

## 5.7 Country case study: Vietnam

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### Summary

- Pharmacy workforce development has only taken place over the last two decades after 30 years of conflict.
- To overcome the shortage of pharmacists in the mountainous and rural areas, the Government has implemented strategies to improve the training and salaries of pharmacists and technicians.
- Five pharmacy schools were newly opened in the provinces. The transition from a state-controlled central planning system to a market economy has stimulated pharmaceutical workforce development through expansion of the private sector.
- Government investment in pharmacy education has increased significantly over recent years.

### 5.7.1 Background

#### *Pharmacy practice and regulation*

For many years the Government and Ministry of Health (MOH) have tried to guarantee the supply of good quality medicines at affordable prices. Now there is one pharmacy outlet for every 2,000 people and medicines are available in every corner of the country, even in rural areas. Expanding the pharmacy workforce has been a key strategy to improve access to medicines. Efforts have been underway within the pharmaceutical sector to improve practice standards, quality of care and regulation.

The total number of pharmacists in Vietnam in 2007 was 9,807.[1] But in practice, the total number of pharmacists and technicians may be higher, because this does not include pharmacists working in sectors such as the military, police and the Ministry of Agriculture. For many years pharmacists were mainly employed in the pharmaceutical industry and wholesalers, adopting quality control and distribution and pharmaceutical care roles such as in the private sector (community pharmacy) had not been developed. Legislative systems, supply chain management and pharmacy education have developed and grown over the last two decades.

Before 1975 all pharmacies and pharmaceutical factories in North Vietnam belonged to the State. After liberation and unification of the country from 1975 to 1987, only 22 state pharmaceutical manufacturers and three wholesale companies were responsible for the entire production and supply of medicines for the whole country. With the process of privatisation, the government cannot hold more than 51% ownership of companies. Statistics from the Drug Administration indicate that there were around 800 pharmaceutical distributing companies and 39,016 pharmacy outlets (pharmacies, desks, kiosks) in 2008. Only pharmacists can own pharmacies after completing five years of practice or two years of practice if they intend to open a pharmacy in a rural area. For smaller outlets, pharmaceutical technicians can receive a licence after two years of practice.

Policies and legislature such as the National Drug Policy (1996), Good Manufacturing Practice (1997), Drug Law (2005) and Good Pharmacy Practice (2007) were instituted to address issues of rational use of medicines, good practices, and pharmaceutical care for the first time. Vietnam also became member of ASEAN (Association of Southeast Asian Nations), World Trade Organisation and other international organisations. A key priority of the government is to meet global practice standards and implement the ASEAN agreement for harmonisation of services and service providers (eg – education).

#### *Historical context*

There was limited local health workforce development before 1945. The first Medical school was established in 1902 and a pharmacy faculty in this institute was set up in 1914. But from 1914 to 1917 only four pharmacists were trained and passed the examination in France. It was only after 1934 when the Paris Medical Institute sent one professor to Vietnam to lead an examination council that Vietnam was granted the right to teach and issue qualifications for physicians and pharmacists.

During the war (1946-1954), many rapid training courses for doctors, pharmacists, nurses and other health workers were carried out. Pharmaceuticals were severely lacking throughout this period and traditional medicines sources from the jungles formed the mainstay of therapeutic agents use. There was limited infrastructure and facilities for health provision and care was provided under basic conditions in underground shelters.

From 1954 to 1975 Vietnam was divided into two parts. North Vietnam developed the primary health care approach and built pharmaceutical factories to produce generic essential medicines. All facilities belonged to the Government. Medicines were distributed from a central site to districts by the state pharmacies. There were no private pharmacies and pharmacy schools. Based on the programmes of medical and pharmacy education in socialist countries, the Department of Education in the Ministry of Health prepared teaching materials which were sent to the medical and pharmacy schools all over the country.

### Scale up of health professional training

From 1970, the MOH decided to develop and expand higher education to train health professionals in some of the leading universities in parallel with sending physicians and pharmacists to train abroad.

The pre-service training programme is six years for physicians, five years for pharmacists and two years for pharmacy technicians. From 1975 to 2007 the total number of physicians and pharmacists increased fivefold and threefold respectively (Table 1).

Table 1. The total number of human resource from 1945 to 2003

Name of title	1945	1954	1965	1975	1985	2003
Physicians	51*	59*	790*	8,300*	19,000	45,073
Pharmacists	21*	37*	159*	2,700*	5,600	6,025

\*The figures from 1954 to 1975 only represent North Vietnam.

