Thai Medical Graduates in the United States Residency Training Programs: 1988-2003

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In the past 2 decades, international medical graduates (IMG) were needed to fill graduate medical education (GME) positions in the United States (US). The author built a database of Thai medical graduates in accredited US residency systems between 1988-2003, and analyzed the trend and opportunity for Thai IMG. During the 16-year study period, there were 281 Thai medical graduates who successfully entered residency in the US, with a rising trend that reached a peak between 1993-1994, and subsequently declined to about 10-15 per year. Thai physicians entered US residency program 4.2 $\pm$ 3.3 years after medical school graduation. Thai IMGs were mostly in internal medicine (N = 153, 54.4%) and pediatric residency programs (N = 76, 27.1%), with much fewer in psychiatry (N = 10), surgery (N = 9), neurology (N = 8), anesthesiology (N = 7), and other specialties (N = 18). Thai medical graduates tended to be clustered in a few residency programs. Half of the Thai graduates in the US internal medicine residency were accepted in 9 programs; the largest were Texas Tech (Lubbock, N = 18), Albert Einstein University (Philadelphia, N = 14), and University of Hawaii (Honolulu, N = 13). For pediatric residency, about half of the Thai graduates (56.6%) were in 6 programs; the largest were Christ Hospital (Oaklawn, N = 11), University of Illinois at Chicago (N = 11), and Jersey City Medical Center (N = 9). After residency training, most Thais (94.5%) chose to do subspecialty training. The most popular medical subspecialties were cardiology, nephrology, and hematology-oncology. The most popular pediatric subspecialties were allergy-immunology, endocrinology, and cardiology. In conclusion, there are too few Thais in the US residency system. This information may be helpful for Thai medical graduates who seek residency abroad.

Keywords: *Thai medical graduate,Resident, United States*

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The graduate medical education (GME) in the United States (US) employs almost 100,000 physicians to provide healthcare services[1]. International medical graduates (IMG) are an important workforce for the American healthcare. In addition to each country's own residency program, the US is practically the only alternative for graduate medical education opportunities for Thais and other IMGs worldwide.

The number of IMGs in the US GME varies with time and policy. During World War II, there was a shortage of US physicians. An amendment in US immigration law in the 1960's allowed a large number of IMGs to work in the US. As many as 800 Thai physicians entered the US residency system during that time, but its exact number was unknown. By the mid 1970's, IMGs constituted 19% of the US physician workforce[1]. After a change in the US immigration law in 1976, the number of IMGs entering the US dropped sharply. The proportion of IMGs in the US graduate medical education came to the lowest in 1988, when it constituted only 14% of all trainees.

The change in Medicare policy in the late 1980's resulted in a significant expansion of GME positions, from 12,443 in 1988 to 22,706 in 1994[2], after which the number of positions reached a plateau[3-7]. IMGs, particularly non-US citizens, were again in demand to fill these positions. During the past two decades, many Thai medical graduates have gone through residency training in the USA. To date, there are no systematic reports on the Thai graduates in the

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US residency system. The author have made an attempt to build a database of Thai medical graduates in accredited US residency program and hereby report a summary of this database.

Material and Method

All Thai physicians who graduated from Thai medical schools and entered the US residency system between 1998-2003 were included in the present study. The names of the Thai physicians were identified through multiple peer informants. These names were then verified by the American Board of Medical Subspecialty (ABMS) directory and/or confirmed with the physicians themselves by e-mail or in person when possible.

