1. Health Workforce

Health workforce is an input that is extremely important for health service systems. The production of health personnel has been undertaken continuously, resulting in an increase in the number of health personnel and their distribution to various health facilities within and outside MoPH. However, there are some problems in this regard, particularly the inadequacy of health personnel, compared with the suitable standard, the problem of distribution to cover all geographical areas, and the quality of personnel, which might be associated with personnel’s workloads.

In analyzing the health workforce situation, the following aspects are taken into consideration: quantity of existing personnel, production situation, loss situation and distribution situation, as shown in Figure 6.2.

Figure 6.2 Aspects in the analysis of health workforce situation

1.1 Situation and Trends in Quantity of Health Workforce

1.1.1 Trends in Ratio of Population to Health-care Provider by Type of Personnel

The overall situation of health workforce during the past period, using the ratio of population to health-care provider, has shown that the trends in quantities have been improving steadily (Figure 6.3).
**Figure 6.3** Ratios of population to health-care provider, 1979–2009


Note: In 1979, data were adjusted and the ratios were recalculated due to the incompleteness of data.

Data from the MoPH health resource survey might be inaccurate due to incompleteness of data obtained, especially for dentists; the population/dentist ratio reported by the Bureau of Policy and Strategy was 1.6-fold to 2.3-fold lower than that revealed by the Dental Health Personnel Report of the Department of Health  (Figure 6.4).
1.1.2 Health Workforce by Agency

1) Doctors

In 2009, there were 35,789 physicians or medical doctors who were alive and living in Thailand (Medical Council, 2010). But according to the report on health resources survey of 2009, there were only 19,089 doctors, which was 13% lower than that reported in the 2008 survey, due to data incompleteness. Therefore, in 2009, based on the data from the Medical Council, the proportions of doctors were recalculated for each agency and region as shown in Figures 6.5 and 6.21; and it was found that the proportion was lower in the public sector but higher in the private sector, i.e. from 93.2% in 1971 to 82.9% in 2009 in the public sector and from 6.7% to 17.1% in the private sector during the same period (Figure 6.5).

Most of the doctors in Bangkok work for other ministries, followed by the private sector, while in the provinces, most of them work for MoPH (Figure 6.6); this feature is similar for all professions.

Sources:  
- Report on Health Resources Survey, Bureau of Policy and Strategy, MoPH.  
- Report on Dental Health Personnel, 1999–2009, Department of Health, MoPH.
Figure 6.5  Proportions of doctors by agency, 1971–2009


Note: As the 2009 data were incomplete, the proportion and number of doctors for each type of agency were recalculated using the formulas below:

Proportion for each agency = (New number of doctors by agency/ Number of all doctors alive and living in country) x 100

New number of doctors for each agency = Proportion of doctors by agency from 2009 MoPH report x Number of all doctors alive and living in country
2) Dentists

In 2009, Thailand had a total of 10,571 dentists who were alive and living in Thailand (Dental Council, 2010), whereas the 2009 health resources survey revealed that there were only 4,278, which was 11% lower than that found in the 2008 survey due to data incompleteness. So, for 2009, the figure from the Dental Council was used for recalculating the proportions of dentists by agency and region as shown in Figures 6.7 and 6.22. Overall, it was found that the proportion of dentists was declining in the public sector (MoPH, other ministries, state enterprises and local agencies) from 96.2% in 1971 to 92.8% in 2009, but rising in the private sector from 3.8% in 1971 to 7.2% in 2009 (Figure 6.7).

As for dentists in Bangkok, most of them work for other ministries, followed by the local agency (i.e. Bangkok Metropolitan Administration, or BMA) and the private sector, while in other regions, most of them work for MoPH (Figure 6.8).

Figure 6.7  Proportions of dentists by agency, 1971–2009


Note: As the 2009 data were incomplete, the proportion and number of dentists for each type of agency were recalculated using the formulas below:

Proportion for each agency = (New number of dentists by agency/ Number of all dentists alive and living in country) × 100

New number of dentists for each agency = Proportion of dentists by agency from 2009 MoPH report × Number of all dentists alive and living in country
However, according to the dental personnel survey of the Department of Health covering 93% of all dentists alive and living in the country, the number being 1.6-fold to 2.3-fold greater than that shown in the health resources report, and the proportion of dentists was mostly in the private sector while only 30% worked for MoPH. The proportions of dentists by agency did not change much (Figure 6.9).
3) Pharmacists

