

Region, and that in Japan, poliomyelitis is now subject to certification of eradication. It is intended that the detection of paralytic illness of acute onset should be more specific and sensitive, therefore the Ministry of Health and Welfare (MHW) and Japan Medical Association have provided detailed information to clinics, hospitals and Local Health Centers (LHC) s on the following:

- i) criteria for differential diagnosis of poliomyelitis, (**Annex 2-1**)
- ii) definition of adequate stool samples and virological examination methods,
- iii) methods for transportation of stool samples,
- iv) reporting system for poliomyelitis and polio-like illness

The circular notices were issued in April 1998 and are shown in **Annex 2-2**.

(B) MHW of Japan supports a working group mainly composed of the members of the J-NCC as a national research project to perform retrospective and prospective clinical and virological analysis for acute flaccid paralysis of children under the age of 15. Members of this working group and their locations are in **Annex 2-3**.

(C) Strengthening the role of Local Health Centers (LHC) s:

As soon as they receive the reports from physicians, the LHCs should instruct physicians how to collect adequate stool samples and, if necessary, they pick up samples and send them to DPHLs in charge.

(4) Education for personnel:

A special program on polio eradication has been incorporated to the annual training course held at NIID for personnel of LHCs and DPHLs.

(5) Time schedule

The above procedures started in May 1998 and continue up to 2000.

3. Executive summary

Japan is situated in Eastern Asia and forms an island chain between the North Pacific Ocean and the Sea of Japan, east of the Korean Peninsula. The total population estimated in July 1999 was 126.2 million. The country is divided into 47 prefectures. Further details on country background are described in the respective chapters of this documentation.

Good sanitary condition and well-established health care system in Japan indicate adequate infrastructure for polio control.

Poliomyelitis has been designated as a notifiable disease since 1954 and extensive clinical survey has been done over the years. The last outbreak was reported in 1960 in Hokkaido with more than 5,000 cases in one year but was brought under control by emergency mass immunization. In 1962, routine immunization with oral poliovirus vaccine (OPV) was introduced and resulted in a further drastic decline of poliomyelitis. The annual incidence since then was very low with the last wild poliovirus associated poliomyelitis case reported in 1980. Incidental isolation of wild poliovirus occurred from other sources than paralyzed individuals in 1979, 1981 and 1993.

In October 1998 new "Law for Control of Infectious Disease" was established and poliomyelitis was designated as second grade infectious disease requiring immediate reporting to health authorities and strict investigation and control measures. Detailed guidelines for the identification and response were also established.

Poliomyelitis is considered to be an important disease in Japan and virological surveillance of enteroviruses has been the key element of "Infectious Agents Survey" in Japan since 1970. The laboratory of Enteroviruses, Department of Virology II, National Institute of Infectious Diseases (NIID) has been performing as a National polio laboratory since 1962. This laboratory is a WHO Collaborating Center for Virus Research and Reference (enteroviruses). It has been designated as a Regional Reference Laboratory as well as Specialized Laboratory for the Global Poliovirus Laboratory Network of the WHO poliomyelitis eradication program. NIID has been fully accredited under WHO standards for several consecutive years.

Nationwide network of 71 district public health laboratories (DPHL) under the coordination of NIID has been functioning well. DPHLs are responsible for isolation and identification of polioviruses and have to send all isolates to NIID for confirmation and intratypic differentiation. DPHLs are also requested to provide additional information on laboratory data on suspected poliomyelitis cases to NIID. DPHLs work in close coordination with Local Health Centers (LHC) to whom every suspected poliomyelitis case has to be immediately reported by the attending physician.

The enterovirus surveillance system in Japan started in 1970 and covers almost 100% of the population. Over 7,000 positive samples collected under this system were investigated in 1999 by the network. Isolation data of enteroviruses and polioviruses are collected and analyzed yearly for place of residence (geographical distribution), month (seasonal distribution), age, sex, type of specimen, clinical diagnosis, institution and other.

External quality control for all laboratories is provided by NIID through annual training courses for personnel with special emphasis on poliomyelitis eradication. In 1998, a special training course was conducted for the reliable and accurate isolation of polioviruses and L20B cells were distributed.