Data source: Report of the Department Science and Training in the meeting of 50 years of Department.[2]

At present there are seven pharmacy schools in Vietnam. In 2007 a total of 817 pharmacists graduated from five of these universities (Table 2). Two newly established schools of pharmacy had yet to graduate pharmacists.

Table 2. Pharmacy graduates in 2007

Pharmacy school	Graduates
Hanoi Pharmaceutical University	398
Ho Chi Minh city Medical and Pharmacy University	185
Cantho Medical and Pharmacy University	51
Hue University	66
Thainguyen Medical University	117

## 5.7.2 Key issues

### Regulation

On the 14th of June 2005, the Vietnam National Assembly had passed the Drug law, in which not only the regulations on manufacturing, distribution, quality control, inspection of drugs were promulgated, but it also set the policies for the pharmaceutical sector, including pharmacy workforce development.

The regulatory authority issued many regulations, such as: regulation for registration of medicines, pharmaceutical practices, guidelines for Good Practices, Drug and Therapeutic committees in hospitals; new programmes for pharmaceutical institutes and pharmacy schools amongst others.

In the past the government had to concentrate attention on the supply of drugs. Problems of training and continuing education for pharmacists, education of inspectors, and workforce for the rural areas did not receive adequate attention. Now many activities and campaigns in the pharmaceutical field are developed. The campaign against counterfeit drugs, improvement of quality of drugs, introduction of legislation and standards, including Good Pharmacy Practice (GPP) have had the positive effect of the increasing awareness of appropriate medicines use in the community and the responsibility of pharmacists. Although the Vietnam government has overcome the workforce shortage, there are still many challenges affecting workforce planning and development.

Despite efforts, we still face some limitations and problems, such as the availability of some medicines due to high prices, medicine storage conditions, and competence of pharmacists and technicians in hospital pharmacy. All these issues require long-term strategies and investment.

### Inequitable pharmacy workforce distribution

The majority of the workforce is concentrated in the urban or in the more socio-economically developed regions whilst at the same time there are workforce shortages in the rural areas. Students that receive scholarships from the government are required to serve in defined regions upon graduation.

Table 3 describes the distribution of the pharmacist workforce across the eight regions in Vietnam.

Table 3. Pharmacist workforce distribution

Region	Pharmacists with post-graduate degrees	Pharmacists with university degrees
1. In the Red-river delta	30	397
2. In the North- East	4	275
3. In the North-West	5	81
4. In the North of middle part of Vietnam	7	201
5. In the South of middle part of Vietnam	4	151
6. In the West plateau	0	74
7. In the Mekong delta	10	338
8. In the Eastern part of South Vietnam	27	389

Data source: Health statistic year book 2007. [1]

When Vietnam began the “DOIMOI” policy for economic reform, government allowed the private sector to open pharmacies. This spurred many people to attend pharmacy schools and training classes, paying mainly out of pocket to cover their education. A number of different kinds of private pharmacies (pharmacies, pharmacy desks, kiosks) were allowed to open, especially in the big cities. The inequitable distribution of human resources resulted – the mountainous and rural regions lack pharmacists, but the urban and rich deltas of rivers are in excess. A significant part of the workforce is concentrated in the industry (about 1/10 of factory workers are pharmacists). Many young pharmacists go to work as drug-representatives for multinational companies. Pharmacy outlets are mainly run as a business and the concept of “Pharmaceutical care” and “patient focused care” was only introduced when the Vietnam Pharmaceutical Association implemented GPP two years ago.

### Capacity

There is a shortage of academic faculty in schools of pharmacy, particularly in new schools of pharmacy and in relatively new fields such as social pharmacy, pharmaceutical care and clinical pharmacy. Lack of accessible information resources also has an influence on pharmacy practice as not all pharmacists can read English or access the internet. Research and development in pharmaceutical sciences is weak and there is a need for the development of researchers and local expertise. Capacity building is required to build local resources, information and expertise.

### 5.7.3 Strategies

To reach the target of 1 pharmacist for 10,000 people as described in The Strategy for Pharmaceutical sector Development up to 2010, the Government allowed the establishment of new pharmacy schools and has set directives for the expansion of existing schools.[3] Table 4 describes the targets set by the Government for the number of pharmacist graduates from each pharmacy school. Most institutions were projected to at least double their 2007 output, bringing the total number of graduates to 2130 by 2009.

