International Priorities for Research in Nursing Informatics for Patient Care
Nursing Informatics International Research Network (NIIRN)

- Multidisciplinary group of experts collaborating on the development of internationally relevant research programs for nursing informatics
Introduction

• Previous studies have focused on priorities for Nursing Informatics in USA (not internationally)

• NIIRN: Held workshop at NI2012 to identify key research priorities for nursing informatics internationally
Survey Design

• Items identified from:
  – Previous surveys in USA (Brennan et al 1994, Bakken et al 2008)
  – Brainstorming of experts (via UK Nursing Informatics Strategic Taskforce and NIIRN members)

• New items added to existing survey:
  – Effective ways of training nurses in the use of HIT systems
  – Impact of e-prescribing,
  – Assessment of the impact of decision aids for patients on shared decision making
  – Use of social media in nursing practice

• Participants rated 20 priorities on a 10 point scale from 1 (low priority) through to 10 (high priority)
Survey Distribution

- Online survey (using Bristol Online Survey), available May-August 2012.
- Link sent via email distribution lists, as well as social media (Twitter, Facebook etc.)
- Additional responses from workshop held at NI2012, Montreal, Canada

Analysis

- Country data grouped into regions based on WHO world regions
- Mean rankings were calculated by region and then the mean of regions was calculated (to prevent a weighting of responses towards the Americas)
Survey Respondents (n=468)

- **Americas**: N=222
- **Europe**: N=171
- **Africa**: N=2
- **Western Pacific**: N=61
- **Eastern Mediterranean**: N=3
- **South East Asia**: N=9
## Results

<table>
<thead>
<tr>
<th>Region</th>
<th>N</th>
<th>Mean Age (SD)</th>
<th>N reporting Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>171</td>
<td>46.6 (9.9)</td>
<td>161</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>61</td>
<td>47.7 (8.9)</td>
<td>60</td>
</tr>
<tr>
<td>South East Asia</td>
<td>9</td>
<td>38.1 (10.5)</td>
<td>8</td>
</tr>
<tr>
<td>Americas</td>
<td>222</td>
<td>51 (9.9)</td>
<td>201</td>
</tr>
<tr>
<td>East Med</td>
<td>3</td>
<td>45.3 (18.8)</td>
<td>3</td>
</tr>
<tr>
<td>Africa</td>
<td>2</td>
<td>41.5 (0.7)</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>468</td>
<td>48.6 (10.1)</td>
<td>435</td>
</tr>
</tbody>
</table>
# Results

<table>
<thead>
<tr>
<th>Region</th>
<th>Nurse</th>
<th>Admin</th>
<th>Informatics</th>
<th>Academ/Research</th>
<th>Other</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>42 (55)</td>
<td>41 (52)</td>
<td>37 (20)</td>
<td>47 (43)</td>
<td>4 (24)</td>
<td>171 (37)</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>6 (8)</td>
<td>16 (20)</td>
<td>27 (15)</td>
<td>9 (8)</td>
<td>3 (18)</td>
<td>61 (13)</td>
</tr>
<tr>
<td>South East Asia</td>
<td>3 (4)</td>
<td>1 (1)</td>
<td>0</td>
<td>4 (4)</td>
<td>1</td>
<td>9 (2)</td>
</tr>
<tr>
<td>Americas</td>
<td>25 (32)</td>
<td>19 (24)</td>
<td>120 (65)</td>
<td>49 (45)</td>
<td>9 (53)</td>
<td>222 (47)</td>
</tr>
<tr>
<td>East Med</td>
<td>0</td>
<td>1 (1)</td>
<td>1 (.5)</td>
<td>1 (1)</td>
<td>0</td>
<td>3 (.6)</td>
</tr>
<tr>
<td>Africa</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2 (.4)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>77 (16)</td>
<td>79 (17)</td>
<td>185 (40)</td>
<td>110 (24)</td>
<td>17 (4)</td>
<td>468</td>
</tr>
</tbody>
</table>
Results - 5 most highly ranked priorities

1. Systems that provide real-time feedback to nurses to improve safety;
2. Assessment of the impact of HIT on nursing care;
3. Decision support systems for nurses;
4. Investigation of the impact of systems on workflow
5. The design and management of nursing information databases.
Results - 2 lowest ranked priorities

1. Theory development

2. Integrating genomic data into clinical information systems.
Results

• Regional differences:
  – Development of decision support; ranked 3rd by respondents from the Americas, but 13th and 14th by Europe and Western Pacific respectively
  – Design and management of nursing informatics databases; in top 10 for all regions apart from Americas (ranked 13)
  – Evaluation of e-prescribing systems; in top 10 for Europe, Western Pacific, Eastern Mediterranean and Africa. Ranked 18th in Americas and 16th in South East Asia
Discussion

- Highest ranked priority areas focus on issues of importance to nurses in clinical practice
- Differences in priority ranking may reflect differences in stage of adoption of HIT in nursing
- Internationally a need to develop the evidence base in nursing informatics further
- Limitations: self report, low response rate in some regions, potential bias to Americas and Europe
Conclusion

• Considerable agreement internationally for priorities for nursing informatics research
• Two most highly ranked areas of importance relate to:
  – provision of real-time feedback to support nursing practice
  – the impact of HIT on nurses’ work and patient outcomes.
• Results will be used to inform future research studies that have international relevance
NIIRN

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