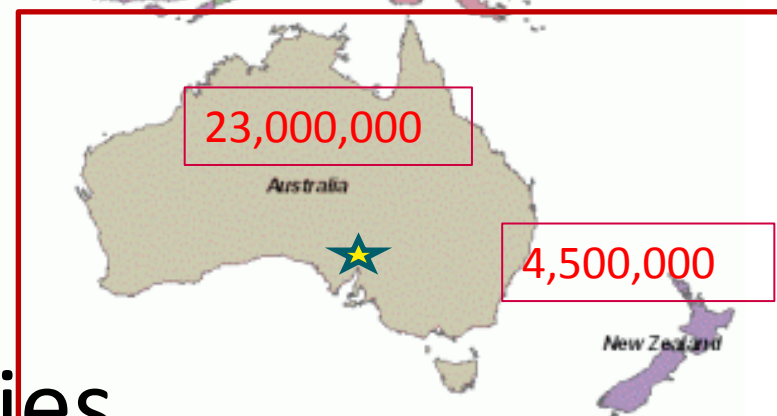
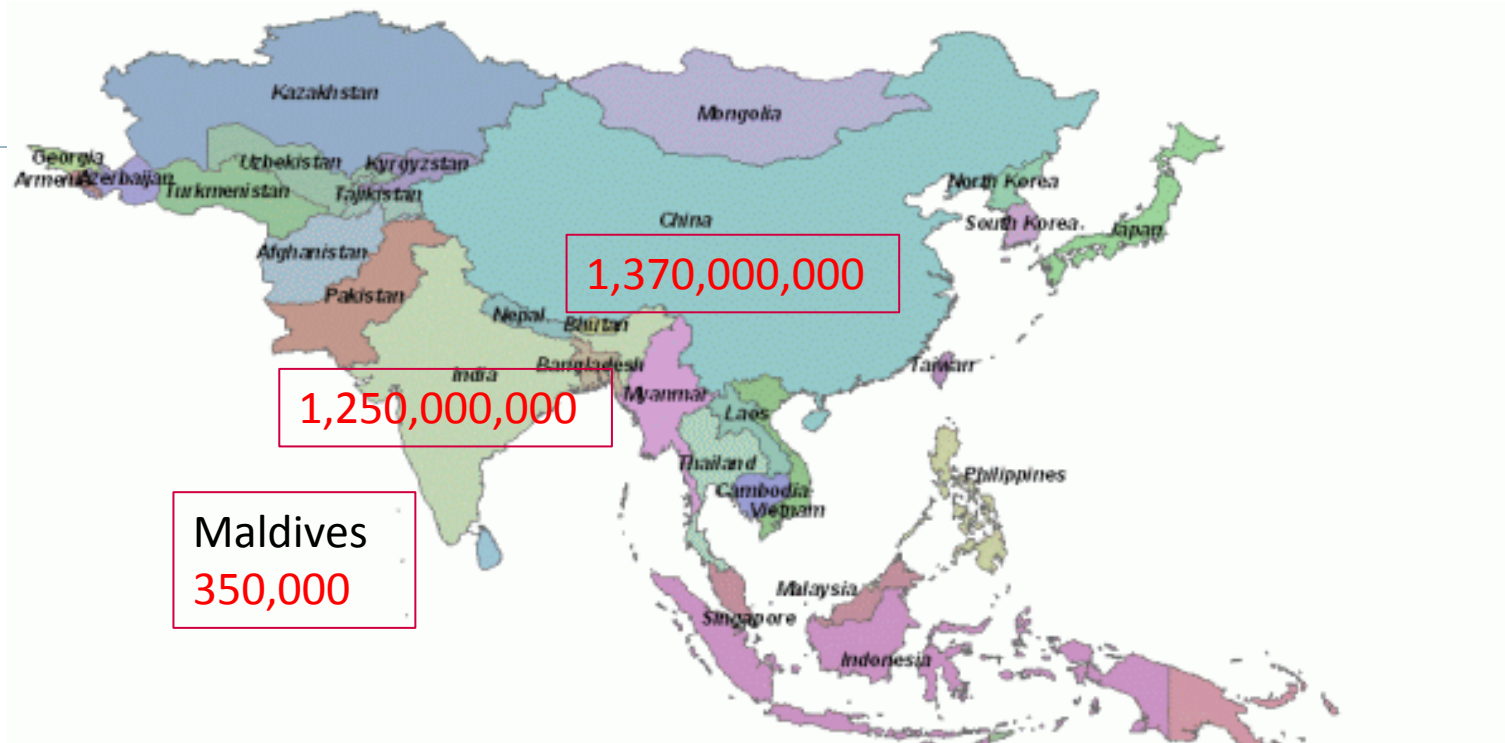


AF Challenges in the Asia-Pacific Region

Andrew McGavigan
Chair of the EP and Pacing Council
Cardiac Society of Australia and New Zealand