Environmental surveillance for enteroviruses through monthly sampling of river and seawater is conducted in 3 prefectures with a total population of 6.42 million and specimens are tested at DPHL.

In order to meet certification requirements, additional surveillance activities have been conducted since 1998. Active surveillance for poliomyelitis and polio-like diseases is being carried out at all hospitals, clinics, LCHs and DPHLs in Japan since April 1998. Up to date, 11 poliomyelitis-like cases were investigated.

Retrospective record reviews have been conducted for 1998 for cases of acute flaccid paralysis (AFP) in six prefectures and 327 institutes (pediatric departments at hospitals in coordination with DPHL). A total of 46 cases were identified and reviewed resulting in a non-polio AFP rate of 1.24 per 100,000 persons under 15 years of age for these six prefectures (range 0.91 to 1.65 with 95% confidence interval CI).

A prospective study for AFP cases was conducted at the same institutes from January 1999 to March 2000. A total of 41 cases were investigated during the study period resulting in an annualized AFP rate of 0.88 per 100,000 persons under 15 years of age in these six prefectures (range 0.63 to 1.2 with 95% CI).

All cases identified through these supplemental surveillance activities were individually reviewed by the responsible expert committee and finally discarded as non-poliomyelitis.

OPV has been used since 1962. Routine immunization is provided to children aged between 3 –18 months in spring and autumn of every year. Nationwide coverage has been maintained at levels above 90% for over 10 years. In Japan, people have high confidence in the polio vaccine and the quality of immunization services.

After the new Law for Control of Infectious Diseases designated poliomyelitis as the second grade infectious disease, the infrastructure for timely and reliable detection of importation of wild poliovirus has been further strengthened. A good example was shown in the recent case of vaccine associated paralytic poliomyelitis (VAPP), where prompt and extensive investigation was conducted and adequate response was taken.

However, areas of special concern remain to be (i) importation of wild polioviruses from still endemic countries and (ii) VAPP cases. While OPV is used, there is the possibility that vaccine derived revertant, pathogenic virus can be shed from vaccinees and this virus will be a possible source for the secondary infection.

Japan's high quality surveillance and high immunization levels have to be sustained even after the Regional certification of polio-free status until global certification is achieved. A Task force committee has already been established to set up a national strategy for poliomyelitis control in the future.

