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Media Statement by Dr. Lim Chee Han, Senior Researcher at Penang Institute in Kuala Lumpur on the 21st of July, 2017

Ways to keep afloat with the housemanship programme in Malaysia

Medical graduates in Malaysia having to wait for a year, sometimes more, before they can be placed for their housemanship training has been putting a heavy burden on the Ministry of Health as well as these aspiring doctors.

The long queue for housemanship positions is driven by a number of factors namely:

(i) A significant increase in the number of medical graduates from local private colleges and universities and an increase in the number of medical graduates from overseas driven by an increase in the number of overseas medical institutions which are recognized by the Malaysian Medical Council (MMC)

(ii) The inability of the public health system to expand to keep up with the increasing number of medical graduates

(iii) The declining rates of graduation within the stipulated period experienced by those undergoing the housemanship training programs with an especially high rate of non-graduation coming from medical graduates from certain overseas institutions

The number of medical house officers i.e. those who have taken up their housemanship positions from local public universities increased from 496 in 2001 to 1245 in 2014, an increase of approximately 2.5 times. For local private institutions, the number of medical house officers increased from a mere 43 in 2001, when only the Penang Medical College was offering medical degrees, to 1125 in 2014, when 11 private institutions were offering medical degrees. This represents a 26-fold increase (See Appendix 1 below). At the same time, the number of medical house officers who graduated from overseas institutions increased from 241 in 2001 to 1490 in 2014, representing a six-fold increase.

The main driving force behind the increase in the number of medical students graduating from local private institutions is the sudden increase in the number of accredited medical programs offered by these colleges and universities.

In just under two decades, the number of accredited local private institutions has shot up from 0 to 18. Another 9 programs in private institutions were provisionally accredited as of 2015 according to the Annual Report of MMC 2015. Even though the government imposed a moratorium on new medical programs in 2011, four of these private institutions which were established in 2012 were given provision recognition (See Appendix 2 below). It is almost certain that private institutions will produce more medical graduates moving forward, a situation which would have been unthinkable to most policy makers just 10 years ago when there were only seven private medical programs which were accredited!

In a sad twist of fate, three out of the nine provisional programs (Perdana University – Johns Hopkins Graduate School of Medicine, UniKL Royal College of Medicine Perak – Vinayaka Mission's University, India and the Allianze University College of Medical Sciences (AUCMS-MD)) have been discontinued due to various financial and administrative problems. Students in these programs were forced to transfer to other programs, both local and overseas.

The increase in the number of medical graduates may not have posed huge challenges to the government if the public health system expanded at a commensurate rate. Unfortunately, the demand for housemanship positions currently outstrips the supply of these positions in the public hospitals. The shortfall between the supply and demand for housemanship positions reached an all-time high of 880 in 2014, the most recent year with complete data (See column 4 in Table 1 below). To make up this shortfall, the Ministry of Health has to build more new hospitals, upgrade existing smaller hospitals and also train more specialists who can then train the medical houseman, all of which requires long term planning and management.

Table 1: Shortfall in the supply and demand for housemanship positions and the shortfall between housemanship positions 'released' every year and the demand for the housemanship positions

Year	No. of medical graduates (1)	No. of housemanship positions filled up (2)	Supply gap housemanship positions: Supply (2) – Demand (1)	No. of housemanship positions released locally (3)	Difference in the vacated and demand for positions: (3) - (1)
2000	996			829	-167
2001	1029	780	-249	1009	-20
2002	1104	997	-107	1011	-93
2003	1083	959	-124	583	-500
2004	1126	1036	-90	874	-252
2005	1112	1049	-63	1060	-52
2006	1122	1059	-63	1703	581
2007	1534	1298	-236	1622	88
2008	2530	2326	-204	1787	-743
2009	3147	3058	-89	364	-2783
2010	3256	3252	-4	2326	-930
2011	3708	3565	-143	2923	-785
2012	4094	3743	-351	3086	-1008
2013	4472	4991	519	3374	-1098
2014	4740	3860	-880	3602	-1138
2015	5146			4121	-1025

Source: MMC Annual Report, MOH Human Resources Division and own calculations

*note: Number of new medical officers dipped in 2009, it was because starting from 2008 the length of housemanship training programme has extended from 1 year to 2 years.