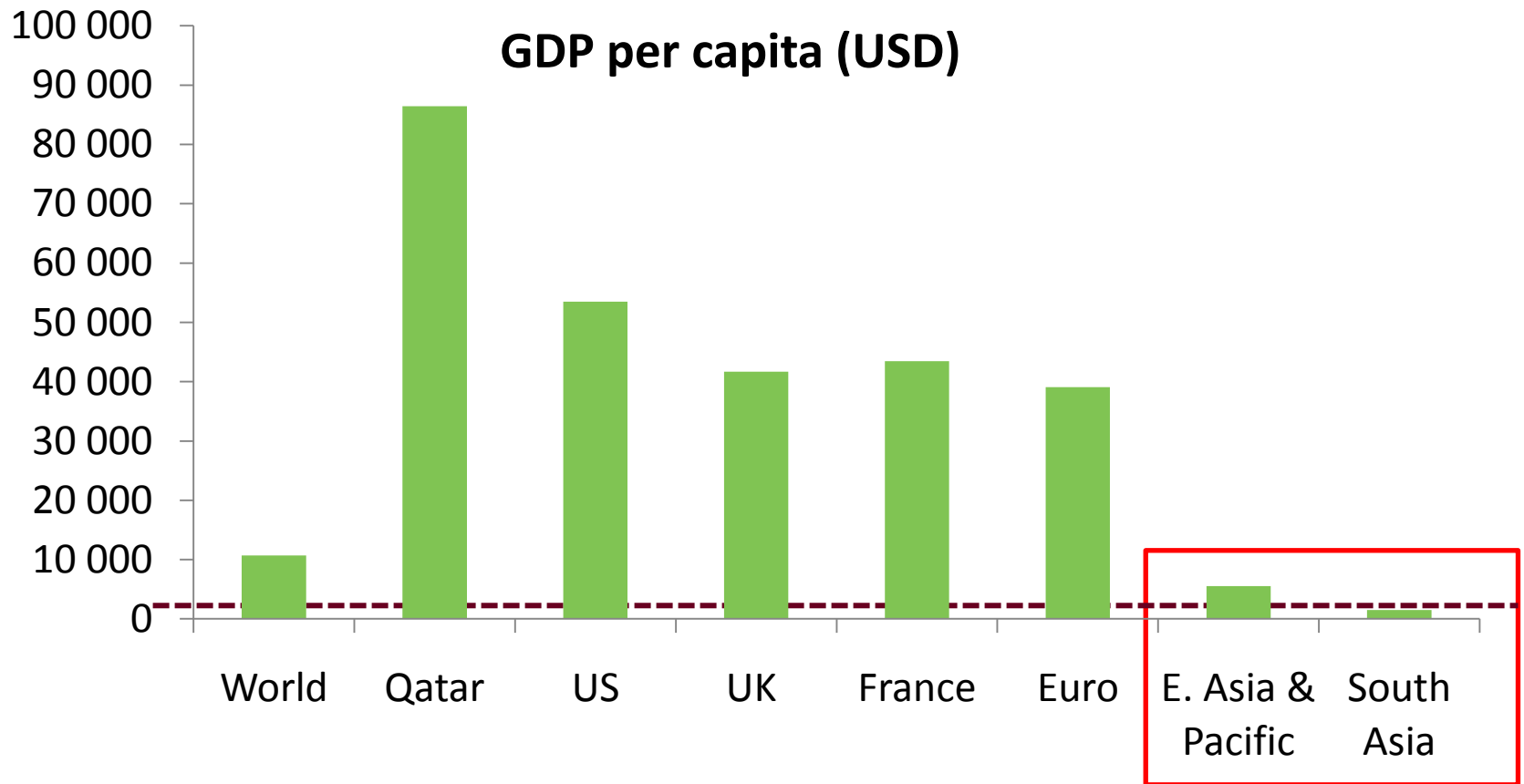


4.37 billion people

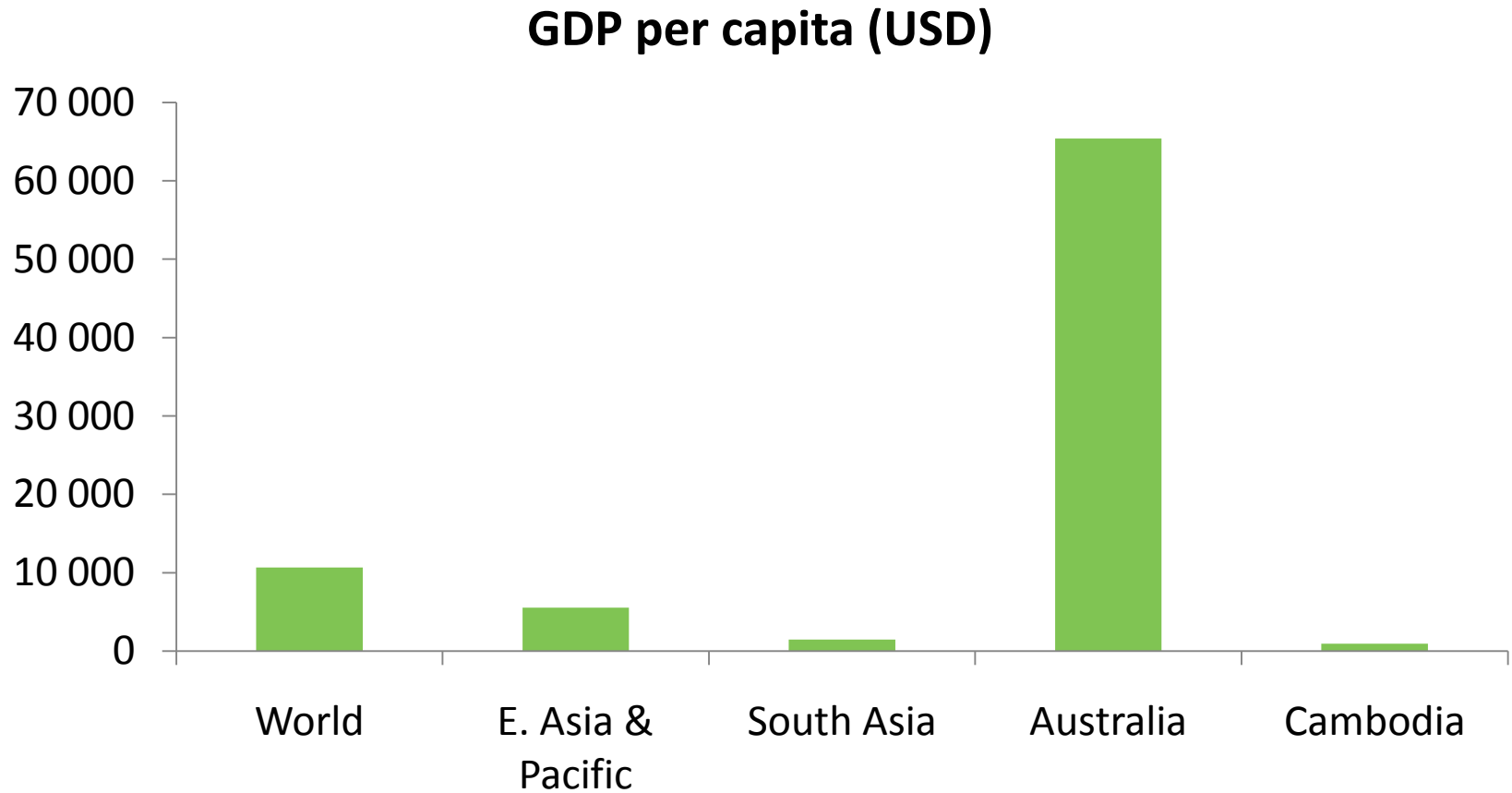
3579 languages