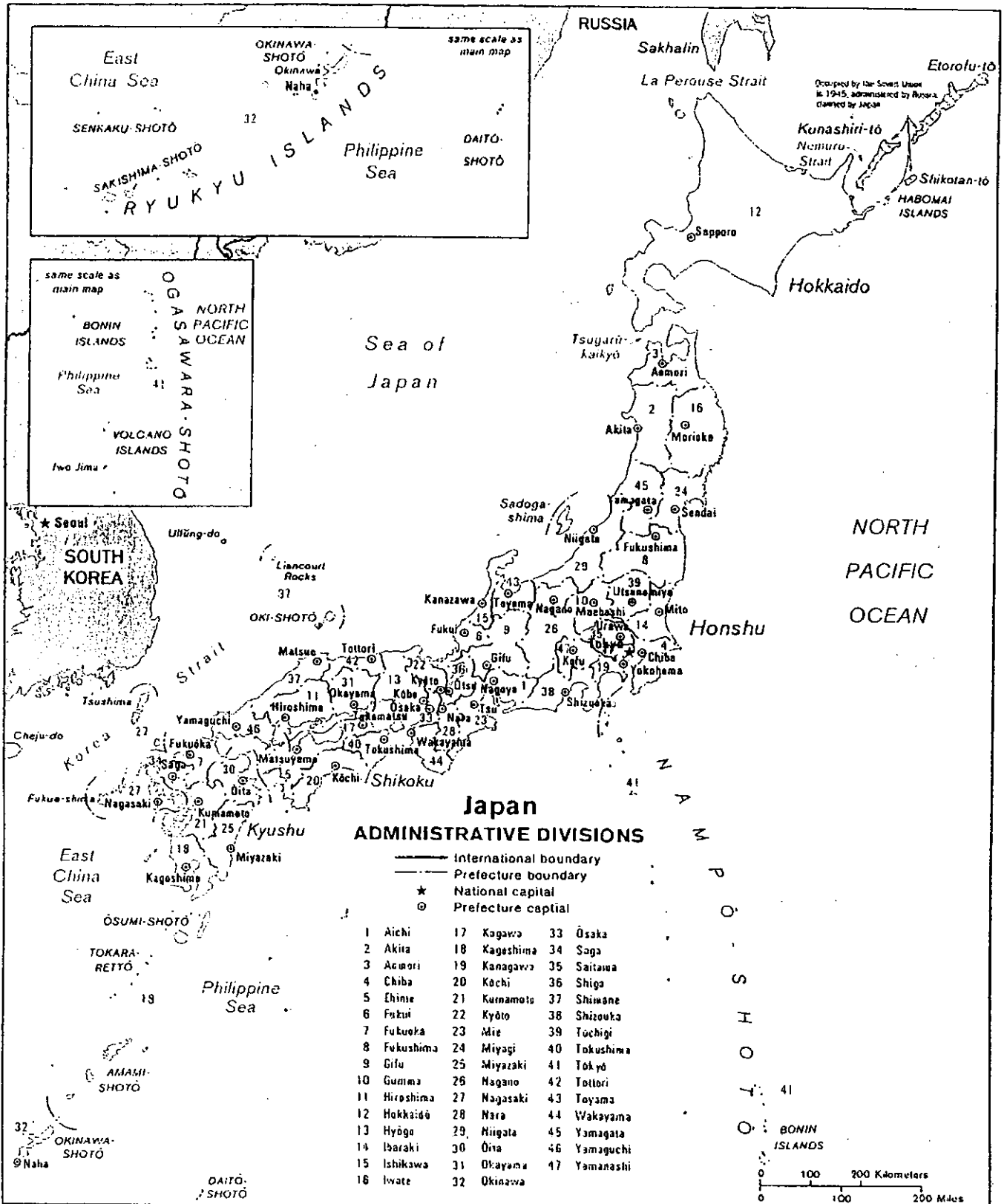
The sub-committee for laboratory containment of wild polioviruses started their search. Many laboratory strains of wild polioviruses and field isolates are kept and used for experiments by professional virologists. Although the number of laboratories retaining potentially wild poliovirus infectious materials is expected to be very large, good cooperation from their staff and virologists can be expected and registration might not be so difficult. However, the search for human specimens, which might contain wild polioviruses collected by those researchers and kept in laboratories not involved in poliomyelitis control may be difficult.

A National Certification Committee of Japan (J-NCC) was established in 1997 aiming to summarise the necessary information to prove polio-free status in Japan.