(1): Number of practitioners provisionally registered; (2) Number of medical house-officers entering the workforce; (3) Number of Full Registration certificates issued according to local housemanship training positions

The shortfall in housemanship positions is further exacerbated by the declining graduation or 'turnover' rates of existing houseman. This is shown in the sixth column in Table 1 above which shows the difference between the demand for housemanship positions and the number of housemanship

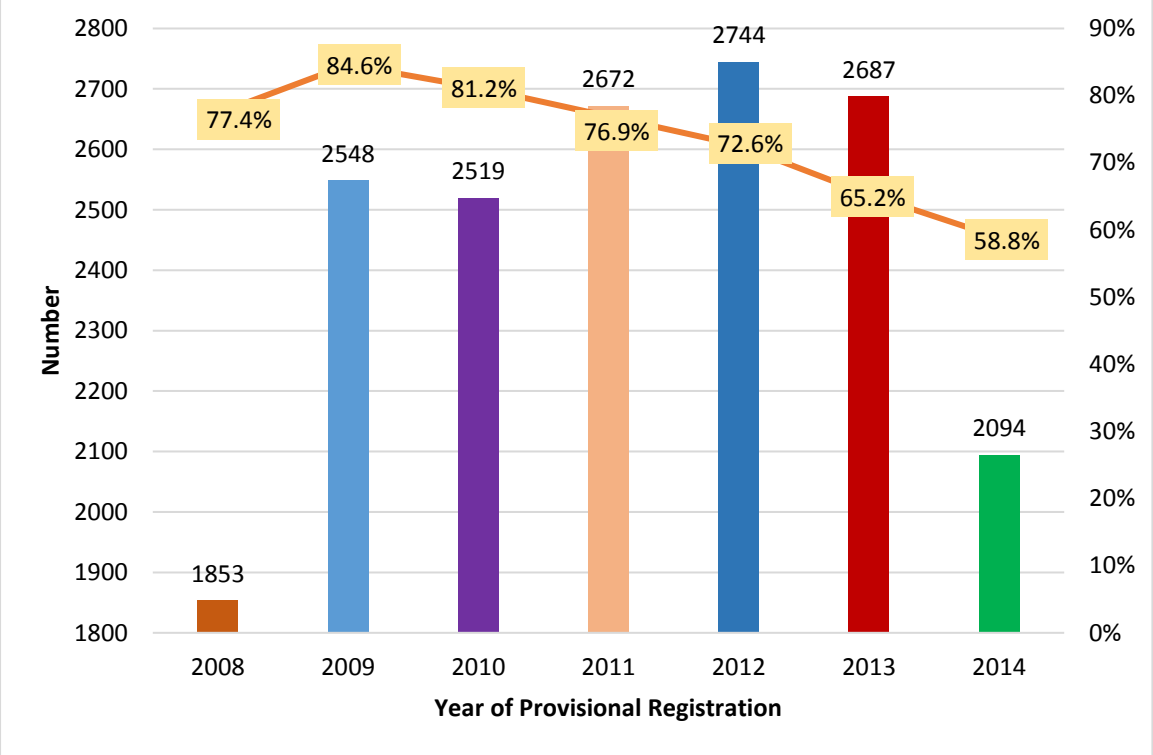
positions 'released' locally i.e. the number of medical officers who have graduated. This shortfall reached a high of 1138 in 2014.

Recall that from 2008 onwards, the duration of the housemanship programme was extended from one to two years. Housemen are required to cover six disciplines for their postings: the five core disciplines are Internal Medicine, Paediatrics, Surgery, Obstetrics and Gynaecology and Orthopaedics; for the sixth posting, students choose one out of four there is a choice of disciplines, namely Emergency Medicine, Anaesthesiology, Psychiatry and Primary Care. Each posting should take approximately four months. If a houseman does not complete his posting within 24 months, he can apply for an extension for up to one year which will be evaluated on a case by case basis.

Who are these medical houseman officers who do not finish their training within two years? To answer this question, we turn to the MMC Medical Register which keeps records of all 24,500 doctors including those who are provisionally registered i.e. those undergoing housemanship training. [1]

The Medical Register records taken from housemen provisionally registered from 2008 to 2014 shows that since 2009, the percentage of housemen who completed the housemanship programme within 24 months[2] dropped from 84.6% in 2009 to 58.8% in 2014 (Figure 1 below).