>20 regulatory agencies

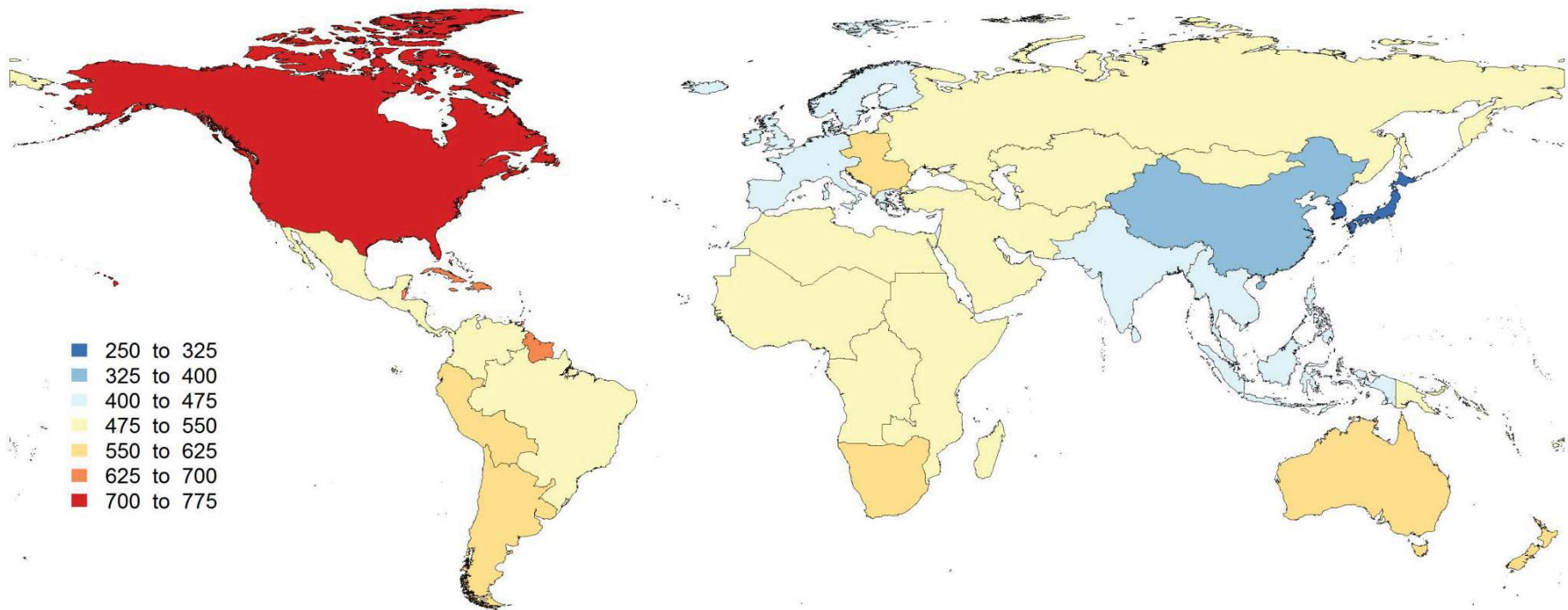
GDP per capita – comparison across regions