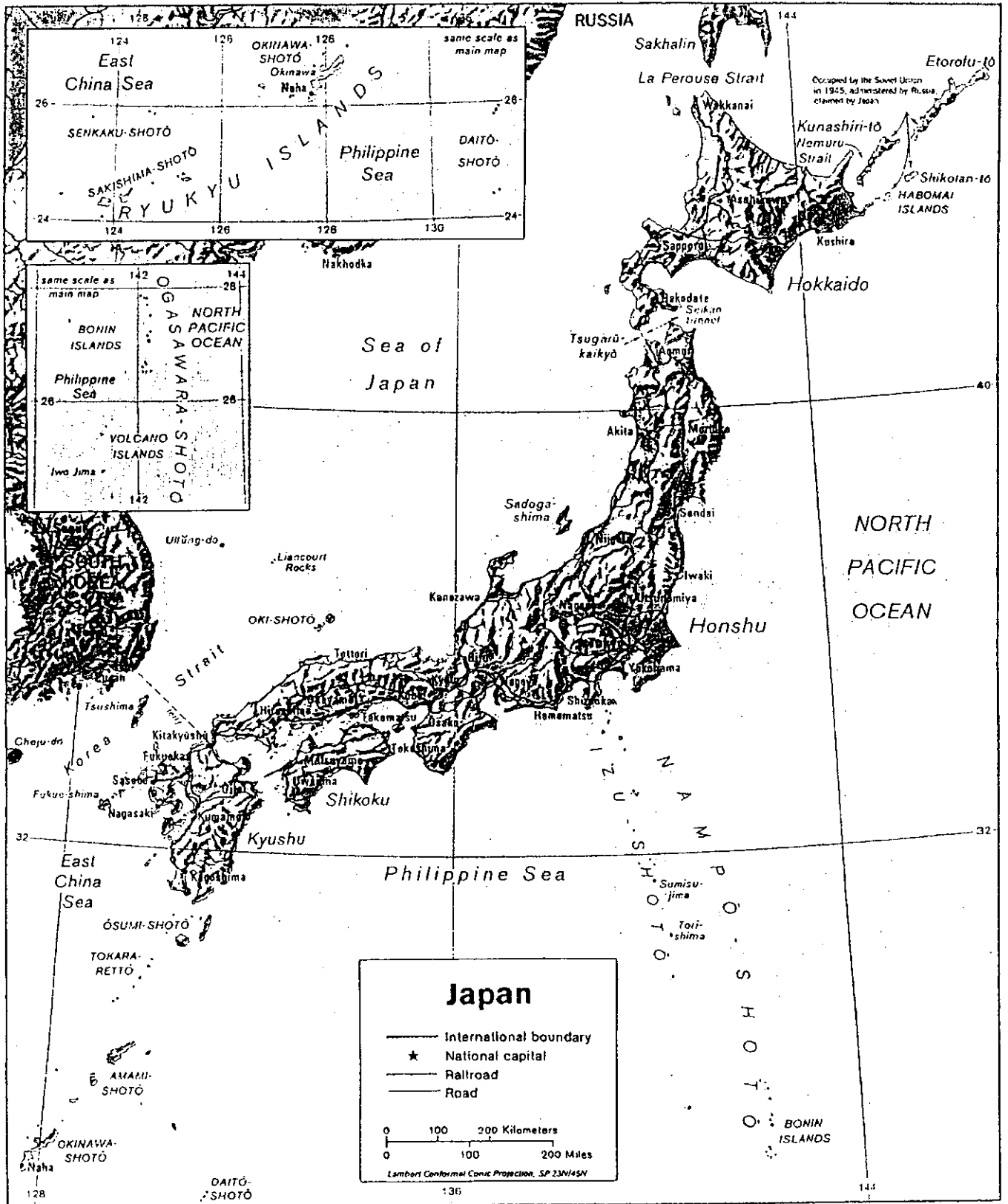
The committee approved a national plan of action and prepared progress reports on its implementation to the Regional Certification Commission (RCC). The committee is meeting on a regular basis to review and oversee strategies conducted to meet the requirements for certification of polio-free status and ensure timely detection of imported wild polioviruses.

The J-NCC concludes after having reviewed this national documentation that indigenous poliomyelitis was eradicated in Japan 20 years ago. The J-NCC furthermore concludes that surveillance system currently in place in Japan would reliably detect an importation of wild poliovirus and high levels of immunization coverage would limit the spread of such an importation. The process of laboratory containment of wild poliovirus infectious and potentially infectious materials has started and the final verification of materials retained is expected by the end of 2001.

Therefore, the J-NCC recommends to the RCC to consider certification of polio-free status of Japan.



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4. Country background information

4-1. Geographical features and details (Annex 4-1).

Location: Eastern Asia, island chain between the North Pacific Ocean and the Sea of Japan, east of the Korean Peninsula

Geographic coordinates: 36 00 N, 138 00 E

Area:

total: 377,835 sq km

land: 374,744 sq km

water: 3,091 sq km

4-2. Administrative division and population numbers.

47 prefectures; Aichi, Akita, Aomori, Chiba, Ehime, Fukui, Fukuoka, Fukushima, Gifu, Gunma, Hiroshima, Hokkaido, Hyogo, Ibaraki, Ishikawa, Iwate, Kagawa, Kagoshima, Kanagawa, Kochi, Kumamoto, Kyoto, Mie, Miyagi, Miyazaki, Nagano, Nagasaki, Nara, Niigata, Oita, Okayama, Okinawa, Osaka, Saga, Saitama, Shiga, Shimane, Shizuoka, Tochigi, Tokushima, Tokyo, Tottori, Toyama, Wakayama, Yamagata, Yamaguchi, Yamanashi.

Population: 126,182,077 (July 1999 est.)