The search for Thai physicians who were board certified was made through an internet search in the official ABMS directory (http://www.board-certifieddocs.com) under advanced search using search term "Thailand" for country of origin and "≥ 1988" for medical graduation year. An additional search for Thai physician were made using the following common part of Thai names in the ABMS directory: *Amorn*, *Ananta*, Api*, Asava*, Arun*, Ban*, Bai*, Benj*, Boon*, Bodhi*, Bua*, Bum*, Bun*, Bura*, Bus*, Chad, Chakr*, Chai*, Chana*, Charas*, Charn*, Chareon*, Chalerm*, Chali*, Cham*, Charn*, Chava*, Cherd*, Chin*, Chit*, Chok*, Chol*, *Chot, Chul*, Chuti*, Dara*, Dee*, Dhep*, Dhev*, Dej*, Duang*, Duen*, Dumrong*, Dusit*, Eam*, Gavi*, Hirun*, Issa*, Jai*, Jaru*, Jatu*, Jid*, Jira*, Jinda*, Jinta*, Jong*, Jaroon*, Jum*, Jutha*, Junt*, Kaew*, Kamol*, Kanok*, Kanjana*, Kajorn*, Kanit*, Karn*, Kasem*, Kavee, Keerati*, Korn*, Krai*, Kiat*, Krid*, Krit*, Kob*, Kom*, Kong*, Kij*, Kitti*, Krai*, Krieng*, Kwan*, Laoha*, Lert*, Lim*, Maha*, Manee*, *Mitr*, Ngam*, Narong*, Napa*, Nar*, Nares*, Nath*, Nao*, Nava*, Nawa*, Net*, Nong*, *Nop*, Nik*, Nimit*, Nip*, Nithi*, Niyom*, Nuan*, Nuch*, Num*, Nunt*, Nutt*, Paib*, Pair*, Pait*, Pais*, Parn*, Panya*, Pant*, Pata*, *Patch*, Peera*, Pen*, *Petch*, Phai*, Pich*, Pipat*, Pira*, Pirom*, Pita*, Piti*, Pisit*, Piya*, Poj*, Pok*, Pol*, Pon*, *Poom*, Poon*, Porn*, Pong*, Pra*, *Pree*, Prem*, Puang*, Rak*, Ratana*, Reung*, Roong*, Ruang*, *Rux*, Saeng*, Saha*, Sak*, Shote*, *Seri*, Sophon*, Sila*, Siri*, Sitti*, Song*, Sri*, Suk*, Suntorn*, Suthi*, Supha*, Suwan*, Suwat*, Tavee*, Tawat*, Tawee*, Tem*, Terd*, Term*, *Tham*, Thana*, Thane*, Thani*, Thanom*, That*, Thaw*, Thany*, Theera*, Thida*, Thiti*, *Thip*, Thav*, Thawe*, Thiti*, Thong*, Tong, *Tiem*, Tien*, Udom*, Urai*, Vich*, Vajira*, Vong*, Vora*, Watana*, Wich*, Wora*, Wong*, Ying*

*anand, *aree, *arin, *arun, *boon, *bul, *butr, *chad, *chid, *chit, *chai, *chareon, *choke, *chinda, *dej, *dilok*, *jai, *jid, *jit, *jinda, *jira, *kaew, *kamol, *kasem, *kawee, *khun, *kul, *kij, *kiat, *komol, *korn, *larp, *lek*, *lert, *lers, *manee, *nakorn, *nant, *nanda, *narong, *netr, *nij, *nond, *nukul, *kasem, *korn, *kupta, *paiboon, *paibul, *panich, *pab, *pat, *payom, *petch, *phan, *phol, *pong*, *pradit, *prapa, *prasert, *prayoon, *prawat, *prom, *pruk, *porn, *pong, *raj, *rak, *rat, *ratana*, *rerk, *reung*, *rin, *roj, *rojana, *rote, *rut, *sakul, *sak, *sakdi, *sap, *sarn, *sakol, *sakul*, *sathien, *sawad, *sith, *sidh, *silp, *siri, *sitti, *sri, *sindhu, *sorn, *sophon, *suk, *suntorn, *sup, *suwan, *tasana, *tawee*, *tham*, *tep, *thep, *torn, *thai, *thorn, *thida, *thip, *tida, *torn, *trakul, *ubol, *ubon, *vanich, *vilai, *vej*, *viroj, *vora*, *vuthana, *visit, *visuth, *vit, *vidh, *vong, *wan, *wat, *watana, *wes, *wid, *wit, *wilai, *wirote, *wong, *wongse, *wora*, *yong

The physicians who had only subspecialty clinical or research training in the US without entering residency in the accredited US graduate medical education (GME) programs were excluded from the study. Those who graduated from a US medical school or any medical school other than from Thailand were also excluded.

