

Pharmacy Education in Asia and the Asian Assoc of Schools of Pharmacy

Motoko Kanke, Ph.D.
Visiting Professor, Khon Kaen University, Thailand
Visiting Professor, Keio University, Japan
Professor Emeritus, Kyoritsu University of Pharmacy,
Japan



1

Asian Association of Schools of Pharmacy (AASP)

- Established in April 2001
with >100 Asian Educators from 16
countries.
- Registered in Singapore
- Started with 10 BOD members in 2001 →
20 BOD members (14 countries) by 2008



2

Objectives of AASP

1. To promote cooperative advancement of
pharmacy education & research among all
member schools.
2. To stimulate the exchange, and
dissemination of ideas and information of
education, science and practice among
pharmaceutical/other health care
educators.



3

AASP Activities



- 2-3 BOD meetings per year
- Publication of AASP Newsletter
- Faculty and students exchange among member schools
- Holding of Biennial Conferences
 - 1st Conference, Beijing, China, 2004
 - 2nd Conference, Bangkok, Thailand, 2005
 - 3rd Conference, Makati, Philippines, 2007
 - 4th Conference, Penang, Malaysia, 2009 and
 - 5th Conference, Bandung, Indonesia, 2011

4

Current Plans of AASP for Asia



- Establish database of current basic information on Pharmacy Education and Pharmacist Licensure System in Asia
- Design the minimum core curriculum of Pharmacy Education in Asia
- Make and conduct strategic plans for the next 10 years starting 2010
- Encourage and increase individual and institutional members
- Organize international educational workshops for the Asian academy
- Promote inter-continental collaboration
- Seek financial support for the above plan of activities

5

Number of Schools of Pharmacy in Asia



- From a total of 39 countries in Asia
- There are 486 Schools of Pharmacy in 2008
- In India alone, total no. of schools reported is 87
 - Schools of 4 year BS course: 600+
 - Schools of 2 year Diploma course: 520+
- In China, reported was 77
 - About 280 including Pharmaceutical Dept. in Chemistry Universities, etc.

6

Diversity of Pharmacy Education in Asia



- Entry level 6 year or 2+4 year curriculum
 - 5 year curriculum
 - 4 year curriculum
 - 3 year curriculum
 - 2 year curriculum (Diploma program, postgraduate degree)
- With specialization-**
- Major in Pharmacotherapy or Pharm. Science

7

Diversity of Requirements for Pharmacist Licensure



Country	Licensure Requirements
Australia	4 year B Pharm or 2 yr M Pharm + 1 year (2000 hrs) pre-registration training followed by State-based Pharmacy Board examination. National Board examination and registration for future implementation.
China	4 year BS Pharm + 3 year work experience + National Exam
Hong Kong	3 year + 1 year internship at hospital
Indonesia	4 year <i>Sarjana Farmasi</i> (BS Pharmacy)+1 year Pharmacist education & training terminated by University Exam approved by Pharmacist Association
Japan	6 year + National Board Exam
Korea	2 + 4 year + National Board Exam
Malaysia	4 year B Pharm + Provisional Registered Pharmacist, national license exam (1 yr) + 3 year compulsory government service
New Zealand	4 year accredited Bachelor of Pharmacy Degree + 1 year accredited pre-registration program
Philippines	minimum 4 year BS Pharmacy + 960 hrs internship in hospital / community / manufacturing pharmacy

8

Pharmacy in Japan



- **Pharmacy Program, 6-year**
→ Graduates can apply for Pharmacist Licensure Exam
- **Pharmaceutical Sciences program, 4-year**
→ Graduates cannot apply for Pharmacist Licensure Exam
→ Graduates are expected to go to graduate school (researcher path)