4-3 Infrastructure

- Infrastructure (transportation system, urban vs rural structures, sanitation/sewage system/water supply)

4-3-1: transportation system

Airways:

total: 23,670.7 km

standard gauge: 2,893.1 km 1.435-m gauge (entirely electrified)

narrow gauge: 89.8 km 1.372-m gauge (89.8 km electrified); 20,656.8 km 1.067-m gauge (10,383.6 km electrified);

31 km 0.762-m gauge (3.6 km electrified) (1994)

Highways:

total: 1.16 million km

paved: 859,560 km (including 6,070 km of expressways)

unpaved: 300,440 km (1996 est.)

Waterways: about 1,770 km; seagoing craft ply all coastal inland seas

Pipelines: crude oil 84 km; petroleum products 322 km; natural gas 1,800 km

Ports and harbors: Akita, Amagasaki, Chiba, Hachinohe, Hakodate, Higashi-Harima, Himeji, Hiroshima, Kawasaki, Kinuura, Kobe, Kushiro, Mizushima, Moji, Nagoya, Osaka, Sakai, Sakaide, Shimizu, Tokyo, Tomakomai

Merchant marine:

total: 713 ships (1,000 GRT or over) totaling 13,753,027 GRT/19,311,312 DWT
ships by type: bulk 159, cargo 54, chemical tanker 13, combination bulk 16, combination ore/oil 4, container 27, liquefied gas tanker 40, oil tanker 232, passenger 10, passenger-cargo 2, refrigerated cargo 27, roll-on/roll-off cargo 48, short-sea passenger 13, vehicle carrier 68 (1998 est.)

Airports: 170 (1998 est.)

Airports with paved runways:

total: 140
over 3,047 m: 5
2,438 to 3,047 m: 35
1,524 to 2,437 m: 39
914 to 1,523 m: 30
under 914 m: 31 (1998 est.)

Airports with unpaved runways:

total: 30
914 to 1,523 m: 2
under 914 m: 28 (1998 est.)

Heliports: 14 (1998 est.)

4-3-2: Sanitation /water supply

Japan's trade with foreign countries became increasingly active around the mid-19th Century. During the same period, there were nationwide epidemics of cholera and typhoid fever. To cope with this situation, a survey of water supply systems of Yokohama, the largest port-city in Japan at the time, was made in 1883 and service was begun in 1887. This was the first modern water supply system in Japan, which provided continuous water supply, with cast iron pipes, pumps and filters.

This was followed by construction of modern water supply systems throughout Japan, particularly in the port cities of Hakodate, Nagasaki, Osaka, Tokyo, Hiroshima, Kobe, Okayama, Shimonoseki, etc. In 1911, there were 23 waterworks systems with 4.18 million people being served.

Table 4-1 shows the development of water supply systems. The figure (Fig.4-1) shows the remarkable progress in the water supply systems made in the past 35 years; the

percentage of the population served was 26.2% in 1950 and 96.1% in 1997.

With the realization that the water supply system was an essential infrastructure for the building of a modern nation, national subsidies and loans were made available for small-scale water supply systems serving populations of more than 101 and less than 5,000 in 1952. This measure helped to expand water supply systems to rural communities. At the same time, measures were taken to develop large-scale water supply systems serving populations of 5,001 or more in the form of loans and national subsidies.

Japan's waterworks has thus developed and is expected to play an increasingly important role in the future.

Table 4-1 Population served and total population (1950-97)

(in million)

| Fiscal year | Total Population | Population served | Percentage of P.S. (%) |
|-------------|------------------|-------------------|------------------------|
| 1950 | 83.20 | 21.80 | 26.2 |
| 1960 | 93.42 | 49.91 | 53.4 |
| 1970 | 103.72 | 83.75 | 80.7 |
| 1980 | 116.86 | 106.91 | 91.5 |
| 1985 | 121.01 | 112.87 | 93.9 |
| 1990 | 123.56 | 116.96 | 94.7 |
| 1991 | 124.12 | 117.80 | 94.9 |
| 1992 | 124.57 | 118.47 | 95.1 |
| 1993 | 124.93 | 119.09 | 95.3 |
| 1994 | 125.31 | 119.71 | 95.5 |
| 1995 | 125.42 | 120.10 | 95.8 |
| 1996 | 125.82 | 120.73 | 96.0 |
| 1997 | 126.20 | 121.29 | 96.1 |

A bulk water supply is the water supply system which supplies potable water to large/small water supply systems. A small, private water supply system is the water supply system in buildings which incorporates a receiving water tank of capacity of more than 10m³ and receives potable water from a large/small water supply.