Figure 1: Number and % of housemen obtained full registration within 24 months



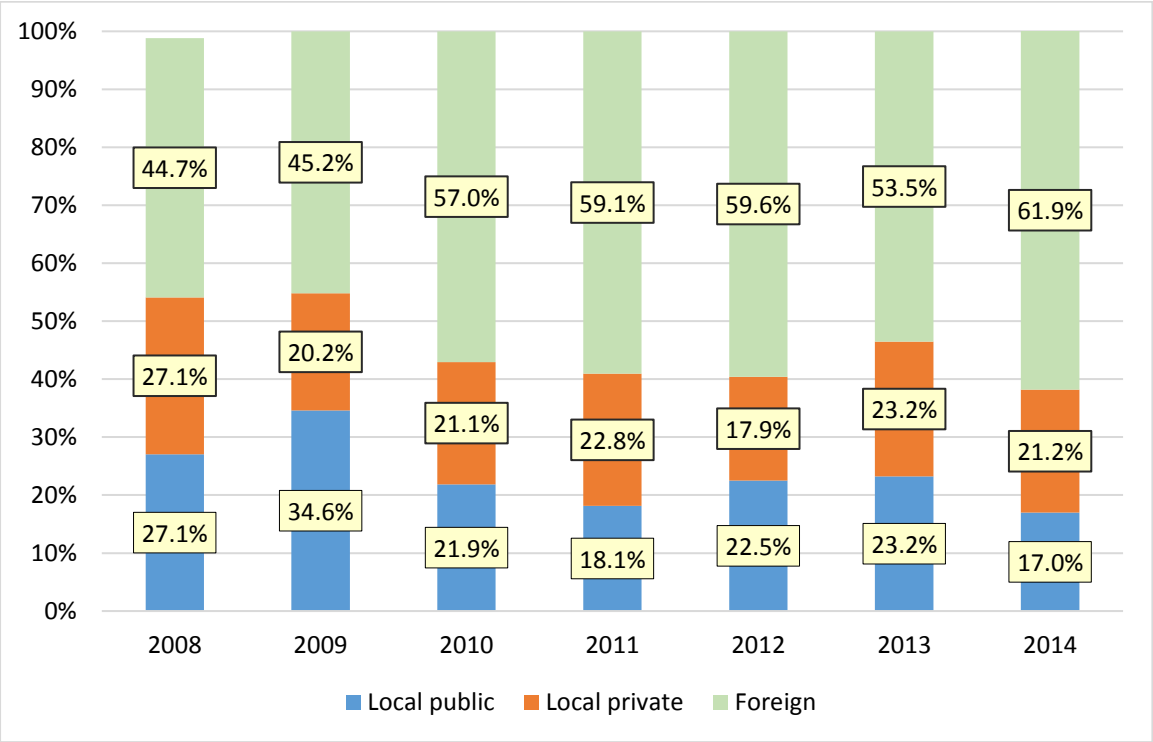
Source: MMC Medical Register, and own calculation

[1] A manual data extraction of a total of 24,500 doctors' details from the MMC Medical Register (http://www.mmc.gov.my/index.php/medical-register) was performed to analyse housemanship turnover from the provisional registration year 2008 to 2014. The data extraction period was from the 28th of February to the 17th of March 2017. Information extracted from each doctor's profile includes: i) Date of provisional registration, ii) Date of full registration, iii) Provisional registration number, iv) Full registration number, v) Undergraduate Institution, vi) Year of Annual Practising Certificate (APC) and vii) Name of the medical practitioner.

[2] Housemanship duration = Date of Full Registration – Date of Provisional Registration (according to the records in the Medical Register)

Drilling down to examine trends among housemen dropouts, 59.1% (2011) were graduates from foreign medical institutions (Figure 2 below). Meanwhile, graduates from local public and private institutions have fairly similar dropout rates (18.1% and 22.8%, respectively). This raises concerns with regards to overseas graduates, on whether they are competent enough to take up and overcome the challenges that await them during housemanship training.

