Kabisa Travel

Interactive expert system

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Kabisa

- Card game
- Training
- Non validated expert
  - I Foxpro
  - II C++
  - III-IV VBA
  - V Delphi
Kabisa V

- Program: 20,000 lines
- Database
- Images database: 120M
- Both pattern recognition and probabilistic (Bayesian)
- Interactive discussion
- Exclusion of other diseases
Expert systems

• Consensus method
• Spiegelhalter type regression
  – Database of real clinical cases
  – Setting dependent (specificities)
• Kabisa
  – Database of real clinical cases
  – Prevalences & sensitivities
  – Dynamic specificity
<table>
<thead>
<tr>
<th></th>
<th>Malaria</th>
<th>Dengue</th>
<th>Typhoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>1.2</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>1</td>
<td>0.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Myalgia</td>
<td>1.1</td>
<td>2</td>
<td>0.8</td>
</tr>
</tbody>
</table>
KABISA method

• False positives =
  – Disease X: prevalence * sensitivity = symptom through disease x
  – Sum for all related diseases
  – Add noise factor

• Convert to specificity

• AT EVERY STEP IN DIAGNOSTIC PATHWAY
Kabisa

- Prevalences
- Sensitivities
- Specificity computed in a dynamic way (waning specificity)
- Sum of prevalences stable
KABISA TRAVEL

- 2000 patients with fever
- Extensive questionnaire
- Lab
- Xray, ultrasound
- PhD Manu Bottieau
Differences kabisa-Gideon

Kabisa
- Data first 24 hours
- Incremental seek
- Non sense (not related) findings no effect
- Active help until exhaustion

Gideon
- No time limit
- Large tree
- Not related findings absolute excluding power
- No active guidance
Addresses

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