There were 15,980 water supply systems (Fig. 4-2) and 163,337 small, private water supply systems as of March 1996.

Fig.4-1 Waterworks administrative organization

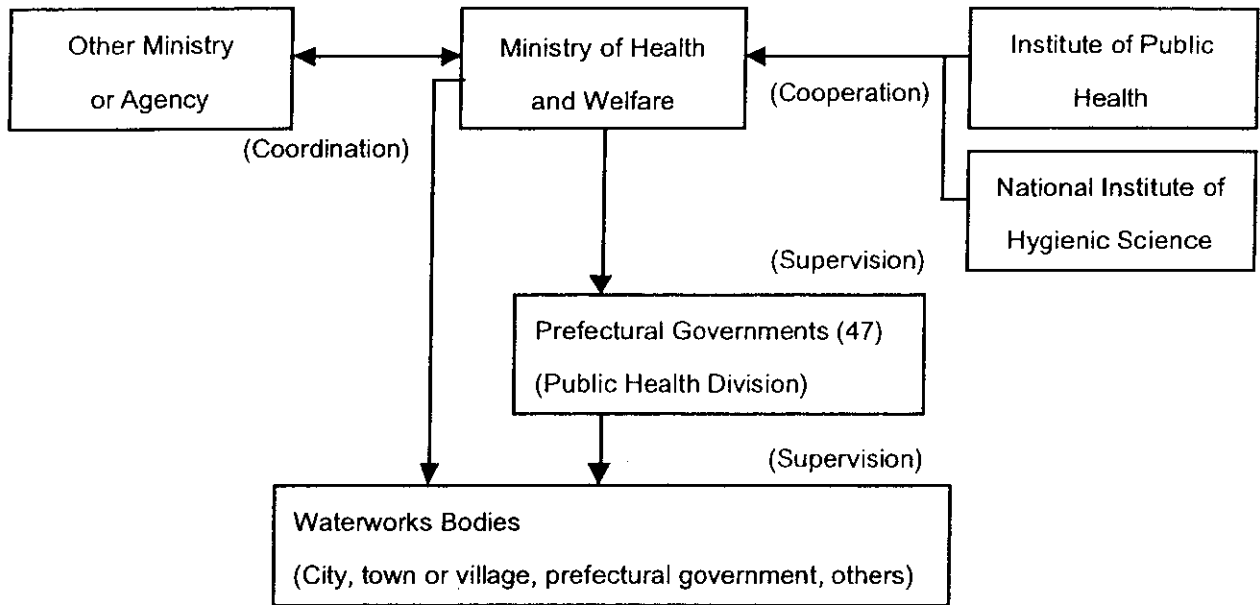
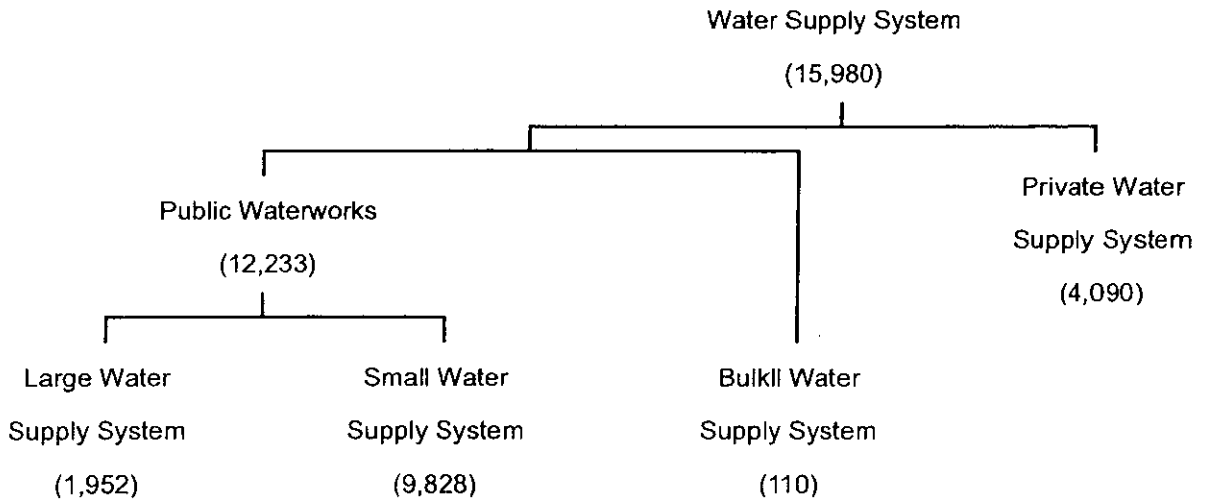