Figure 2: Medical education background of housemen who dropped out or did not obtain full registration



Source: MMC Medical Register, and own calculation

Table 2 below further shows that a majority of overseas housemen dropouts were from medical institutions on the list of 339 MMC-recognised medical institutions. Ukraine's Crimea State Medical University contributed a high number of dropouts prior to 2011. In subsequent years, the number decreased, probably due to the de-listing of the university in 2013. However, looking at the statistics, there are certain overseas medical institutions which have churned out a relatively high number of dropouts, including Russia's I.M. Sechenov First Moscow State Medical University (previously named I.M. Sechenov Moscow Medical Academy) and Russian National Research Medical University (previously named Russian State Medical University); Indonesia's Universitas Padjadjaran, Bandung and Universitas Sumatera Utara (USU), Medan; Bangalore Campus of MSU-International Medical School in India; Egypt's University of Alexandria and University of Mansoura and lastly Czech Republic's Charles University in Prague. It is time for the MOH to look into the issues faced by some of these overseas medical institutions, in order to understand the situation with regards to teaching quality and skills training, if they are serious about tackling the housemanship dropouts and extension issues. The situation is made even more critical when we consider that many of the students in these institutions might be on scholarships that are sponsored by government agencies using taxpayers' fund.

Table 2: Housemanship dropouts by medical graduates from overseas medical institutions of selected countries

Medical Institution(s)	2008	2009	2010	2011	2012*	2013*	2014*
	RUSSIA						
I.M. SECHENOV FIRST MOSCOW STATE MEDICAL UNIVERSITY					8	8	29
I.M. SECHENOV MOSCOW MEDICAL ACADEMY	3	1	3	8	2		
KURSK STATE MEDICAL UNIVERSITY	3	3	1	3	9	3	15
NIZHNY NOVGOROD STATE MEDICAL ACADEMY		1	4	4	3	1	11
RUSSIAN NATIONAL RESEARCH MEDICAL UNIVERSITY					9		60
RUSSIAN STATE MEDICAL UNIVERSITY	4	1	2	5	1	1	
ST. PETERSBURG STATE MEDICAL ACADEMY#							1
VOLGOGRAD STATE MEDICAL ACADEMY	3	3	2	4	5	5	13
Total RUSSIA	13	9	12	24	37	18	129
	UKRAINE						
CRIMEA STATE MEDICAL UNIVERSITY	12	15	23	23	6	4	
DNIPROPETROVSK STATE MEDICAL ACADEMY#							1
LUGANSK STATE MEDICAL UNIVERSITY#							1
LVIV NATIONAL MEDICAL UNIVERSITY#							1
TERNOPIL STATE MEDICAL ACADEMY#							3
UKRANIAN MEDICAL STOMATOLOGICAL ACADEMY#							1
Total UKRAINE	**12**	**15**	**23**	**23**	**6**	**4**	**7**
	INDONESIA						
AIRLANGGA UNIVERSITI, SURABAYA	1		4	2	1	5	2
UNIVERSITAS ANDALAS, PADANG				2	2		6
UNIVERSITAS BRAWIJAYA, MALANG, JAWA				2	3	2	4
UNIVERSITAS GADJAH MADA, JOGJAKARTA	4	4		4	1	3	5
UNIVERSITAS HASANUDDIN, SULAWESI SELATAN	1	2	6	1	2	5	14
UNIVERSITAS ISLAM SUMATERA UTARA							1
UNIVERSITAS KRISTEN KRIDA, WACANA (UKRIDA)				3	6	3	17
UNIVERSITAS METHODIST#						1	1
UNIVERSITAS PADJADJARAN, BANDUNG		3	2	8	10	9	26
UNIVERSITAS SRIWIJAYA PALEMBANG, SUMATERA			1	2	1	4	4
UNIVERSITAS SUMATERA UTARA, MEDAN (USU)	1	1	4	3	19	12	18
UNIVERSITAS TRISAKTI				1	6	6	10
UNIVERSITAS UDAYANA DENPASAR, BALI	1	1	1		1	4	2
Total INDONESIA	**8**	**11**	**18**	**28**	**52**	**54**	**110**
	INDIA						
ALL-INDIA INSTITUTE OF MEDICAL SCIENCES NEW DELHI		1					
JSS UNIVERSITY, MYSORE, KARNATAKA							1
KARNATAKA UNIVERSITY, DHARWAD KARNATAKA					1		
KLE UNIVERSITY - JAWAHARLAL NEHRU MEDICAL COLLEGE, BELGAUM							5
L.N MITHILA UNIVERSITY-DARBHANGA MEDICAL COLLEGE, LAHERISARI			1	1			