GDP per capita – Asia-Pacific Region



Prevalence of AF by region 2010



Chugh SS et al. Circulation 2014; 129(8): 837-847

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

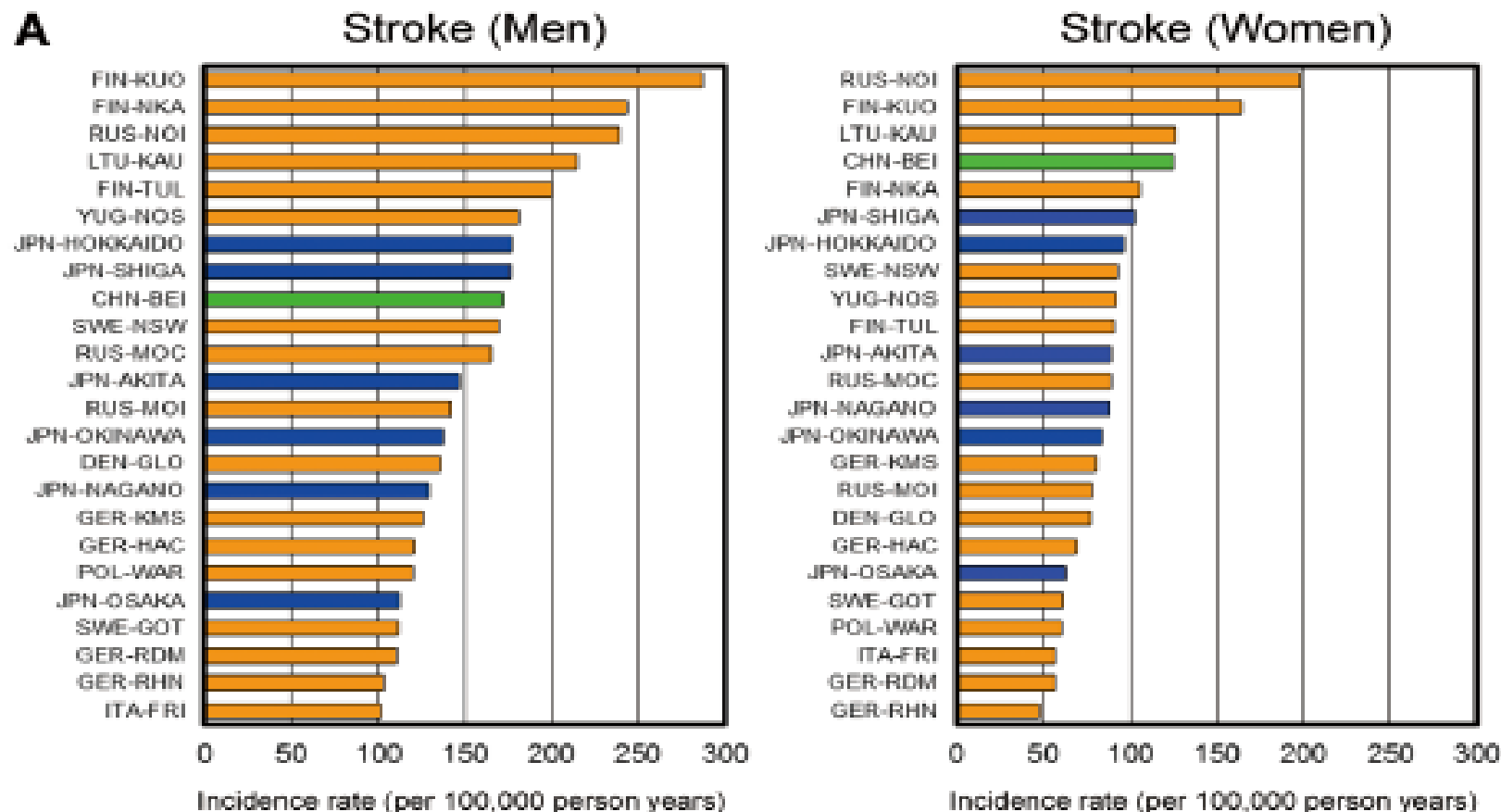
- **Racial difference**

- Borzecki et al, J Natl Med Assoc. 2008; 88: 237-246
 - 664,754 US veterans
 - 5.7% in caucasian
 - 2.4% in african-american
 - 3.6% in asian
- Shenet al, J Natl Med Assoc. 2010; 102: 906-913.
 - 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?