Fig.4-2 Classification and number of water supply systems in Japan (as of March 1996)



4-3-3: Sanitation/sewage system

The Ministry of Construction has prepared a summary of the nationwide sewage system conditions in Japan as of the end of 1996. This summary is based on local populations that are listed in the basic resident registers of municipalities, which was announced by the Ministry of Home Affairs on August 26, 1999.

Percentage of Population Served by the Sewer

The nationwide percentage of population served by the sewer in Japan as of the end of 1996 rose to 58% (56% as of the end of 1995). The total number was about

73,110,000 persons. In the one year between the end of 1997 and the end of 1998, approximately 2,320,000 persons, which is equivalent to the total population of Miyagi Prefecture, gained access to sewage. In 1998, Ise City (Mie Prefecture) began to implement the public sewage system, marking the availability of public sewage to people in all cities with a population of more than 100,000.

By prefecture, the population served by the sewer in the Yamagata, Nagano, and Shiga prefectures had the largest increase at 4%. About 60% of the increase in the population served by the sewer is using a river-basin sewage system, which is the main contributor to this increase.

The level of sewage system development in Japan, however, is still inferior to other advanced countries. Wide gaps can be observed between large cities, and medium and small municipalities. Particularly, the number of people served by the sewer in municipalities of less than 50,000 is at a low 22%.

Development of Sewage System that allows Storm Water Drainage

Another role of the sewage system is draining storm water from urban areas to rivers, accumulating and permeating the rainwater into the ground to prevent submersion, and thus protects the lives and assets of residents.

Currently, storm water drainage measures using the sewage system are being implemented for the strong rains that occur about once in five years. As of the end of 1998, out of all urban areas that require such measures, the percentage of areas in Japan in which the storm water drainage measures had been completed was 49% (48% as of the end of 1997). This indicates the need to aggressively continue the promotion of storm water drainage measures in the future.

Percentage of Population Receiving Advanced Sewage Treatment

Advanced treatment is the elimination of organic substances, nitrogen, and phosphor by more advanced means than the standard sewage system.

Advanced treatment is provided to improve the aquatic aspect of the environment, prevent eutrophication in lakes, ponds and inner bays, and to promote the reuse of treated water. The advanced population receiving advanced sewage treatment as of the end of 1998 was 8 million people, up 1,260,000 from the previous year. Advanced sewage treatment will therefore be focused on designated lakes such as Lake Biwa and Kasumigaura, closed water areas such as the Three Great Bays, and sources that supply public water.

[Definition of Indices for Sewage System Development]

$$\text{Percentage of population served by the sewer (\%)} = \frac{\text{Population in the area with sewage treatment}}{\text{Total population}} \times 100$$

Based on the population listed in the basic resident registers, which was announced by the Ministry of Home Affairs

$$\text{Percentage of sewage system that allows storm water drainage} = \frac{\text{Area equipped with storm water drainage system}}{\text{Area requiring storm water drainage system}} \times 100$$

Area requiring storm water drainage system

Urban area requiring storm water drainage that can deal with storm rain expected to occur approximately once in five years

Area equipped with storm water drainage system

Out of the above area, area served by public sewage system, etc. that allow storm water drainage

$$\text{Population receiving advanced sewage treatment (person)} = \frac{\text{Amount of sewage treated with advanced technology}}{\text{Total amount of sewage treated}}$$