MANAGEMENT & SCIENCE UNIVERSITY-INTERNATIONAL MEDICAL SCHOOL, BANGALORE CAMPUS				1	12	15	42
MANIPAL ACADEMY OF HIGHER EDUCATION-KASTURBA MEDICAL COLLEGE				2	2	1	3
NTR UNIVERSITY OF HEALTH SCIENCES- ANDHRA MEDICAL COLLEGE, VISAKHAPATNAM		1					
RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES (Various Campuses)				1			8
UNIVERSITY OF MYSORE							1
VINAYAKA MISSION'S UNIVERSITY-AARUPADAI VEEDU MEDICAL COLLEGE, PUDUCHERRY					1	1	1
Total INDIA	**0**	**2**	**0**	**5**	**14**	**17**	**61**
	EGYPT						
AL-AZHAR UNIVERSITY							1
UNIVERSITY OF AIN SHAMS							11
UNIVERSITY OF ALEXANDRIA						21	95
UNIVERSITY OF CAIRO						5	23
UNIVERSITY OF MANSOURA						8	26
UNIVERSITY OF TANTA						4	6
UNIVERSITY OF ZAGAZIG						3	1
Total EGYPT	**0**	**0**	**0**	**0**	**0**	**41**	**163**
	CZECH REPUBLIC						
PALACKY UNIVERSITY OLOMOUC							5
CHARLES UNIVERSITY IN PRAGUE					3	2	22
	JORDAN						
JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY			1	2	2	4	13
Medical Institution(s)	**2008**	**2009**	**2010**	**2011**	**2012***	**2013***	**2014***
	RUSSIA+UKRAINE+INDONESIA						
R+U+ID	33	35	53	80	95	76	246
	86.8%	*74.5%*	*72.6%*	*79.2%*	*66.4%*	*47.8%*	*44.3%*
	RUSSIA+INDONESIA+INDIA+EGPYT						
R+ID+IN+E	21	22	30	57	109	130	463
	55.3%	*46.8%*	*41.1%*	*56.4%*	*76.2%*	*81.8%*	*83.4%*
	THE REST OF REGIONS						
The REST (non R+U+ID+IN+E)	5	10	19	21	34	28	85
	13.2%	*21.3%*	*26.0%*	*20.8%*	*23.8%*	*17.6%*	*15.3%*
	TOTAL FOREIGN INSTITUTIONS						
Total FOREIGN	38	47	73	101	143	159	555

Source: MMC Medical Register, and own calculation

*Note: For 2012-2014 batch of housemen, some may have not completed their housemanship therefore have not obtained their full registration licence. The data unfortunately could not separate this group from the dropouts, given the maximum period of housemanship training is 5 years.

Medical institutions *in italic* indicate that they are not one of the 310 MMC-recognised medical institutions.

The outcome of this shortfall in housemanship places coupled with declining turnover rates have led to higher specialists (trainers) to houseman ratios. This would inevitably compromise the quality of training received by these trainees and also put additional pressure on the specialists. Housemen are also increasingly overworked and suffering from mental health problems as a result of their work environment. The tragic death of Dr Danny Lee Chang Tat in 2012 in the Kajang Hospital, due to a self-injected drug overdose, is a good reminder for the MOH to prioritize the mental health of housemen and medical officers.

Our policy recommendations are as follows.

Firstly, in order to overcome the shortage of available specialists to train housemen, the MOH should plan to train significantly more specialists and retain them in the public sector, through strategic incentives and career advancement options. A healthy and effective housemanship training programme should keep the recommended specialist to housemen ratio to 1:5. This also implies that the government has to increase the number of hospital beds, and either build more specialist hospitals or upgrade the existing minor specialist hospitals to major ones.

