruited patients "whose home circumstances were adequate"
2. RCTs included patients with leg DVT. They excluded those with PE and pregnant women
3. 4 RCTs had partial hospital treatment for some participants in the home group: Levine 1996 (mean hospital stay 2.1 vs. 6.5 days in home and hospital arms respectively), Koopman 1996 (2.7 vs. 8.1 days), Boccalon 2000 (1 vs. 9.6 days), and Ramacciotti 2004 (3 vs. 7 days). Chong 2005 and Daskalopoulos 2005 did not report mean duration of hospital stay.
Formulating Recommendations

• Online training modules for panels and 1-day workshop on guideline development
• In-person panel meetings, facilitated by McMaster guideline leaders
• Recommendations formulated using the Evidence-to-Decision (EtD) framework
Evidence-to-Decision Framework

• Factors that bear on recommendations and their strength

• Enables formulation of recommendations tailored to the specific healthcare setting, through consideration of the factors outlined in the framework (e.g. patients’ values and preferences in local setting, resources acceptability, feasibility)
• Question/Problem
• Benefits and harms
• Quality of evidence
• Values and Preferences
• Resource use
• Impact on health equity
• Acceptability
• Feasibility
• Recommendation
“General points were raised including culture, cost of interventions, convenience, and discussed in detail and proper recommendations were extracted.”

“The process had highlighted the need for more local research in the field which hopefully will come as a recommendation from the panel to start and to revisit the guidelines 2-3 years after some quality research that focuses on the guideline questions.”
Conclusions

- Ad-o-lopment approach allows for efficient production of guidelines
- Support and facilitation from trained methodologists to help with development of guidelines
- Evidence-to-Decision framework allows for formulation of recommendations specific to the local healthcare setting
Acknowledgment

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