PEDIATRIC RESIDENCY TRAINING IN THAILAND

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Ten years ago, 1.5 million children were born in Thailand every year. This number has dropped to 800,000 per year (for the year 2005). It is expected in the next few years this will drop further to 700,000 per year. Although the number of qualifying pediatricians every year is increasing, the number of children is decreasing.

In Thailand there are 21 medical schools: nineteen public and two private institutions. There are 80 specialty and subspecialty training programs (38 main and general specialties, 42 subspecialties). These programs are accredited every five years. There are altogether 55 accredited institutions for residency training (across all specialties) and 113 internship programs, which are accredited annually. Following medical school graduation, it is compulsory for graduates to work in a rural area for one year. In order to apply to start a new medical school, the Thai Medical Council requires the setting of curriculum, performance, and process standards of that particular institution. Table 1 shows the number and distribution of Thai medical graduates. Forty percent of Thai Medical graduates work in Bangkok, with the remaining 60% working outside Bangkok. Following high school, students train for six years to gain a medical degree in Thailand. Following graduation, doctors register to become members of the TMC (Thai Medical Council), and gain full membership following successful completion of licensing examinations (Fig 1). All doctors who wish to practice in Thailand, regardless of institution or country of qualification, must take these examinations.

For graduates of public universities, it is compulsory to work as interns in government hospitals for three years. The first of these three years aims to gain a clinical experience certificate, which is required prior to applying for residency training programs. Depending on which residency training program is chosen, applicants may have to work for government hospitals for

Table 1
Numbers and distribution of physicians in Thailand, 2013.

	Male	Female	Total
Total	26,778	18,386	45,164
Not in Thailand	406	77	483
Deceased	1,408	301	1,709
Bangkok	9,936	7,238	17,174
Outside Bangkok	13,819	10,089	23,908

Fig 1–The steps of learning.

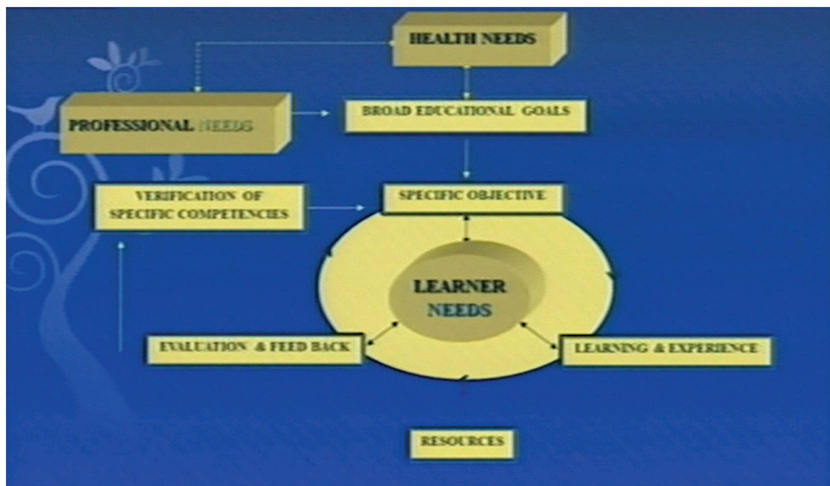

Fig 2–The model of curriculum development.

- General Pediatrics 1 programs 3 years
- Subspecialty 13 programs 2 years
  - Neonatology & Perinatology
  - Allergy and Immunology
  - Pulmonology
  - Cardiology
  - Hematology
  - Neurology
  - Infectious
  - Nephrology
  - Endocrinology
  - Developmental Pediatrics
  - Gastroenterology
  - Dermatology
  - Nutrition
- New subspecialty : Genetics and Rheumatology 2014

Fig 3–Pediatric training program in Thailand.

Core Basic Requirement: Year 1-2

Inpatient	6 mo.	OPD/ER	4 mo.
Subspecialty	4 mo.	NICU	2 mo.
PICU	2 mo.	Child dev	1 mo.
Adolescent	1 mo	Normal NB	1 mo
Community/Social Ped	1 mo	Elective	1 mo.
school health		Vacation	1 mo

Year 3

Leadership	6 months (Chief)
Instituitional programme	6 months

Fig 4–The learning experience.

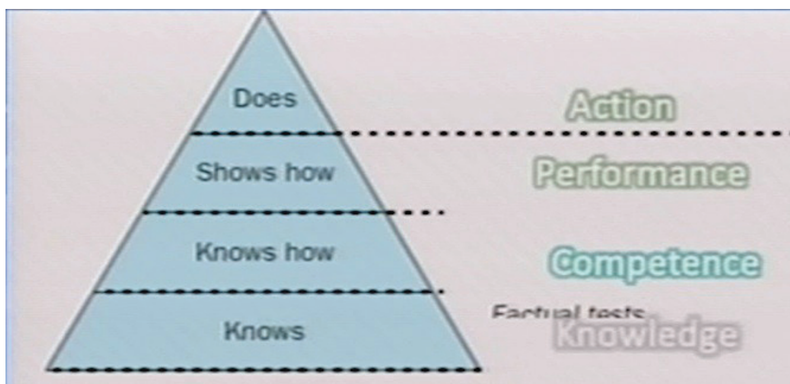

Fig 5–Principles of assessment.