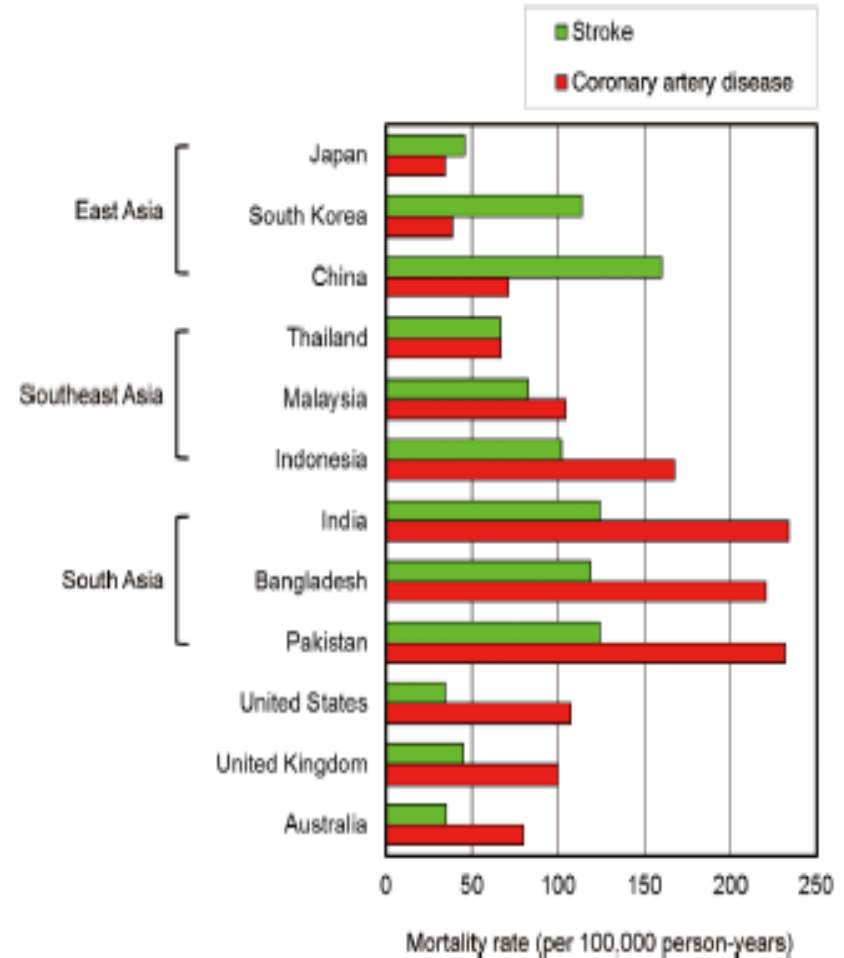
Prevalence of Stroke in the Asia-Pacific region