In 2009, there were a total of 24,401 pharmacists alive and living in the country (Pharmacy Council, 2010), while the 2009 health resources survey showed that there were only 7,689, which was 10% lower than that for the 2008 survey due to data incompleteness. Thus, for 2009, the data from the Pharmacy Council were used for recalculating the proportions of pharmacists by agency and region as shown in Figures 6.10 and 6.24. It was found that, during 1971–1985, about half of pharmacists (approximately 50%) worked in the private sector (drug manufacturing industries, import companies and drugstores), while only 43.0%–50.9% worked in the public sector. But after the government launched the compulsory working for newly graduated pharmacists in 1984 and 2006, the proportion of pharmacists working in the public sector especially MoPH rose to 73.4% in 2009, while that in the private sector dropped to only 14.7% in the same year (Figure 6.10).

Most of those pharmacists in Bangkok work in the private sector, which is close to that for other ministries, but for other regions, most of them work for MoPH (Figure 6.11).

Figure 6.10 Proportions of pharmacists by agency, 1971–2009

Note: As the 2009 data were incomplete, the proportion and number of pharmacists for each type of agency were recalculated using the formulas below:

Proportion for each agency = (New number of pharmacists by agency/ Number of all pharmacists alive and living in country) x 100

New number of pharmacists for each agency = Proportion of pharmacists by agency from 2009 MoPH report \times Number of all pharmacists alive and living in country
4) Professional Nurses

In 2009, Thailand had 120,948 professional or registered nurses actually working and living in the country (Nursing Council, 2010). But the 2009 health resources survey revealed that there were only 101,760 professional nurses or 7% lower than that found in the 2008 survey due to data incompleteness. Thus, in 2009, the figure from the Nursing Council was used to recalculate the proportions of nurses by agency and region as shown in Figures 6.12 and 6.25, which showed that the proportion in the public sector (MoPH, other ministries, state enterprises and local agencies) was declining from 93.1% in 1971 to 89.3% in 2009, while that in the private sector was rising from 6.8% in 1971 to 10.7% in 2009 (Figure 6.12).

Most of the nurses in Bangkok work for other ministries, while in other regions they mostly work for MoPH (Figure 6.13).
Figure 6.12  Proportions of professional nurses by agency, 1971–2009


Note: As the 2009 data were incomplete, the proportion and number of nurses for each type of agency were recalculated using the formulas below:

Proportion for each agency = (New number of nurses by agency/ Number of all nurses alive and living in country) x 100

New number of nurses for each agency =

\[
\frac{\text{Proportion of nurses by agency from 2009 MoPH report}}{100} \times \text{Number of all nurses alive and living in country}
\]
Another important aspect in the management of health workforce is their part-time work in the private sector. Among all part-time health-care providers, doctors had the largest proportion (50%–60%), followed by professional nurses (28%–38%); the rising trend was noted for doctors (Figure 6.14).

**Figure 6.14** Proportions of part-time health-care providers in the private sector, 2003–2009

**Source:** Report on Health Resources Survey, Bureau of Policy and Strategy, MoPH.
1.1.3 Specialties of Health Workforce

Specialties of health-care providers reflect the direction towards specialized care rather than integrated services. There has been a rising trend for doctors in Thailand to undertake specialty training. In 2009, the proportion of doctors with medical specialty certification in various fields was as high as 85.2% of all medical doctors (Figure 6.15).

**Figure 6.15** Proportions of medical general practitioners and specialists, 1971–2009

Source: Office of the Secretary-General, Medical Council of Thailand.

Similarly, for dentists in Thailand, there was a rising trend for them to undertake dental specialty training in 2003, but the proportion of dentists with dental specialty certification dropped to a rather stable level during 2004–2008 and rose again in 2009 to 35.4% of all dentists (Figure 6.16).
1.2 Production and Development of Health Workforce

1.2.1 Production of Doctors

At present, there are 18 medical schools in Thailand (17 public and 1 private), including another state-run university (Kasetsart University), which started producing medical graduates in 2007.

Apart from distributing more doctors to the rural areas, MoPH has been undertaking two projects as follows:

1) The Project on Increased Production of Medical Doctors for Rural People. A total of 5,097 medical students have been admitted under the project since 1996 and 2,156 of whom have graduated.

2) The “One District, One Doctor” Project. A total of 1,098 medical students have been admitted from the district level since 2005; to date there have been no graduates yet. However, upon graduation, they will be required to work for MoPH for 12 years.

