AF Challenges in the Asia-Pacific Region

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Chair of the EP and Pacing Council
Cardiac Society of Australia and New Zealand
4.37 billion people
3579 languages
>20 regulatory agencies
GDP per capita – comparison across regions

GDP per capita (USD)

World | Qatar | US | UK | France | Euro | E. Asia & Pacific | South Asia
GDP per capita – Asia-Pacific Region

GDP per capita (USD)

- World
- E. Asia & Pacific
- South Asia
- Australia
- Cambodia
Prevalence of AF by region 2010

Factors affecting prevalence of AF in Asia-Pacific

• **Data / Healthcare system**
  • Under-reporting – apparent lower prevalence
  • Lack of access to primary care / other potential screening encounters
  • Exact prevalence/incidence unclear – appears to be increasing

• **Racial difference**
    • 664,754 US veterans
      • 5.7% in caucasian
      • 2.4% in african-american
      • 3.6% in asian
    • 430,713 in California
      • 8% in caucasian
      • 3.8% in african-american
      • 3.9% in asian

• **Potential reasons for difference**
  • Atrial size?
  • Reduced risk factors? Weight, alcohol, sleep apnoea
  • Polymorphisms in RAAS?
  • Other genetic factors?
Prevalence of Stroke in the Asia-Pacific region

Hata, Circ J 2013;77:1923-32
Increased mortality of Stroke in Asia-Pacific

- **Under-treatment of Risk factors**

- **AF related stroke**
  - Increased mortality
  - Increased disability at presentation and at 6 months
  - Increased risk of subsequent stroke

- **Inadequate anticoagulation of AF**

Hata, Circ J 2013;77:1923-32

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### Rates of warfarin usage in Asia Pacific Region

#### ADHERE Registry

<table>
<thead>
<tr>
<th>Country</th>
<th>Unadjusted Rate (%)</th>
<th>Risk-Adjusted Rate* (%)</th>
<th>OR (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>60.0</td>
<td>48.6</td>
<td>2.34 (1.2–4.59)</td>
<td>0.0132</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td><strong>59.4</strong></td>
<td><strong>65.2</strong></td>
<td><strong>3.74 (2.24–6.27)</strong></td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>43.0</td>
<td>52.5</td>
<td>1.99 (1.28–3.10)</td>
<td>&lt;0.0021</td>
</tr>
<tr>
<td>Indonesia</td>
<td>36.2</td>
<td>34.3</td>
<td>0.88 (0.37–2.06)</td>
<td>0.76</td>
</tr>
<tr>
<td>Malaysia</td>
<td>50.8</td>
<td>52.9</td>
<td>2.08 (1.31–3.30)</td>
<td>0.0018</td>
</tr>
<tr>
<td>Philippines</td>
<td>30.3</td>
<td>25.5</td>
<td>0.52 (0.33–0.84)</td>
<td>&lt;0.0076</td>
</tr>
<tr>
<td>Singapore</td>
<td>30.2</td>
<td>35.8</td>
<td>1.01 (0.64–1.59)</td>
<td>0.96</td>
</tr>
<tr>
<td><strong>Taiwan</strong></td>
<td><strong>18.3</strong></td>
<td><strong>25.1</strong></td>
<td><strong>0.62 (0.36–1.04)</strong></td>
<td>0.0721</td>
</tr>
<tr>
<td>Thailand</td>
<td>49.4</td>
<td>49.4</td>
<td>1.93 (1.18–3.15)</td>
<td>0.0086</td>
</tr>
<tr>
<td>Brazil</td>
<td>34.4</td>
<td>37.5</td>
<td>Reference</td>
<td>--</td>
</tr>
</tbody>
</table>

*Adjusted for age, coronary artery disease, pacemaker, and creatinine levels.

Suarez et all. Am Heart J 2012; 163:804-11

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Distribution of INR range – by Region (ROCKET trial)

Singer, J Am Heart Assoc 2013
TTR in ethnic Chinese patients across A-P region

Adapted from Singer, J Am Heart Assoc 2013
Inter-INR test interval – by Region

Singer, J Am Heart Assoc 2013
Rationale for NOAC in the Asia-Pacific Region

- Higher ICH risk with antiplatelet or anticoagulant therapy in asian patients\(^1,2\)
- RR for ICH is 4.06 compared to caucasian populations\(^3\)
- NOACs reduce ICH risk\(^4\)
- Increased use of complementary medicines\(^5\)
- Difficulty with INR monitoring\(^6\)

![Table and Diagram](attached_table_and_diagram.png)

1. Wong et al, Neurology 2003; 60: 511-13
5. Choi-Kwon et al Kor J Stroke 2003; 5: 64-69
6. Singer et al J Am Heart Assoc 2013

www.escardio.org/EHRA

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## Availability of EP expertise

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>EP Docs</th>
<th>EP labs</th>
<th>Ablations</th>
<th>AF ablations</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Australia</td>
<td>1,250,000</td>
<td>12 (10/million)</td>
<td>6 (5/million)</td>
<td>900 (750/million)</td>
<td>300 (250/million)</td>
</tr>
<tr>
<td>India</td>
<td>1,250,000,000</td>
<td>120 (0.1/million)</td>
<td>126 (0.1/million)</td>
<td>16,700 (13/million)</td>
<td>1200 (1/million)</td>
</tr>
</tbody>
</table>
Challenges of AF in Asia-Pacific Region

• Population
• Ethnic
• Economic
• Cultural
• Regulatory
• Training
• Access
What can be done?

• **Promote AF and stroke as national and international issue**
  • Gather epidemiological data
  • Registries in A-P region
  • Outcome studies in A-P region
  • APHRS advocacy
  • International summits

• **Promote AF awareness**
  • Government
  • Healthcare workers
  • General public

• **Improve patient access to:**
  • Screening
  • Primary care
  • Specialists
  • Electrophysiologists
  • Good anti-coagulation
  • Ablation