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

Rates of warfarin usage in Asia Pacific Region

ADHERE Registry

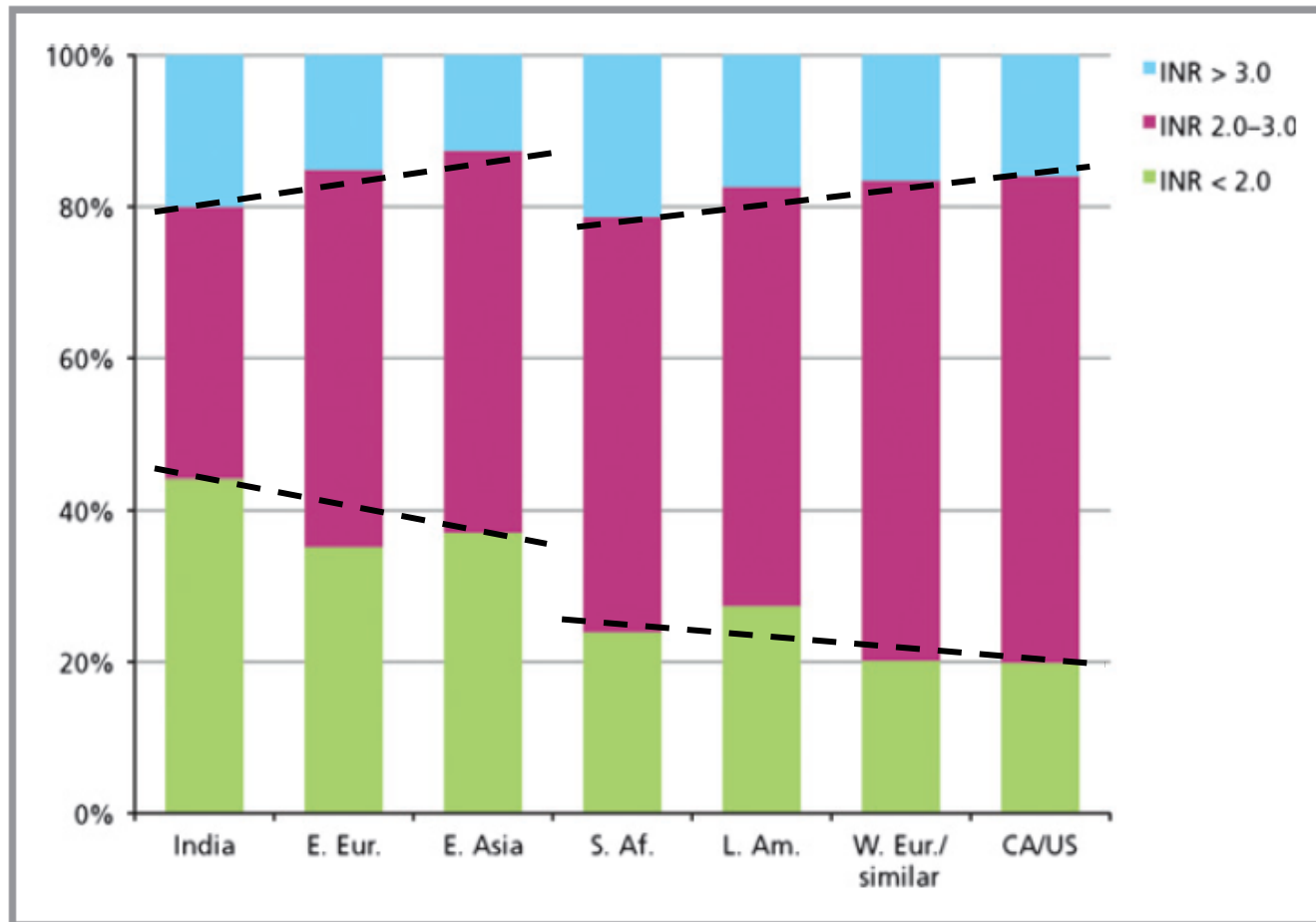
Country	Unadjusted Rate (%)	Risk-Adjusted Rate [*] (%)	OR (95% CI)	P Value
Mexico	60.0	48.6	2.34 (1.2–4.59)	0.0132
Australia	59.4	65.2	3.74 (2.24–6.27)	<0.0001
Hong Kong	43.0	52.5	1.99 (1.28–3.10)	<0.0021
Indonesia	36.2	34.3	0.88 (0.37–2.06)	0.76
Malaysia	50.8	52.9	2.08 (1.31–3.30)	0.0018
Philippines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