For each physician, the name, year entering medical school, medical school graduated, year entered residency program, program name, city, state, year entered subspecialty fellowship program, program name, city, state were collected. In case where information in the ABMS directory was incomplete, the missing information was searched for in the PUBMED database, or through Thai medical alumni, then direct contact with the physician, or by making inquiries to classmates, to physicians who were in the same residency program, and to people who had personally contacted the physicians in the USA. The physician's medical graduation institution and year of graduation were verified by their medical school directory when appropriate. The information was kept confidential unless consented for disclosure by the physicians.

Data were recorded in Microsoft Excel 7.0. Data were summarized using descriptive statistics.

Results

Characteristics of Thai medical graduates in the US residency

Before 1988, very few Thai physicians received training in the US residency system. Between 1988 and 2003, there were 281 Thai medical graduates in US residency programs. One hundred and seventy-two physicians were males and 109 were females. Ninety-five physicians graduated from Chulalongkorn University, 81 from Siriraj Hospital-Mahidol University, 48 from Ramathibodi Hospital-Mahidol University, 26 from Chiang Mai University, 22 from Prince of Songkla University, 6 from Phramongkutklao College of Medicine, 2 from Kon Kaen University, and 1 from Srinagarinwirote University.

During the study period, Thai physicians entered the US residency program 4.2 ± 3.3 years (mean ± standard deviation, median = 3 years) after graduation from Thai medical schools. About half (161 of 281, 57.1%) entered the US residency program within 3 years after graduation, and most (225 of 281, 79.8%) did so within 6 years after graduation from Thai medical schools (Fig. 1). The number of graduate year 1 (GY1) entry into US residency programs steadily increased from 1988, reached a peak between 1993-1994, and subsequently declined (Fig. 2).

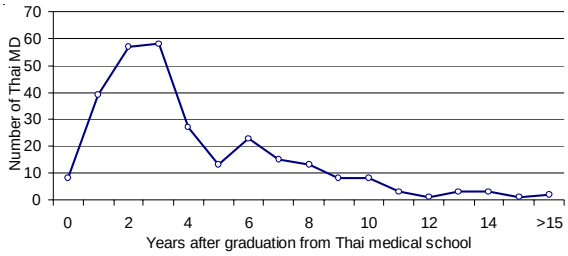

Fig. 1 Elapsed time between Thai medical graduation and US GME entry

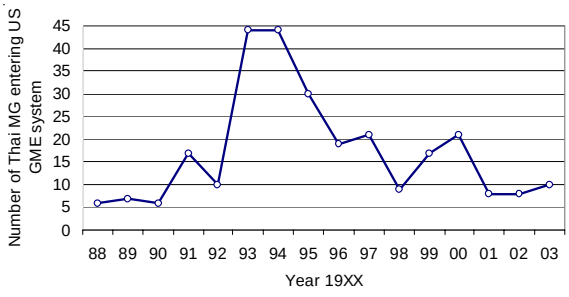

Fig. 2 Distribution of Thai medical graduates in US residency training programs between 1988-2003

Residency specialty choices and programs

The majority of Thai medical graduates entered internal medicine residency (N = 153, 54.4%), or pediatric residency (including combined programs, N = 76, 27.1%). There were fewer Thai residents in psychiatry (N = 10, 3.5%), surgery (N = 9, 3.2%), neurology or combined internal medicine and neurology (N = 8, 2.9%), anesthesiology (N = 7, 2.5%), genetics (N = 4), pathology (anatomic and clinical, N = 3), combined medicine and pediatrics (N = 2), physical medicine and rehabilitation (N = 2), radiology (N = 2), family medicine (N = 2), dermatology, emergency medicine, and orthopedics (one each). There were no Thai medical graduates in the US accredited ophthalmology, otolaryngology, or urology residency programs during the 16-year study period.