Table 4. Number of pharmacist graduates from schools of pharmacy

University	2007 graduates	2008 target	2009 target
Thainguyen Medico-Pharmaceutical institute	0	200	200
Danang University	0	50	50
Hue Medico-Pharmaceutical institute	66	180	180
Thaibinh Medical institute	117	120	120
Hanoi Pharmaceutical college	398	860	860
Cantho Medico-Pharmaceutical institute	51	230	300
HoChiMinh city Medico-Pharmaceutical inst.	185	380	420
<b>Total</b>	<b>817</b>	<b>2,020</b>	<b>2,130</b>

Source: Department Science and Training 2009

Pharmacy workforce development strategies:

1. To overcome the pharmacist shortage in the rural areas, the Government and MOH will:
  - allow pharmacy schools to receive students from under-served provinces and rural areas without a competitive examination.
  - organise work-place based education for workers and technicians from health offices, factories or companies, who are unable to attend academic programs.
  - develop bridging training programmes for pharmacy technicians to train as pharmacists.
  - send volunteer doctors and pharmacists to help and to work for a short period.
  - increase the salaries for pharmacists to work in the countryside or rural areas.
2. Upgrade teaching facilities in government universities: classes, laboratories, teaching instruments, materials.
3. Model workforce needs to strike a balance between the training output and utilisation of cadres in the different sections and areas to avoid oversupply or shortages of pharmacists .
4. Establish projects for the post-graduate training of pharmacists and scientists through government funds or in cooperation with foreign countries/organisations.
5. Implement different measures to encourage Vietnamese pharmacists and scientists from abroad return to Vietnam to invest or open companies, schools or to work.
6. Promote cooperation between pharmacy schools and research centres, hospitals and industry.
7. Carry out the training profitably within government schools, so that it not only covers the fee for training but also enables future investment in education development.

Some provincial government authorities have improved the salaries and working conditions of pharmacists to address shortages. For example, the provinces of Ha Nam and Lao Kai have doubled the salaries for pharmacists to encourage the recruitment and retention of pharmacists.

Barriers to strategy implementation:

- Lack of qualified teachers.
- Government does not bind recently graduated pharmacists to work for a defined period in the rural areas. Pharmacy students mainly pay for their education by themselves, so they are not bound to the government to provide public service.
- Slow development of pharmaceutical care roles, particularly in Ministry of Health and hospital settings

where physicians have firmly established patient care roles.

- Limited information and exchange of teaching programmes and experiences with foreign institutes.
- Dispersed management and responsibility for pharmacy workforce development between various stakeholders such as Universities, Ministry of Education, and Ministry of Health. Professional bodies have limited input into strategic development processes.

#### 5.7.4 Lessons learnt

Workforce planning must be based on the requirements of employers (industry, provinces). With the changing roles of pharmacists in the community, it is increasingly important to pay attention to the quality of education.

With the assistance of foreign specialists for concrete problems, progress has to be better achieved. For example: Swedish International Development Agency (SIDA) assisted Vietnam in developing the National Drug Policy and medicines legislations; FIP and the Western Pacific Pharmaceutical Forum and Monash University assisted in Good Pharmacy Practice.

Cooperation between pharmacy training institutions with hospitals (for pharmaceutical care, hospital pharmacy practice), industry (for utilisation of educated students), and research centres (for R&D) is good idea, but must be planned. The exchange of information and teaching experiences between countries can improve the education development process.

Strategies beyond retention are required to address the shortage of pharmacists in mountainous and rural islands. Coordination is necessary between Central government and provincial authorities to incentivise young pharmacists to work in areas of need.

### 5.7.5 Outcomes and future actions

By 2010 the target of 1 pharmacist per 10,000 population can be reached. Greater attention on quality of education must be paid during this period of workforce expansion and scale up of training. All programs of training in the pharmacy schools shall be revised in correspondence with the current requirements. The Department of Science and Training are currently working on the development of indicators to assess each program.

Future actions required to develop the pharmacy workforce include:

- Increasing government investment in equipment for laboratories, teaching programs;
- Coordinating education development and planning with workforce needs defined by provinces, regulatory bodies and major employers (eg – industry);
- Redressing rural-urban imbalances in workforce distribution;
- Establishing plans for continuing education for pharmacists;
- Developing quality indicators for pharmacy education programs;
- Sending pharmacists abroad for post-graduate training.
- Improving English language skills among pharmacists and access to internet to enhance capacity building and access to information;
- With the cooperation of the Vietnam Pharmaceutical Association, building relationships between pharmacy schools in Vietnam with the International Pharmaceutical Students' Federation, FIP, WPPF and other organisations internationally and within the ASEAN region.

### References

1. *Health Statistics Year Book 2007. Ministry of Health, Vietnam.*
2. *Report: 50 years Department Science and Training, Ministry of Health, Vietnam.*
3. *Strategy for Pharmaceutical sector Development up to 2010. Ministry of Health. Vietnam. 2002.*