The number of medical student admissions is on the rise, particularly during 2007–2008; and the number of newly graduated doctors has also been rising steadily (Figure 6.17).
1.2.2 Production of Dentists

At present, the production of dentists in Thailand is undertaken by 10 institutions (9 public and 1 private); the private one is Rangsit University, which started accepting dental students in 2005.

At present, there are approximately 900–1,000 new dentists graduating each year, but for the period 2002–2009, there were only 400–450 new graduates annually as shown in Figure 6.18.

Figure 6.18 Numbers of dental students admitted and dental graduates, 1997–2009

Sources: **Student admissions data**, from the Bureau of Policy and Planning, Office of the Higher Education Commission (HEC).

**Dental graduates data**, from the Dental Council of Thailand.
1.2.3 Production of Pharmacists

At present, Thailand has 14 schools of pharmacy (11 public and 3 private). Between 1997 and 2009, there were increases in both admissions and graduates. The number of graduates dropped slightly in 2003–2004, but rose to 1,493 in 2009 (Figure 6.19).

**Figure 6.19** Numbers of pharmacy students admitted and graduates, 1997–2009

Sources: Student admissions data, from the Bureau of Policy and Planning, Office of the Higher Education Commission (HEC).

Data on graduates, from the Pharmacy Council of Thailand.

1.2.4 Professional Nurses

At present, Thailand has 74 nursing colleges/institutions (64 public and 10 private) including one state-run institution (Suananree Technology University) which began offering a nursing education programme in 2009.

Between 2006 and 2009, there was a plan to admit approximately 7,000 nursing students each year and the number of nursing graduates is shown in Figure 6.20.
1.2.5 Losses of Health Workforce in the Public Sector

This section mainly focuses on the issue of resignation from civil service which reflects the change in the type of agency for which health-care providers work, especially shifting from the public to the private sector or to other occupations. Even though shifting to the private sector does not mean a loss in the entire system, the impact is not minimal as most rural residents rely on public services. In MoPH, the significant problem is the resignation of medical doctors; the net loss is on a rising trend, the peak being during the economic booming period in 1996 (before the economic crisis). During that time period, as many as 21 community hospitals had no doctors at all (Table 6.1).

After the 1997 economic crisis, the situation improved considerably, possibly due to the downturn in the private sector. Until the economic recovery period of 2001–2003, the resignation of doctors from MoPH became a serious issue again. However, the loss declined in 2004, but rose again between 2005 and 2009 with the annual loss of 600–800 doctors, most likely due to the recovery in the private sector (Table 6.1). However, as the number of newly graduated doctors has been rising, the proportion of net loss has been declining steadily.
Table 6.1  Number and proportion of doctors lost in relation to newly appointed doctors. Office of the Permanent Secretary, MoPH, 1994–2009

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Increases</th>
<th>Decreases (resignation)</th>
<th>Net loss (No./percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Newly graduated</td>
<td>Re-appointed</td>
<td>Total</td>
</tr>
<tr>
<td>1994</td>
<td>526</td>
<td>-</td>
<td>526</td>
</tr>
<tr>
<td>1996</td>
<td>568</td>
<td>-</td>
<td>568</td>
</tr>
<tr>
<td>1997</td>
<td>579</td>
<td>30</td>
<td>609</td>
</tr>
<tr>
<td>1998</td>
<td>618</td>
<td>93</td>
<td>711</td>
</tr>
<tr>
<td>1999</td>
<td>830</td>
<td>57</td>
<td>887</td>
</tr>
<tr>
<td>2000</td>
<td>893</td>
<td>98</td>
<td>991</td>
</tr>
<tr>
<td>2001</td>
<td>883</td>
<td>82</td>
<td>952</td>
</tr>
<tr>
<td>2002</td>
<td>878</td>
<td>38</td>
<td>916</td>
</tr>
<tr>
<td>2003</td>
<td>1,013</td>
<td>39</td>
<td>1,052</td>
</tr>
<tr>
<td>2004</td>
<td>998</td>
<td>92</td>
<td>1,090</td>
</tr>
<tr>
<td>2005</td>
<td>741</td>
<td>37</td>
<td>778</td>
</tr>
<tr>
<td>2006</td>
<td>1,188</td>
<td>110</td>
<td>1,298</td>
</tr>
<tr>
<td>2007</td>
<td>1,128</td>
<td>150</td>
<td>1,278</td>
</tr>
<tr>
<td>2008</td>
<td>1,024</td>
<td>159</td>
<td>1,183</td>
</tr>
<tr>
<td>2009</td>
<td>999</td>
<td>191</td>
<td>1,190</td>
</tr>
</tbody>
</table>

Source: Bureau of Central Administration, Office of the Permanent Secretary, MoPH.