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

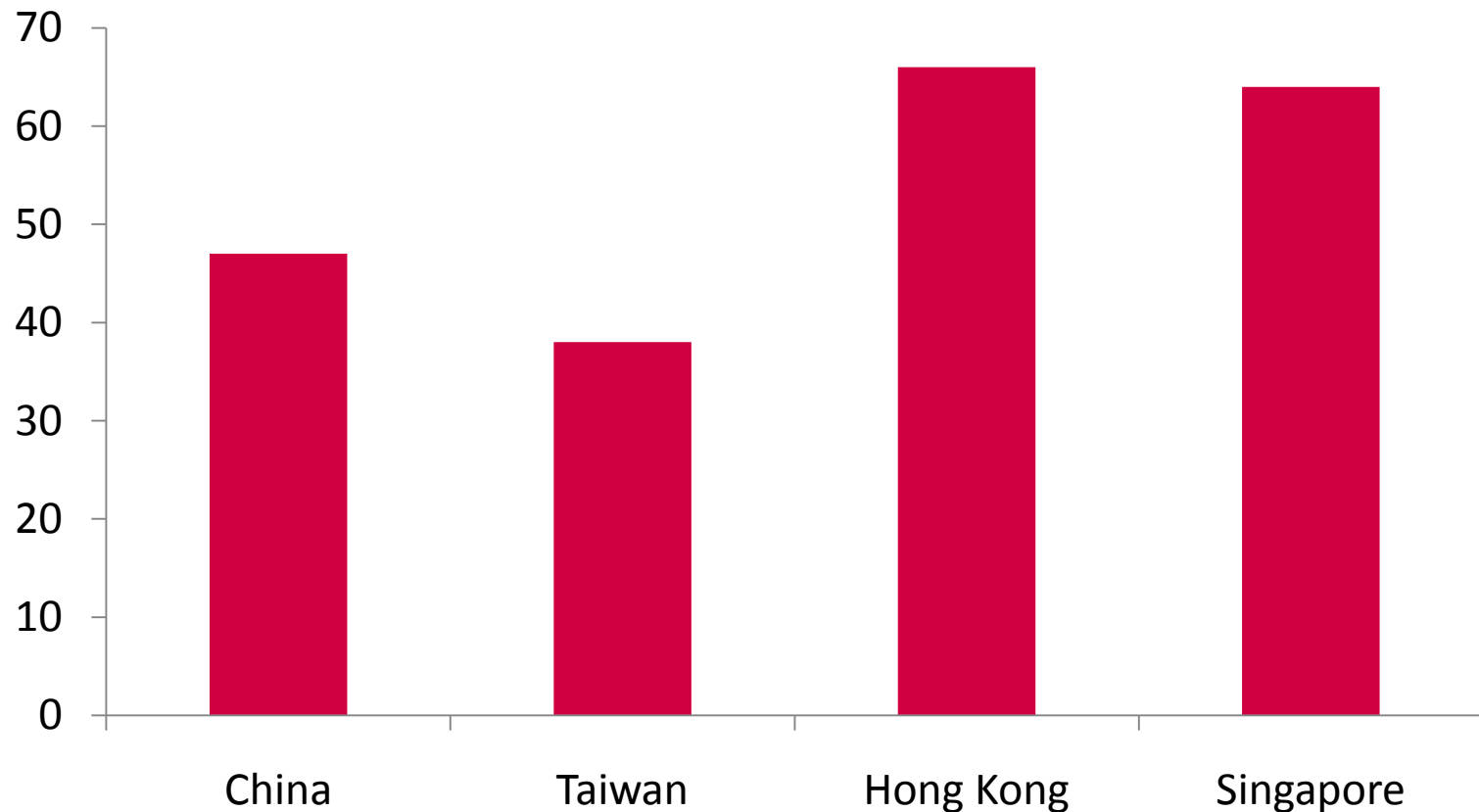
Suarez et al. Am Heart J 2012; 163:804-11

Andrew McGavigan

Distribution of INR range – by Region (ROCKET trial)



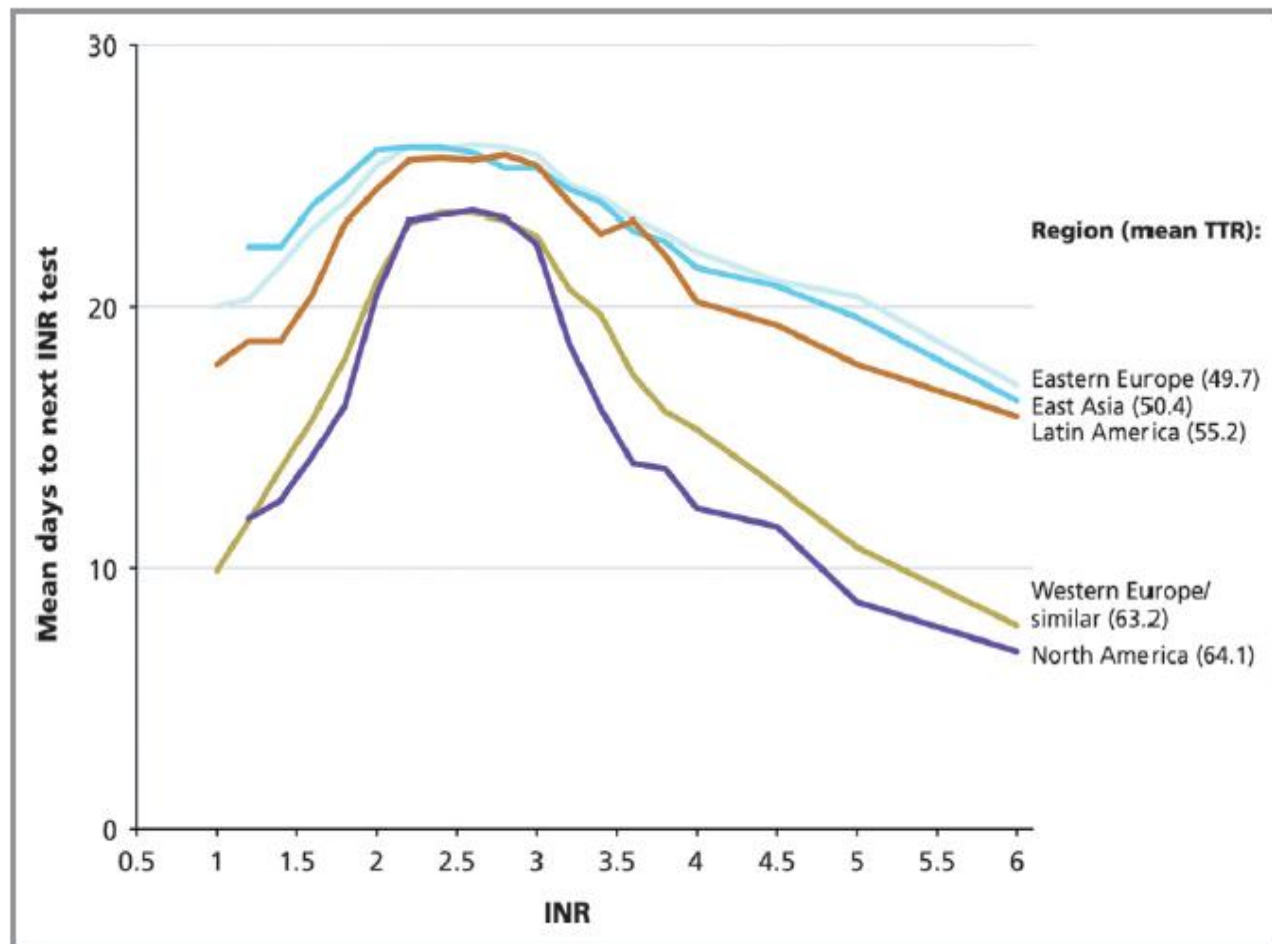
TTR in ethnic Chinese patients across A-P region