Thai medical graduates tended to be clustered in a few residency programs. For 153 Thai graduates in internal medicine residency, half (49.4%) were accepted in 9 programs: Texas Tech University Health Science Center, Lubbock (N = 18), Albert Einstein University, Philadelphia (N = 14), University of Hawaii, Honolulu (N = 13), Framingham Union Hospital-Metrowest Medical Center, Framingham (N = 8), Bronx-Lebanon Hospital, New York (N = 6), University of Illinois at Chicago (N = 5), Mary Imogene Bassett Hospital, Cooperstown (N = 4), Detroit medical center-Wayne State University, Detroit (N = 4), and Columbus Hospital, Chicago (N = 4). The rest of the Thai graduates were scattered in 51 other internal medicine programs around the US (Table 1).

For 76 Thai graduates in pediatric residency, about half (56.6%) were clustered in 6 programs: Christ Hospital, Oaklawn (N = 11), University of Illinois at Chicago (N = 11), Jersey City Medical Center, Jersey city (N = 9), Children's Hospital of Michigan, Detroit (N = 4), SUNY Upstate Medical Center, Syracuse (N = 4), and University of Tennessee, Knoxville (N = 4). The rest of the Thai graduates were scattered in 24 other pediatric programs around the US (Table 1).

There was no particular program that accepted Thai graduates for residency training in anesthesiology, psychiatry, surgery and other specialties.

Career choices of Thai medical graduates after residency training

After residency training, most Thai graduates continued subspecialty training in the US. Of 145 Thai medical graduates who had completed internal medicine residency, 137 (94.5%) chose

Table 1. Accredited residency programs in the United States that accepted Thai medical graduates in the past 16 years by States and city. The total number of Thai medical graduates are in parentheses

State (total)	City (total number of graduates)	Program entry	Med	Ped	Other specialties	Grand Total
AL (4)	Birmingham (3)	U Ala Sch Med	1	1	1 surg	3
	Mobile (1)	U South Alabama		1		1
BC (1)	Vancouver (1)	U BC	1			1
CA (8)	Fresno (1)	UCSF-Fresno	1			1
	Los Angeles (6)	LA County H/USC Med Ctr	2	2	1 MedPed	5
		UCLA			1 Ortho	1
	San Diego (1)	UCSD	1			1
CO (1)	Denver (1)	Children's H Denver		1		1
CT (3)	Framington (2)	U Connecticut			2 Neuro	2
	New Haven (1)	Connecticut Mental Hlth Ctr/Yale U			1 Psych	1
DC (5)	Washington (5)	Washington Hlth Ctr	1			1
		George Washington Med Ctr	2		1 Emerg, 1 Psych	4
FL (5)	Gainsville (2)	U Florida Coll Med		2		2
	Jacksonville (1)	Nemours Childrens' Hlth Clinic/U FL HSC		1		1
	Miami (1)	Miami Children's H		1		1
	Orlando (1)	Arnold Palmer H		1		1
GA (2)	Atlanta (2)	Emory U	1			1
		Unknown			1 Anesth	1
HI (17)	Honolulu (17)	U Hawaii	13	2	1 Med/neuro, 1 Psych	17
IL (58)	Chicago (37)	Columbus H	4			4
		Louise A Weiss Memorial H	1			1
		Mt. Sinai H		1		1
		Rush Westlake H	3			3
		Rush-Presbyterian H		2	1 Psych	3
		Schwab Rehab H/U Chicago			1 PM&R	1
		St. Joseph H	3			3
		U Chicago		3		3
		U Illinois at Chicago (UIC)	5	11	1 Anesth	17
		Westlake H	1			1
	Evanston (3)	St Francis H	3			3
	Maywood (1)	Loyola	1			1
	Oaklawn (12)	Christ H		11	1 Radiology	12
	Oakpark (1)	West Suburban HL	1			1
	Springfield (3)	Southern Illinois U Sch Med		2	1 Neuro	3
	Urbana (1)	U Illinois at Urbana-Champaign	1			1
IN (1)	Indianapolis (1)	Indiana U			1 Anesth	1
KS (1)	Kansas city (1)	Kansas Med Ctr			1 Path	1
KY (1)	Lexington (1)	U Kentucky		1		1
MA (12)	Boston (2)	Beth Israel Deaconess Med Ctr			1 Genetics	1
		Children's H/Harvard U		1		1
	Framingham (8)	Framingham Union H/Metrowest Med Ctr	8			8
	Worcester (2)	St. Vincent H	2			2
MD (8)	Baltimore (6)	Harbor H	2			2
		Maryland General H	1			1
		St. Agnes H	2			2
		Unknown program	1			1
	Bethesda (2)	NIH/NIHGR			2 Genetics	2
MI (15)	Ann Arbor (2)	U Michigan	1	1		2
	Detroit (8)	Children's H of Michigan		4		4
		Wayne State U	4			4
	Flint (1)	Hurley Med Ctr		1		1
	Pontiac (2)	St. Joseph Mercy H	1		1 MedPed	2
	Southfield (2)	Providence H			2 Surg	2
MN (3)	Rochester (3)	Mayo Clinic		1	1 Anesth, 1 Surg	3
MO (10)	Columbia (1)	U Missouri	1			1