Secondly, the MOH should revise the structure of the housemanship programme to be more effective in supporting or incentivising specialist trainers. Given the significant role that specialists play in the housemanship training programme, the MOH should work to improve the ratio of specialist-mentor to housemen to under 1:5. This would improve the effectiveness of training in each posting and ensure that housemen are adequately prepared to face the realities of medical practice. Specialist trainers should spend a significant amount of time to supervise or teach the housemen *directly*, and minimum weekly hours should be stipulated in the guidelines. In situations where the specialist cannot perform this duty, senior MOs who are appointed as substitute trainers must be very familiar with the programme and act accordingly. An independent tribunal or ombudsman should be established for housemen to address their grievances should they feel that they have been abused or unfairly treated. Presently, the Standing Committee for House Officers, Medical Officers and Specialists (SCHOMOS) established by the Malaysian Medical Association[3], enjoys a good working relationship with the MOH on the various issues concerning welfare of doctors. SCHOMOS would be ideal choice to act as the independent tribunal or ombudsman for dealing with housemen abuse cases. The SCHOMOS should further be granted powers to elect its own committee members and call for independent inquiry if the need arises.

Thirdly, the MOH should explore the possibility of forging partnerships with private hospitals to utilise their expertise and resources to train more housemen, through voluntary schemes. Attractive incentives should be given and the cost burden of training should be shared with willing participating hospitals and their consultants. This has been practised, for example, in Australia, under the Commonwealth Medical Internships (CMI) initiative[4]. In addition, the MOH, together with the MMC, could also work with certain foreign countries to accredit more medical institutions outside of the country. This would encourage more Malaysian graduates to undergo medical internship in these

[3] Official webpage for SCHOMOS: https://www.mma.org.my/75-mma-pages/membership/556-schomos

[4] Commonwealth Medical Internships (CMI) initiative, by the Department of Health, Australia. Official website URL: http://www.health.gov.au/internet/main/publishing.nsf/content/work-commonwealth-medical-internships

institutions after graduation (if they are teaching hospitals). The number of Malaysians completing housemanship overseas, while small, appears to have declined after 2013.

Lastly, local private and overseas medical education institutions must be more tightly regulated, to ensure the medical graduates produced are of a high quality. More resources have to be poured into the MMC accreditation and review process, and the integrity and professional independence of the Joint Technical Committee must continue to be upheld. On top of this, there should be a formal mechanism established involving stakeholders from the MMC, MQA, PSD and MOHE to ensure:

i) Government agencies (e.g. PSD) will only sponsor students to the fully accredited medical institutions, regardless of whether these are local or overseas institutions.

ii) Students who fail to obtain the "No Objection Certificate" and go on to enrol at any foreign medical institution with academic qualifications lower than the MOHE's minimal entry requirements, should be required to sit for the Medical Qualifying Exam. NOCs should not be issued too leniently to students, especially those who lack strong academic qualifications.

iii) All MMC-recognised foreign medical programmes, especially those universities which have churned out a high number of medical graduates who cannot finish or drop out from the housemanship training, must undergo a thorough review under the same procedures and conditions set for local medical institutions (as stipulated in *Guidelines for the accreditation of Malaysian Undergraduate Medical Education Programmes 2016*).

There should not be a further increase in the number of local private and public universities offering medical programmes until the housemanship issue is resolved both in the short term (increasing the number of housemanship positions) as well as a long-term planning and strategic management perspective. On top of this, there should be a strictly enforced cap on the yearly medical student intake for existing local programmes.

The housemanship bottleneck and training quality are issues that cannot be solved effectively simply by imposing an extended moratorium on new medical courses in Malaysia. Policymakers must exercise more prudent planning to prevent the situation from worsening, as well as anticipate possible further complications that may arise.

Appendix 1: Number of medical house officers entering the workforce from local public and private higher education institutions, 2001-2014

No.	University	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Local Public Universities														
1	University of Malaya (UM)	137	175	182	175	149	144	150	141	150	159	182	188	198	197
2	National University of Malaysia (UKM)	131	160	162	160	160	142	185	203	173	223	219	259	220	208
3	University of Science Malaysia (USM)	150	185	201	181	147	159	151	179	191	186	180	193	193	205
4	University of Malaysia Sarawak (UNIMAS)	38	38	22	33	47	13	76	68	53	79	64	74	39	92
5	University Putra Malaysia (UPM)	40	54	61	72	82	69	90	81	123	101	131	111	143	99
6	International Islamic University of Malaysia (IIUM)	46	55	59	74	82	88	88	95	105	121	108	96	128	-
7	University of Malaysia Sabah (UMS)	-	-	-	-	-	-	-	29	36	68	75	70	80	81
8	University of Technology Mara (UiTM)	-	-	-	-	-	-	-	19	54	91	116	148	178	182
9	Islamic Science University of Malaysia (USIM)	-	-	-	-	-	-	-	-	-	-	-	-	-	53
	Sub-total	496	658	683	680	659	609	740	808	875	1012	1088	1151	1147	1245