Adapted from Singer, J Am Heart Assoc 2013

Andrew McGavigan

Inter-INR test interval – by Region

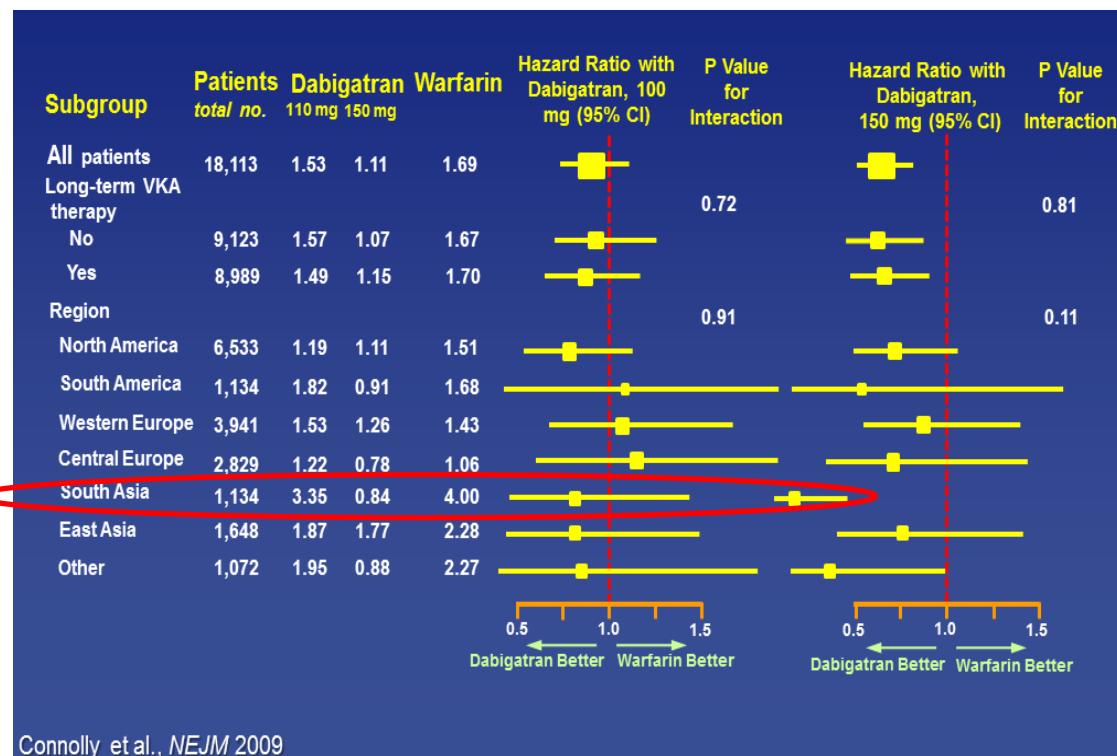


Singer, J Am Heart Assoc 2013

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 populations³
- NOACs reduce ICH risk⁴
- Increased use of complementary medicines⁵
- Difficulty with INR monitoring⁶

1. Wong et al, *Neurology* 2003; 60: 511-13
2. Smith et al *Neurology* 2002; 59: 193-197
3. Shen et al *JACC* 2007; 50: 309-315
4. Ntaios et al *Stroke* 2012; 43: 3298-3304
5. Choi-Kwon et al *Kor J Stroke* 2003; 5: 64-69
6. Singer et al *J Am Heart Assoc* 2013



Availability of EP expertise

	Population	EP Docs	EP labs	Ablations	AF ablations
South Australia	1,250,000	12 (10/million)	6 (5/million)	900 (750/million)	300 (250/million)
India	1,250,000,000	120 (0.1/million)	126 (0.1/million)	16,700 (13/million)	1200 (1/million)

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



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www.escardio.org/EHRA

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