Table 1. (Continue)

State (total)	City (total number of graduates)	Program entry	Med	Ped	Other specialties	Grand Total
	St. Louis (9)	Barnes H/Washington U	1		3 Psych, 1 Path	5
		St. Luke H	1			1
		St. Louis U			3 Med/Neuro	3
NC (3)	Durham (3)	Duke U	2		1 Med/Neuro	3
ND (2)	Bismarck (2)	U North Dakota			2 Fam Med	2
NJ (10)	Jersey City (9)	Jersey City Med Ctr		9*		9
	Newark (1)	UMDNJ	1			1
NV (1)	Reno (1)	U Nevada at Reno		1		1
NY (42)	Albany (1)	Albany Med Ctr			1 Anesth	1
	Brooklyn (8)	Kingbrook H	1			1
		Long Island Coll H	2			2
		SUNY Downstate Med Ctr	1	3	1 Psych	5
	Buffalo (3)	SUNY Buffalo	2		1 PM&R	3
	Cooperstown (5)	Mary Imogene Bassett H	4		1 Radiology	5
	Far Rockaway (4)	St. John's Episcopal H	4			4
	Flushing (2)	NY H Ctr Queens	1		1 Surg	2
	New York (15)	Bronx-Lebanon	6			6
		Lenox Hill H	1			1
		Mt. Sinai Sch Med/VA Bronx	2	1	1 Surg	4
		NY downtown H	2			2
		St. Luke/Roosevelt H	1			1
		United H	1			1
	Syracuse (4)	SUNY Upstate Med U		4		4
OH (13)	Cincinnati (1)	U Cincinnati	1			1
	Cleveland (8)	Case Western U H	2		1 Surg	3
		Huron H	1			1
		Mt. Sinai H	4			4
	Toledo (1)	Toledo H			1 Surg	1
	Youngstown (3)	St. Elizabeth Hlth Ctr/ Northeast OH U Coll Med	3			3
PA (15)	Philadelphia (15)	Albert Einstein Med Ctr	14		1 Anesth	15
TN (8)	Knoxville (6)	U Tennessee	2	4		6
	Memphis (1)	U Tennessee at Memphis		1		1
	Nashville (1)	Meharry Med College	1			1
TX (25)	Amarillo (1)	Texas Tech	1			1
	Austin (1)	Austin Med Education Program	1			1
	Dallas (1)	U Texas Southwestern	1			1
	Galveston (2)	U Texas		1	1 Psych	2
	Lubbock (20)	Texas Tech U Hlth Science Ctr	18	2		20
WA (1)	Seattle (1)	U Washington			1 Surg	1
WI (1)	Madison (1)	U Wisconsin			1 Med/Neuro	1
WV (1)	Huntington (1)	Marshall U	1			1
Unknown	(3)				3 others	3
Total	Thai graduates		153	76	52 in other specialties	281
number of programs			60	30	36	100