No.	University	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Local Private Universities/Colleges														
1	Penang Medical College (PMC)	43	59	23	31	19	132	64	105	97	131	100	97	150	115
2	International Medical University (IMU)	-	90	76	72	109	64	117	156	148	140	118	231	183	136
3	Royal College of Medicine Perak (RCMP)	-	23	-	-	4	10	53	57	82	63	23	19	136	119
4	Malacca-Manipal Medical College (MMMC)	-	-	68	124	154	178	130	222	405	271	254	249	258	117
5	Asian Institute of Medicine and Technology (AIMST)	-	-	-	-	-	-	-	101	119	134	113	108	205	14
6	Alliance College of Medical Science (AUCMS)	-	-	-	-	-	-	-	-	-	52	30	69	58	89
7	Monash University (SUNWAY)	-	-	-	-	-	-	-	-	-	29	27	10	71	76
8	University College Sedaya International (UCSI)	-	-	-	-	-	-	-	-	-	32	43	41	50	32
9	Cyberjaya University College of Medical Sciences (CUCMS)	-	-	-	-	-	-	-	-	-	-	140	133	126	143
10	Management & Science University (MSU)	-	-	-	-	-	-	-	-	-	-	29	38	62	186
11	MAHSA University	-	-	-	-	-	-	-	-	-	-	-	34	142	98
	Sub-total	43	172	167	227	286	384	364	641	851	852	877	1029	1441	1125

Source: Human Resources Division, Ministry of Health

Appendix 2: List of accredited (full and provisional) local private medical programs (As of 17 January 2017)

	University	College	Recognized Date
	Full Accreditation		
1	Royal College of Surgeons of Ireland	Penang Medical College	1/6/2001
2	International Medical University (IMU)		19/2/2002
3	University of Sheffield[Ψ]	Perak Medical College	1/7/2002
4	Manipal University	Melaka-Manipal Medical College	7/9/2003
5	Royal College of Medicine Perak (MBBS-Malaya Programme)		19/1/2006
6	AIMST University		17/8/2007
7	UCSI University		26/3/2010
8	Monash University	Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia, Sunway Campus	26/3/2010
9	Cyberjaya University College Of Medical Sciences (CUCMS)		29/7/2010
10	Management & Science University (MSU)	International Medical School, (MSU-IMS) Bangalore	23/4/2011
11	Universiti Kuala Lumpur-Royal College of Medicine Perak		6/10/2012
12	University of Newcastle-upon-Tyne	Newcastle University Medicine Malaysia	14/5/2014
13	MAHSA University		6/6/2014
14	Universiti Tunku Abdul Rahman (UTAR)		29/1/2015
15	Taylor's University		28/5/2015
16	SEGi University		30/7/2015
17	Royal College of Surgeons of Ireland	Perdana University	13/4/2016
18	Kolej Universiti Lincoln		10/6/2016
	Provisional Accreditation (as of MMC Annual Report 2015)		
	Institution / Program	**Year Established**	**Year Expected to be Accredited**
1	ASIA Metropolitan University	2010	2015
2	Perdana University – Johns Hopkins Graduate School of Medicine	2010	**(discontinued)**
3	Perdana University – Royal College of Surgeons, Ireland*	2010	2015
4	UniKL Royal College of Medicine Perak – Vinayaka Mission's University, India	2009	(**discontinued)**
5	Kolej Universiti Insaniah	2011	2016
6	Quest International University Perak	2012	2017
7	University College Shahputra	2012	2017
8	Allianze University College of Medical Sciences (AUCMS-MD)	2012	(**discontinued)**
9	Lincoln University College*	2012	2017

Source: Malaysian Medical Council

[Ψ] Course discontinued after final batch of students graduated in December 2004