

CHAPTER 1 : PROVISION OF CORONARY CARE SERVICE IN MALAYSIA

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Summary

1. There was an uneven distribution of cardiologist and cardiac services reported by state and sector.
2. The number of cardiologists per population ratio was far below that for other developed countries.
3. Kuala Lumpur has five times the national average cardiologist to population ratio.
4. There were considerably more cardiologists and catheterization laboratories in the private sector compared to the public sector.

We had reported previously in 2006 on the number of coronary care units (CCU) in the country. In this report, we highlighted the number and density of cardiologists and catheterization laboratories (cath labs) in Malaysia and by individual states as of December 2012. The information was sourced from the registry of the National Specialist Register (NSR) and the Radiation Health and Safety, Engineering Services division of the Ministry of Health Malaysia.

The National Heart Association of Malaysia (NHAM) is under the umbrella of the Cardiology Chapter of the Academy of Medicine of Malaysia. It is affiliated with the European Society of Cardiology (ESC) and American College of Cardiology (ACC). Every year, the NHAM credentialing committee recognizes and certifies qualified cardiologists in Malaysia. The cardiologists are conferred Fellows of the NHAM and also recommended for registration as cardiologists in the National Specialist Register (NSR).

Number and density of Cardiologists in Malaysia

There are currently one hundred and eighty-six cardiologists registered in the NSR in Malaysia with estimated population of nearly thirty million (exact census figures 29,336,800)¹. This represents just six cardiologists for every one million Malaysian, or 0.06 per 10,000 population. As a comparison, in 2009 there were estimated to be 55.7 cardiologists per million population in the United States of America (USA) or 0.6 per 10,000 population². This ratio in the USA was regarded as adequate for a developed country.

Thirty two cardiologists or seventeen percent (17%) are serving in the public sector under the Ministry of Health (MOH) hospitals and public universities. There are no cardiologists in the public sector for the states of Perlis, Negeri Sembilan and Melaka.

Wilayah Persekutuan Kuala Lumpur (WP KL) has the highest density of cardiologists to population with fifty five cardiologists serving 1.7 million population, making up to 0.32 per 10,000 population. This was followed by the state of Pulau Pinang with 0.19 per 10,000 population, and thirdly Melaka with 0.09 per 10,000 population.

At the other end of the scale the states of Kelantan, Terengganu and Sabah (with Labuan) have the lowest cardiologist ratio with 0.02 per 10,000 population. There are no cardiologists in the state of Perlis at the time of publication.

Selangor and Putrajaya with the highest population of 5.7 million residents are served by 32 cardiologists, making up 0.06 per 10,000 population.

Number and density of catheterization laboratories in Malaysia

There are currently fifty-five cardiac catheterization facilities (cath labs) in Malaysia. This represents just two cath labs for every one million Malaysian, or 0.02 per 10,000 population.

There are thirteen (13) cath labs or twenty four percent (24%) in the public sector. There are no cath labs in the public sector for the states of Negeri Sembilan, Melaka and Perlis, and no cath labs in the private sector for Terengganu and Sabah.

WP KL has the highest density ratio of cath lab to population, with 10 cath labs or 0.06 per 10,000 population. Again this was followed by Pulau Pinang with 0.05 per 10,000 population and Melaka with 0.04 per 10,000 population.

The east coast states of Pahang, Terengganu and Kelantan all have a ratio of 0.01 per 10,000 population while Sabah currently have just one cath lab to serve a population of nearly 3.5 million or density of 0.003 per 10,000 population. The state of Perlis which has the lowest population number has no cath lab at the time of publication.

Selangor and Putrajaya has the most number of cath labs, but also has the highest population, therefore giving a ratio of 0.02 per 10,000 population.