H = hospital, Hlth = health, Med = medical/medicine, Coll = college, Ctr = center, Sch = School of, U = university, * = include 1 in combined pediatrics/neurology. For specialties, Med = internal medicine, Emerg = Emergency medicine, Fam Med = Family Medicine, Med/Neuro = combined medicine/neurology, MedPed = combined program in medicine and pediatrics, Neuro = Neurology, Ortho = orthopedic surgery, Path = Anatomic and clinical pathology, Ped = pediatrics, PM&R = Physical Medicine and Rehabilitation, Psych = Psychiatry, Surg = surgery

subspecialty fellowship training, while only 8 chose private practice in general medicine. Of 70 Thai medical graduates who had completed pediatric residency, 66 (94.3%) chose subspecialty fellowship training, while the other 4 continued their careers in general pediatrics.

The most popular subspecialty choices for Thai graduates after internal medicine were cardiology (N = 25), nephrology (N = 21), and hematology-oncology (N = 17). The rest were endocrinology (N = 14), pulmonary-critical care medicine (N = 14), gastroenterology (N = 13), rheumatology (N = 10), infectious diseases (N = 9), oncology (N = 5), neurology (N = 3), allergy-immunology (N = 3), genetics (N = 3) and geriatrics (N = 2).

The most popular pediatric subspecialty for Thai graduates were allergy-immunology (N = 14), endocrinology (N = 11), and cardiology (N = 7). The rest were neonatology (N = 6), infectious diseases (N = 5), pulmonary-critical care medicine (N = 5), hematology-oncology (N = 4), nephrology (N = 4), gastroenterology (N = 3), neurology (N = 3), pediatric emergency medicine (N = 3), and genetics (N = 1). The programs that accepted Thai subspecialty fellows were scattered all over the United States.

Although most physicians entered a fellowship program immediately after residency, 30 entered or completed a subspecialty fellowship program before residency training. These physicians had completed the training programs of the Thai Medical Councils in internal medicine or pediatrics prior to entry to the United States.

Of 9 Thai surgical residents, 2 were specialized in neurosurgery, 1 each in thoracic surgery, transplantation surgery, and vascular surgery. The rest were still in training.

Discussion

US GME is an alternative pathway for residency training for Thai physicians as well as international medical graduates around the world. Thai physicians who seek residency positions in the US GME must pass through several steps that include rigorous examinations, matching system, and interviews[8,9]. They do so on their personal effort and finance. There is no systematic registry of Thai physicians who went to accredited residency programs in the United States. The author attempted to build a database of Thai physicians in the US residency system based on personal network connection of Thai physicians, who are usually helpful to their countrymen, as well as an established database such as the ABMS directory, and extensive search in the internet and PUBMED databases. This report is the first of its kind on Thai medical graduate statistics in the United States. It is still possible that some Thai medical graduates could be missing from this database, particularly those who are not yet American Board certified, those who are most secluded from their peers, but the number would be very small and the conclusion is still valid.

During the past decade, there were approximately 21,000 graduate year 1 (GY1) residency positions annually, but there are about 16,000 US medical graduates each year[3]. The rest of the positions, about 5,000 per year, are filled by international medical graduates (IMG). In 1993, half of these IMG were J-1 visa holders, 25% of whom were Indians or Pakistanis. Thai medical graduates constituted only a small fraction of these IMG. By 1994, IMG constituted 25% of US GME workforce[3]. The author's observation that the number of Thai medical graduates in GY1 was highest between 1993 and 1994 is in agreement with the overall IMG trend in the same period.

Despite the stable proportion of GME positions, US graduates, and IMG after 1994, the number of non-US citizen IMG has decreased, from a high of over 3,000 in 1993 to less than 1,000 in the year 2000[10]. The opportunity for Thai medical graduates also decreased accordingly. Since all IMG are regulated and sponsored by the Educational Commission for Foreign Medical Graduates (ECFMG), the inclusion of clinical skill assessment (CSA) as a part of its USMLE test in 1993 might have contributed to this decline. The number of applicants for USMLE tests and ECFMG certificates issued has declined by half[11]. In 2001, the majority of IMG were permanent US residents, or US citizens who went to medical schools in the Caribbeans, while only 19% were J-1 visa holders[12].