2. According to the cabinet resolution, since 1999 MoPH has been required to accept the graduates who have been awarded scholarships as state employees under MoPH, rather than as civil servants.

3. In 2004, MoPH appointed all state employees as civil servants.

1.3 Distribution of Health Workforce by Geographical Region

1.3.1 Ratio of Population to Health-care Provider by Region

The population/doctor ratio has been on an improved trend since 1979 and the regional disparities have significantly declined. Between 2001 and 2009, a regional comparison of the population/doctor ratio revealed that the ratio for the Northeast has steadily declined, but still higher than those in other regions: the North, South and Central having a comparable ratio (Figure 6.21).
Figure 6.21  Population/doctor ratios by region, 1979–2009


Note: As the 2009 data were incomplete, the proportion of doctors for each type of region was recalculated using the formulas below:

\[
\text{Doctor proportion by region from 2009 MoPH report} \times \frac{\text{Total number of doctors alive and living in country}}{100}
\]

Similarly, the population/dentist ratio in the Northeast has steadily declined; however, the ratio for the Northeast, for the period 2006–2009, was still different from those in other regions (Figure 6.22).
Figure 6.22  Population/dentist ratios by region 1979–2009


Note: As the 2009 data were incomplete, the proportion of dentists for each type of region was recalculated using the formulas below:

\[
\text{Dentists proportion by region from 2009 MoPH report} \times \frac{\text{Total number of dentists alive and living in country}}{100}
\]
However, according to the report on dental health personnel of the Department of Health, the population/dentist ratios are lower (larger number of dentists). The ratio for the Northeast was higher than those for other regions (Figure 6.23).

**Figure 6.23** Population/dentist ratios by region, 1999–2009 (based on DoH database)

<table>
<thead>
<tr>
<th>Year</th>
<th>Bangkok</th>
<th>Central</th>
<th>North</th>
<th>South</th>
<th>Northeast</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1.305</td>
<td>10.494</td>
<td>11.830</td>
<td>11.877</td>
<td>21.120</td>
</tr>
<tr>
<td>2006</td>
<td>1.266</td>
<td>9.967</td>
<td>11.571</td>
<td>11.118</td>
<td>20.527</td>
</tr>
</tbody>
</table>

**Source:** Report on Dental Health Personnel, 2001–2009, Department of Health, MoPH.

Regarding the population/pharmacist ratio, there has been a steadily declining trend; the ratio for the Northeast has had a steady decline and the ratios are comparable for the North, the South and the Central (Figure 6.24).
Figure 6.24  Population/pharmacist ratios by region, 1979–2009

Source: Report on Health Resources, Bureau of Policy and Strategy, MoPH.

Note: As the 2009 data were incomplete, the proportion of pharmacists for each region was recalculated using the formulas below:

\[
\text{Pharmacists proportion by region from 2009 MoPH report} \times \frac{\text{Total number of pharmacists alive and living in country}}{100}
\]
The population/professional nurse ratio has also been declining; the Northeast has the ratio closer to those for other regions (Figure 6.25).

**Figure 6.25** Population/professional nurse ratios by region, 1979–2009

**Source:** Report on Health Resources, Bureau of Policy and Strategy, MoPH.

**Note:** As the 2009 data were incomplete, the proportion of professional nurses for each region was recalculated using the formula below:

\[
\text{Professional nurses proportion by region from 2009 MoPH report} \times \frac{\text{Total number of professional nurses actually working and living in country}}{100}
\]
For health personnel at subdistrict health centres, the overall population to health worker ratio was stable between 2006 and 2008. But in 2009, the trend was improving, especially for the Northeast with the highest ratio and the South with lowest ratio (Table 6.2). Overall, the regional disparities were declining, partly due to the implementation of the policy on primary care unit development with the assignment of nurses to work at health centres.