9

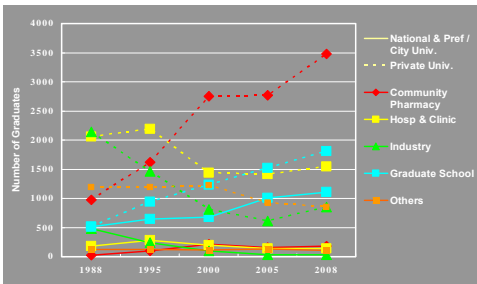
Total No. of Students enrolled in 2009



	6 yr Ph'cy	4 yr Pharm.Sci.	Total
Public U	706 (17U)	764 (17U)	1,470 (17U)
Private U	11,294 (57U)	550 (13U)	11,844 (57U)
Total	12,000 (74U)	1,314 (30U)	13,314 (74U)

10

Employment of New Graduates at Private and Public Universities



11

No. of Registered Pharmacists by Types of Practice (As of Dec 2006)



Total number of pharmacists:	252,533
Community Pharmacy	49.6%
Hospital/clinic	19.4
Industry (D,R,MR)	11.9
Drug sales (drug store)	6.1
University	3.5
Hygienic institute	2.4
Others	7.2

(Total number of physicians: 277,927)

12

Pharmacy in India



- D. Pharm (Diploma in Pharmacy)
2 yr program at 520 institutions
- B. Pharm (Bachelor of Pharmacy)
4 yr program at 600+ institutions
graduates: 40,000/yr
- Pharm.D. (Doctor of Pharmacy) 6 yr Entry level or
3 yr post BS at 31 institutions, 900 graduates/yr
- M. Pharm at 140 institutions, 6,000 graduates/yr
- Ph.D.

16

Pharmacy in Indonesia



- Population of Indonesia: 220 million
- Number of pharmacists: ~ 23,000 (~13,000 working as community pharmacists)
- Ratio community pharmacist: citizen 1:10,000
- Schools of Pharmacy: 63 (vary in quality)
- Pharmacy graduates: 3,000
- 4 year Program (BSc in Pharmacy);
Pharmaceutical Science and Technology (product oriented)
Community and Clinical Pharmacy (patient oriented)
- PreRegistration Training (Pharmacist Program)
for 1 year after graduating with BS

17

Pharmacy in Malaysia



- Population: 27 million
- Schools of Pharmacy: 13 (5 public and 8 private u.)
After 4 yr at BPharm program, 1 year of provisional registration + 3 years of compulsory government service
- Registered pharmacists: 5,700
70% are in community pharmacy, 15% in hospital pharmacy, 5% in commercial pharmacy, 5% in regulatory and enforcement, 5% industrial pharmacy, academics, research institutes

18

Pharmacy in Thailand



- Total No. of pharmacists is 22,000+
- Ratio to population: 1:3,400
- No. of graduates: 1,200; New enrollment is 2,200+
- 6 year program (Pharm D) ← all schools shift by 2010 with clerkship rotations (2000 hr)
- 5 year program (BS)
Post graduate training program
- Board Certification in Pharmacotherapy: 4 yr
- MS/PhD programs in Clinical Pharmacy
coursework+rotation+advanced rotation for thesis
- MS / PhD in Pharm Sci

19

Pharmacy in Taiwan



- **Population of Taiwan: 23 million**
- **Number of pharmacists: ~33,000, (~21,000 R.Ph.; ~80% work in health delivery system, 28% in hospital, 28% in community pharmacy, 24% in private clinics)**
- **Ratio of pharmacist: citizen = 1:1,125**
- **Schools of Pharmacy: 7 (vary in quality)**
- **Graduates: ~ 1000/yr**
- **Passing Rate of licensure Exam: 30%/exam; 50%/year**


20

Pharmacy Education Overview in Asia



- Length of program differs from country-to-country, but increases beyond four years
- Great deal of similarity in content in many countries including increased focus on clinical pharmacy
- Graduate destinations differ from country-to-country, among community pharmacy, hospital and manufacturing pharmacy
- All countries require some competency-based assessment and government licensure

21



Thanks!

22