The specialties that have the highest proportion of IMG are those with a large number of positions and least competitive choice among US graduates, namely, internal medicine (40% IMG), pediatrics (34% IMG), psychiatry, and family medicine (19.7% IMG in 1993). Much fewer IMG are in obstetrics & gynecology (6.1% in 1993), and general surgery (6.1%)[13]. There were the least number of IMGs in the most competitive specialties, namely orthopedics surgery, neurosurgery, otolaryngology, and dermatology[14]. The author's finding that about half of Thai graduates got into internal medicine, and a third into pediatrics are consistent with the overall opportunity for IMG in US GME.

The opportunity for IMG also depends on the US graduates' career choice. The primary care specialties (internal medicine, family medicine & pediatrics) were chosen by half of the US graduates in 1987, but were less favorable (43.1%) between 1991-

1993[15]. The US graduate career choice was influenced by income and lifestyles[16]. When there was a change in American health care from fee-for-service to managed care in 1990's[17], there was a shift toward primary care specialties. The number of GY1 US graduates who chose primary care residency increased from 31,777 (43.1%) in 1993 to 41,378 (53.2%) in 1997[15,18] These phenomenon coincide with the dwindling opportunity of IMG in primary care specialties during that period.

Similar to other IMGs, Thai medical graduates are clustered in a few programs. Most programs that accept IMG are often located in the cities[2] and in the populous states such as New Jersey (56% of residents are IMGs), New York (44%), Illinois (35%), Connecticut (33%), and Michigan (32%), while programs with the smallest proportion of IMGs are Massachusettes (21%), District of Columbia (21%), and California (12% in 1993). The residency programs that accept Thai graduates often accept a large number of IMGs. About 72% of IMGs are in these so-called IMG-dependent programs[19], while all other programs have very few IMGs. In contrast to other IMGs, Thai graduates were fewer (11%) in New York than the overall number (29%)[20]. This finding suggested that there was a preference for Thai IMG in these few programs, probably due to reputation made by an earlier generation of Thai residents.

After residency, IMGs tend to continue their graduate medical education as subspecialty fellows, while USMGs often work in private practice[10]. Thai medical graduates chose subspecialty training after residency in medicine (94%) and pediatrics (94%) to a much greater extent than the IMGs overall (44%), and USMG (27%)[21]. Since this report's focus is on residency program entry, the author did not collect data on their post-subspecialty fellowship career. Although the figure is uncertain, it is estimated that at least half of the Thai physicians eventually return to practice in Thailand.

Thai medical graduates who seek GME training in the USA represented a very small fraction of about 1,300 physicians graduated from Thai medical schools annually. It seems that only the most ambitious physicians would be willing to go through the hurdles of ECFMG certification and international application process. The overall opportunity for Thai medical graduate to enter a US residency program is still too small to pose a threat to physician supply for Thailand. Although Thai medical graduates have a mandatory 3-year medical service in the country, half of the Thai physician in the US GME entered the US training programs within the first 3 years after graduation, suggesting that they had planned during their medical school years. As many as 20% of physicians entered US GME beyond 6 years after medical graduation. This group of physicians most likely have completed residency training in Thailand and elected to redo their residency training in the US. Among these physicians, 31 entered US GME as subspecialty clinical fellowship and later entered primary care residency to be eligible for American Board certification.

In summary, only a few Thai medical graduates seek graduate medical education in the USA. The opportunity for Thai medical graduates to enter GME in the US is variable as it depends on policy and US medical graduate's specialty choices. Like other IMGs, Thais are more likely to be accepted in internal medicine or pediatric programs. The Thai medical graduates are more likely to be accepted in the 'IMG-friendly programs' that has prior Thai residents in their programs. Thais who are in US GME most likely choose to do subspecialty training. Thai physicians, therefore, should not be discouraged to seek residency training in the United States.