Table 6.2  Health personnel at subdistrict health centres by region, 1987–2003 and 2006–2009

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td></td>
<td>4,217</td>
<td>7,724</td>
<td>7,917</td>
<td>8,928</td>
<td>9,017</td>
<td>8,769</td>
<td>8,150</td>
<td>8,027</td>
<td>7,604</td>
<td>8,174</td>
<td>8,166</td>
<td>8,186</td>
<td>8,804</td>
</tr>
<tr>
<td>North</td>
<td></td>
<td>3,233</td>
<td>5,734</td>
<td>6,826</td>
<td>6,970</td>
<td>7,167</td>
<td>7,068</td>
<td>6,558</td>
<td>6,456</td>
<td>6,043</td>
<td>6,349</td>
<td>6,337</td>
<td>7,159</td>
<td>7,484</td>
</tr>
<tr>
<td>South</td>
<td></td>
<td>2,318</td>
<td>4,628</td>
<td>5,038</td>
<td>5,152</td>
<td>5,264</td>
<td>5,146</td>
<td>4,843</td>
<td>4,761</td>
<td>4,639</td>
<td>4,609</td>
<td>4,588</td>
<td>5,415</td>
<td>5,688</td>
</tr>
<tr>
<td>Northeast</td>
<td></td>
<td>4,573</td>
<td>9,114</td>
<td>10,430</td>
<td>10,236</td>
<td>10,569</td>
<td>10,248</td>
<td>9,693</td>
<td>9,591</td>
<td>9,015</td>
<td>9,632</td>
<td>9,619</td>
<td>11,050</td>
<td>11,051</td>
</tr>
<tr>
<td>Disparity between population/worker ratios of the Central and Northeast</td>
<td>1:1.73</td>
<td>1:1.59</td>
<td>1:1.43</td>
<td>1:1.39</td>
<td>1:1.40</td>
<td>1:1.57</td>
<td>1:1.33</td>
<td>1:1.34</td>
<td>1:1.35</td>
<td>1:1.20</td>
<td>1:1.20</td>
<td>1:1.13</td>
<td>1:1.08</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>14,341</td>
<td>27,200</td>
<td>30,211</td>
<td>31,286</td>
<td>32,017</td>
<td>31,231</td>
<td>29,244</td>
<td>28,835</td>
<td>27,125</td>
<td>28,764</td>
<td>28,710</td>
<td>32,428</td>
<td>33,225</td>
</tr>
</tbody>
</table>

Sources: 1. For 1987–2000, data were derived from the Bureau of Health Service System Development, Department of Health Service Support, MoPH.
2. For 2001–2003, data were derived from the Bureau of Central Administration, Office of the Permanent Secretary, MoPH.
3. For 2006–2009, data were derived from the Bureau of Policy and Strategy, Office of the Permanent Secretary, MoPH.

Notes: The figure in ( ) is the ratio of one health worker to population outside municipal areas and sanitary districts.

A comparison of population/health-care provider ratios for Bangkok and the Northeast reveals that the disparities have declined steadily, especially for doctors, at about 5-fold, and for dentists, pharmacists and nurses at about 2.5-fold to 4-fold between 2008 and 2009, due to data incompleteness; based on the re-estimated number of personnel, the regional disparities have dropped by half to 1.5- to 2.7-fold (Figure 6.26). But for dentists, based on the data from the Health Department, the Bangkok-Northeast disparities would remain high at 15-fold for 2009 (Figure 6.26).
Figure 6.26 Disparities of population/health-care provider ratios for Bangkok and the Northeast, 2001–2009

Sources:  
- Report on Health Resources, Bureau of Policy and Strategy, MoPH.
- Report on Dental Health Personnel, 1999–2009, Department of Health MoPH.

Note: For 2009, due to data incompleteness, the numbers were re-estimated.
1.3.2 Ratios of Population to Health-care Provider by Province

A comparison of population/health-care provider ratios for all 76 provinces grouped in five quintiles and shown in different colours for each quintile on a shaded area map (Figures 6.27 and 6.28) reveals that most provinces in the Northeast have a higher ratio, compared with those in other regions, except for the provinces with a university hospital. The provinces near Bangkok and in the East as well as those in the upper South, such as Phuket, have more health personnel than other provinces.