Reference

1. Indicator Demographics Malaysia 2012 accessed online at <http://www.statistics.gov.my> on 15 February 2013
2. Rodgers GP, Conti JB, Feinstein JA, et al. ACC 2009 Survey Results and Recommendations: Addressing the Cardiology Workforce Crisis: A Report of the ACC Board of Trustees Workforce Task Force. *J Am Coll Cardiol.* 2009; 54(13):1195-1208

Table 1.1 Number and Density of Cardiologist in Malaysia by State and Sector, 2012

State	Sector	Number	Population in Malaysia (2012)*	Per 10,000 population
Malaysia	Public	32		
Malaysia	Private	154		
Malaysia	Total	186	29,336,800	0.06
Perlis	Public	-		
Perlis	Private	-		
Perlis	Total	0	239,400	0
Kedah	Public	2		
Kedah	Private	5		
Kedah	Total	7	1,996,800	0.04
Pulau Pinang	Public	4		
Pulau Pinang	Private	26		
Pulau Pinang	Total	30	1,611,100	0.19
Perak	Public	-		
Perak	Private	12		
Perak	Total	12	2,416,700	0.05
Selangor & WP Putrajaya	Public	7		
Selangor & WP Putrajaya	Private	25		
Selangor & WP Putrajaya	Total	32	5,730,200	0.06
WP Kuala Lumpur	Public	6		
WP Kuala Lumpur	Private	49		
WP Kuala Lumpur	Total	55	1,713,400	0.32
Negeri Sembilan	Public	-		
Negeri Sembilan	Private	3		
Negeri Sembilan	Total	3	1,056,300	0.03
Melaka	Public	-		
Melaka	Private	8		
Melaka	Total	8	842,500	0.09
Johor	Public	2		
Johor	Private	7		
Johor	Total	9	3,439,600	0.03
Pahang	Public	3		
Pahang	Private	2		
Pahang	Total	5	1,548,400	0.03
Kelantan	Public	-		
Kelantan	Private	3		
Kelantan	Total	3	1,640,400	0.02
Terengganu	Public	1		
Terengganu	Private	1		
Terengganu	Total	2	1,092,900	0.02
Sabah & WP Labuan	Public	2		
Sabah & WP Labuan	Private	4		
Sabah & WP Labuan	Total	6	3,463,300	0.02
Sarawak	Public	5		
Sarawak	Private	9		
Sarawak	Total	14	2,545,800	0.05

* Indicator Demographics Malaysia 2012

Table 1.2 Number and Density of Hospital with Catheterization Laboratory in Malaysia by State and Sector, 2012

State	Sector	Number ⁺	Population in Malaysia (2012)*	Per 10,000 population
Malaysia	Public	13		
Malaysia	Private	42		
Malaysia	Total	55	29,336,800	0.02
Perlis	Public	-		
Perlis	Private	-		
Perlis	Total	0	239,400	0
Kedah	Public	1		
Kedah	Private	3		
Kedah	Total	4	1,996,800	0.02
Pulau Pinang	Public	1		
Pulau Pinang	Private	7		
Pulau Pinang	Total	8	1,611,100	0.05
Perak	Public	1		
Perak	Private	3		
Perak	Total	4	2,416,700	0.02
Selangor & WP Putrajaya	Public	2		
Selangor & WP Putrajaya	Private	9		
Selangor & WP Putrajaya	Total	11	5,730,200	0.02
WP Kuala Lumpur	Public	2		
WP Kuala Lumpur	Private	8		
WP Kuala Lumpur	Total	10	1,713,400	0.06
Negeri Sembilan	Public	-		
Negeri Sembilan	Private	2		
Negeri Sembilan	Total	2	1,056,300	0.02
Melaka	Public	-		
Melaka	Private	3		
Melaka	Total	3	842,500	0.04
Johor	Public	1		
Johor	Private	2		
Johor	Total	3	3,439,600	0.01
Pahang	Public	1		
Pahang	Private	1		
Pahang	Total	2	1,548,400	0.01
Kelantan	Public	1		
Kelantan	Private	1		
Kelantan	Total	2	1,640,400	0.01
Terengganu	Public	1		
Terengganu	Private	-		
Terengganu	Total	1	1,092,900	0.01
Sabah & WP Labuan	Public	1		
Sabah & WP Labuan	Private	-		
Sabah & WP Labuan	Total	1	3,463,300	0
Sarawak	Public	1		
Sarawak	Private	3		
Sarawak	Total	4	2,545,800	0.02

⁺ Radiation Health and Safety, Engineering Services division of the Ministry of Health Malaysia.

* Indicator Demographics Malaysia 2012