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แพทย์ไทยในระบบการฝึกอบรมแพทย์ประจำบ้านของสหรัฐอเมริกา ค.ศ. 1988-2003

อิศรางค์ นุชประยูร

ในสองทศวรรศที่ผ่านมานั้นมีความต้องการแพทย์ต่างชาติเพื่อทำงานในระบบการฝึกอบรมแพทย์ประจำบ้านในสหรัฐอเมริกาเป็นจำนวนมาก ได้รวบรวมข้อมูลแพทย์ไทยที่อยู่ในระบบการฝึกอบรมแพทย์ประจำบ้านอเมริกันในระหว่าง ค.ศ. 1988-2003 และวิเคราะห์แนวโน้มการรับแพทย์ไทย และโปรแกรมที่รับเข้าฝึกอบรม พบว่าแพทย์ไทยได้มีโอกาสเข้าเป็นแพทย์ประจำบ้านในอเมริการวมทั้งสิ้น 281 คนในช่วง 16 ปี โดยมีจำนวนเพิ่มขึ้นเรื่อย ๆ จนสูงที่สุดระหว่าง ปี ค.ศ. 1993-1994 หลังจากนั้นลดลงเหลือประมาณ 10-15 คนต่อปี แพทย์ไทยได้เข้าโปรแกรมการฝึกอบรมในสหรัฐเฉลี่ย 4.2 $\pm$ 3.3 ปี หลังจบแพทยศาสตรบัณฑิต ส่วนใหญ่ได้เข้ารับการฝึกอบรมในสาขาอายุรศาสตร์ (153 คน, 54.4%), และกุมารเวชศาสตร์ (76 คน, 27.1%), และส่วนน้อยได้เข้าฝึกอบรมในสาขาจิตเวชศาสตร์ (10 คน), ศัลยศาสตร์ (9 คน), ประสาทวิทยา (8 คน), วิสัญญีวิทยา (7 คน), และสาขาอื่น (18 คน) แพทย์ไทยส่วนใหญ่จะอยู่ในโปรแกรมการฝึกอบรมเพียงไม่กี่แห่ง แพทย์ไทยที่อยู่ในโปรแกรมด้านอายุรศาสตร์ประมาณครึ่งหนึ่งอยู่ในโปรแกรมเพียง 9 แห่ง ที่มากที่สุดคือ ศูนย์การแพทย์เทกซัสเทค เมืองลับบอค (18 คน), ศูนย์การแพทย์อัลเบอร์ตไอน์สไตน์ เมืองฟิลาเดลเฟีย (14 คน), และมหาวิทยาลัยฮาวาย เมืองโฮโนลูลู (13 คน) ตามลำดับ แพทย์ไทยที่อยู่ในโปรแกรมด้านกุมารเวชศาสตร์ประมาณครึ่งหนึ่งอยู่ในโปรแกรมเพียง 6 แห่ง ที่มากที่สุดคือ โรงพยาบาลไครสต์ เมืองโอคลอว์น (11 คน), มหาวิทยาลัยอิลลินอยส์ เมืองชิคาโก (11 คน), และศูนย์การแพทย์เมืองเจอร์ซี (9 คน) ตามลำดับ หลังจบการฝึกอบรมแพทย์ประจำบ้าน แพทย์ไทยส่วนใหญ่ (94.5%) จะฝึกอบรมในสาขาต่อยอด โดยเฉพาะทางด้านโรคหัวใจ (25 คน), ด้านโรคไต (21 คน), และโรคเลือดและมะเร็ง (17 คน), ส่วนสาขากุมารเวชศาสตร์นิยมฝึกอบรมต่อยอดด้านโรคภูมิแพ้และภูมิคุ้มกันในเด็ก (14 คน), ด้านโรคต่อมไร้ท่อในเด็ก (14 คน), และโรคหัวใจเด็ก (7 คน) ตามลำดับ โดยสรุปแพทย์ไทยในระบบการฝึกอบรมแพทย์ประจำบ้านในสหรัฐอเมริกายังมีจำนวนไม่มากนัก ข้อมูลเหล่านี้อาจเป็นประโยชน์แก่แพทย์ที่สนใจเข้าฝึกอบรมในสหรัฐอเมริกา