Figure 6.27 Geographical distribution of doctors and dentists: population/doctor and population/dentist ratios, 2008

Source: Report on Health Resources, Bureau of Policy and Strategy, MoPH.
1.4 Distribution of Health Workforce by Level of Services and Workload

1.4.1 Proportion of Health Workforce by Level of Services

Based on the level and type of health facilities, the proportion of doctors working in private hospitals is higher than those of other professions, and the proportion in community hospitals is lower than other professions. For professional nurses, most of them work at community hospitals, followed by general and regional hospitals. But for dentists and pharmacists, most of them work at community hospitals (Figure 6.29).
1.4.2 Beds-to-Doctor Ratios and Average Number of Doctors by Service Level

In 2008, it was found that community hospitals had the highest beds/doctor ratio, close to that for general hospitals, followed by regional hospitals and private hospitals. For the doctors per hospital comparison, on average, a community hospital had 5.7 doctors; a general hospital had 45 doctors; a regional hospital had 120 doctors; and a private hospital had 14 doctors (Figure 6.30). (Private hospitals also had some part-time doctors, whose number was greater than full-time doctors). However, when considering the trends in beds-to-doctor ratios of community hospitals, using data from the Department of Health Service Support, before the economic crisis, the ratio increased markedly due to a considerable increase in the number of beds but no increase in the number of doctors. But after the crisis, the ratio began to decline due to increasing numbers of doctors, the rate being greater than that for beds (Figure 6.31).

Source: Report on Health Resources, Bureau of Policy and Strategy, MoPH.
Figure 6.30  Beds/doctor ratios and doctors/hospital ratios by type of hospitals, 2008


Figure 6.31  Numbers of beds and doctors, and beds/doctor ratio at community hospitals, 1977–2009

Sources: - Bureau of Health Service System Development, Department of Health Service Support, MoPH.
- Bureau of Policy and Strategy, Office of the Permanent Secretary, MoPH.
1.4.3 Workload of Health Workforce by Level of Services

For the 7-year period of 2002–2009, the health resources surveys revealed that doctors at community hospitals had the highest workload followed by those at general hospitals, while those at university hospitals had the lowest; and doctors at private hospitals had a workload close to that for doctors at regional hospitals. The workload of doctors at community hospitals was on a declining trend, but those at other agencies had a stable workload (Table 6.3).


<table>
<thead>
<tr>
<th>Health facility</th>
<th>2002</th>
<th>Comparative index</th>
<th>2005</th>
<th>Comparative index</th>
<th>2007</th>
<th>Comparative index</th>
<th>2008</th>
<th>Comparative index</th>
<th>2009</th>
<th>Comparative index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community hospitals</td>
<td>34,379</td>
<td>2.1</td>
<td>29,997</td>
<td>1.9</td>
<td>28,487</td>
<td>2.0</td>
<td>25,728</td>
<td>1.7</td>
<td>23,006</td>
<td>1.5</td>
</tr>
<tr>
<td>General hospitals</td>
<td>18,805</td>
<td>1.1</td>
<td>17,987</td>
<td>1.1</td>
<td>19,742</td>
<td>1.4</td>
<td>16,680</td>
<td>1.1</td>
<td>17,260</td>
<td>1.1</td>
</tr>
<tr>
<td>Regional hospitals</td>
<td>12,020</td>
<td>0.7</td>
<td>13,046</td>
<td>0.8</td>
<td>13,305</td>
<td>0.9</td>
<td>14,373</td>
<td>0.9</td>
<td>11,721</td>
<td>0.7</td>
</tr>
<tr>
<td>University hospitals</td>
<td>4,931</td>
<td>0.3</td>
<td>3,812</td>
<td>0.2</td>
<td>2,701</td>
<td>0.19</td>
<td>2,934</td>
<td>0.2</td>
<td>3,353</td>
<td>0.2</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>12,849</td>
<td>0.8</td>
<td>14,273</td>
<td>0.9</td>
<td>15,681</td>
<td>1.1</td>
<td>15,168</td>
<td>1.0</td>
<td>15,295</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16,535</strong></td>
<td><strong>1.0</strong></td>
<td><strong>15,788</strong></td>
<td><strong>1.0</strong></td>
<td><strong>14,469</strong></td>
<td><strong>1.0</strong></td>
<td><strong>15,340</strong></td>
<td><strong>1.0</strong></td>
<td><strong>15,808</strong></td>
<td><strong>1.0</strong></td>
</tr>
</tbody>
</table>

**Source:** Report on Health Resources, Bureau of Policy and Strategy, MoPH.

**Notes:**
* In order that the inpatient workload for each type of hospitals is in the same output, the number of inpatients is adjusted as follows:
  1. For community and private hospitals = no. of inpatients X 14
  2. For regional/general, university and BMA hospitals = no. of inpatients X 18
  3. For 2009, data were incomplete.