Source: Miller GE. The assessment of clinical skills/competencies/performance. *Acad Med* 1990; 65: 65-7.

	year1	year2	year3
Assessment			
▪ Chart audit	√	√	√
▪ Portfolio	√	√	√
√	√	√	√
√	√	√	√
√	√	√	√
√	√	√	√
▪ OSCE		√	
▪ MCQ		√	
▪ CRQ			√

Fig 6–Methods of assessment used in Thailand.

Table 2
Pediatric subspecialties in Thailand, 2012.

Pediatric specialty	*n*
Neonatology	150
Allergy	120
Respiratory	119
Cardiology	108
Infectious disease	81
Developmental	74
Renal	67
Endocrinology	62
Hematology	60
GI	44
Oncology	28
Dermatology	20
Nutrition	19

a total of three years, or some can apply immediately following their first year of internship. Required residency training programs are three years, with a few exceptions, such as surgery, which requires four-to-five years of training. Following this, doctors have the option to continue onto subspecialty training.

There is one general pediatrics program in Thailand that lasts three years, and thirteen subspecialty programs that require two further years of training. There are a further two specialties certified by the Royal College of Pediatricians, but not by the Thai Medical Council, in Genetics and Rheumatology. There may be subspecialty training programs offered in Emergency Pediatrics, Pediatric Critical Care, and Adolescent Medicine that are planned in the future.

Of the total 45,186 doctors in Thailand, 8% are Pediatricians, with 3,266 of those being General Pediatricians, and 1,025 being Subspecialists. Each year, there are 135 new first-year pediatric residents distributed among some 21 pediatric training centers nationwide (Table 2).

The model of curriculum development used in Thailand focuses on three main areas: professional needs, health needs, and learner needs (Fig 2).

In recent years, there has been a lot of discussion about the concept of people-centered healthcare, which aims to achieve better outcomes for individuals, families, communities, health practitioners, health care organizations, and health systems. Pediatric training in Thailand tries to incorporate this into the training of its students.

Pediatric Residency Training in Thailand began in 1972. Prior to this, to train to become a pediatrician, doctors had to travel overseas to train. The problem with this system was the ‘brain drain’ of many doctors travelling overseas for training and not returning to Thailand, which led to the initiation of local pediatrics training for Thai doctors. The training program has undergone five revisions, the most recent of which occurred in 2011.

In 2009, a national child and adolescent health survey was carried out in Thailand, reviewing 17 million outpatient visits, looking at the types of diseases that Thai children and adolescents presented with. The incidence of infectious disease had been decreasing, but there was the emergence of new problems, namely, more complicated cases, developmental problems, environmental problems, mental health problems, adolescent problems, children in difficult situations, and accidents.

The structure of the Thai Pediatric Residency Training Program consists of

goals, contents, the learning experience, evaluation, and quality assurance. Professional competencies that are emphasized at the undergraduate level are professional habits, attitudes, morals and ethics; communication and interpersonal skills; scientific knowledge of medicine; patient care; health promotion at the personal, community and population levels; and continuous professional development. The Residency in Pediatrics aims to add to these competencies: leadership, health supervision, and child advocacy. In accordance with recent pediatric residency reviews in the US, the Thai training program in the future would also like to allow training that is more flexible.

Fig 3 summarizes the structure of Thai Pediatric Residency training. There is slight variation between different hospitals.

The institutional program during the third year will depend on the strengths of the training institution and thus opportunities available, as well as the career goals of the trainee and the subsequent decision on training details. During the three years training, residents are expected to learn how to manage all pediatric emergencies, how to manage certain non-emergency diseases, recognition of appropriate cases to refer, and also a knowledge of the basic sciences (Fig 4).

Evaluation of residents is carried out with formative assessments, summative assessments, and at least one research project (Fig 5). The formative assessment is carried out annually using PIE (Pediatrician in training examination), chart audits, a portfolio, global rating scales (360 degrees), and communication skills. The summative exam assesses residents with OSCEs (objective structured clinical examinations), MCQs (multiple choice questions), and CRQs (constructed response questions) and submission of a research project (Fig 6).

Q&A

In the future, Thailand will allow the training of foreign residents. Can you elaborate on this new direction of training?

In the past, there has been allowance for foreign residency training in Thailand, such as trainees from Lao PDR and Bhutan; however, the problem with that system was they were not able to take residency examinations, as they did not have Thai Medical Licenses. In the future this will change, and foreign graduates will be able to take Pediatric Licensing Examinations in Thailand and will also be able to work in designated hospitals with the provision of temporary medical licenses by the Thai Medical Council.

Does Thailand employ any external examiners for the assessment process?

Thailand does not use the external examiner system. It uses a universal standardized national examination that is set up by a training committee from the Royal College of Pediatricians of Thailand. Questions for assessment are pooled from hospitals around the country, and a selection committee chooses which will be used in the examination. For Objective Structured Clinical Examination (OSCE), patient cases are taken from hospitals out of the local vicinity.