× Population in the area with sewage treatment

Percentage of population served by the sewer in each prefecture

(As of the end of FY 1998)

| Prefecture | Diffusion Rate | Rank | Prefecture | Diffusion Rate | Rank | Cabinet Ordinance Designated City | Diffusion Rate |
|------------|----------------|------|------------|----------------|------|-------------------------------------|----------------|
| Hokkaido | 79% | 3 | Fukui | 51% | 17 | Sapporo | 99% |
| | | | Shiga | 54% | 11 | Sendai | 93% |
| Aomori | 36% | 30 | Kyoto | 76% | 6 | Chiba | 81% |
| Iwate | 30% | 39 | Osaka | 78% | 4 | Tokyo (Special wards) | *100% |
| Miyagi | 62% | 8 | Hyogo | 77% | 5 | Kawasaki | 97% |
| Akita | 31% | 37 | Nara | 55% | 10 | Yokohama | 99% |
| Yamagata | 43% | 21 | Wakayama | 8% | 47 | Nagoya | 96% |
| Fukushima | 29% | 40 | | | | Kyoto | 99% |
| | | | Tottori | 38% | 29 | Osaka | *100% |
| Ibaraki | 40% | 25 | Shimane | 21% | 43 | Kobe | 97% |
| Tochigi | 42% | 24 | Okayama | 34% | 33 | Hiroshima | 84% |
| Gunma | 35% | 32 | Hiroshima | 53% | 13 | Kitakyushu | 97% |
| Saitama | 64% | 7 | Yamaguchi | 44% | 20 | Fukuoka | 98% |
| Chiba | 53% | 13 | | | | Nationwide | 58% |
| Tokyo | 96% | 1 | Tokushima | 10% | 46 | General Cities | 47% |
| Kanagawa | 89% | 2 | Kagawa | 26% | 41 | | |
| Yamanashi | 36% | 30 | Ehime | 33% | 34 | Cabinet Ordinance Designated Cities | 97% |
| | | | Kochi | 20% | 44 | | |
| Niigata | 39% | 28 | | | | | |
| Toyama | 52% | 15 | Fukuoka | 62% | 8 | | |
| Ishikawa | 50% | 18 | Saga | 23% | 42 | | |
| | | | Nagasaki | 40% | 25 | | |
| Nagano | 47% | 19 | Kumamoto | 43% | 21 | | |
| Gifu | 43% | 21 | Oita | 31% | 37 | | |
| Shizuoka | 40% | 25 | Miyazaki | 32% | 35 | | |
| Aichi | 52% | 15 | Kagoshima | 32% | 35 | | |
| Mie | 20% | 44 | | | | | |
| | | | Okinawa | 54% | 11 | | |

Note: • Diffusion rates for prefectures include those for cabinet ordinance designated cities.

• Diffusion rates are rounded to the nearest whole number (*100% means that the exact figure before rounding is below 100%)

4.-4. Economic situation.

Government-industry cooperation, a strong work ethic, mastery of high technology, and a comparatively small defense allocation (1% of GDP) have helped Japan advance with extraordinary rapidity to the rank of second most powerful economy in the world. For three decades overall real economic growth had been spectacular: a 10% average in the 1960s, a 5% average in the 1970s, and a 4% average in the 1980s. Growth slowed markedly in 1992-95 largely because of the aftereffects of overinvestment during the late 1980s and contractionary domestic policies intended to wring speculative excesses from the stock and real estate markets. Growth picked up to 3.9% in 1996, largely a reflection of stimulative fiscal and monetary policies as well as low rates of inflation. But in 1997-98

Japan experienced a wrenching recession, centered about financial difficulties in the banking system and real estate markets and exacerbated by rigidities in corporate structures and labor markets. In early 1999 output has started to stabilize as emergency government spending begins to take hold.

GDP: purchasing power parity? \$2.903 trillion (1998 est.)

GDP: real growth rate: -2.6% (1998 est.)

GDP: per capita: purchasing power parity? \$23,100 (1998 est.)

GDP: composition by sector:

agriculture: 2%

industry: 38%

services: 60% (1997)

Exports: \$440 billion (f.o.b., 1998) , Imports: \$319 billion (c.i.f., 1998) ,

Economic aid donor: ODA, \$9.1 billion (1999)

Budget:

revenues: \$407 billion

expenditures: \$711 billion, including capital expenditures (public works only) of about \$86 billion (FY99/00est.)

Inflation rate (consumer prices): 0.9% (1998 est.)

4-5. Minority groups/marginalized populations/hard-to-reach populations

Nationality:

Japanese

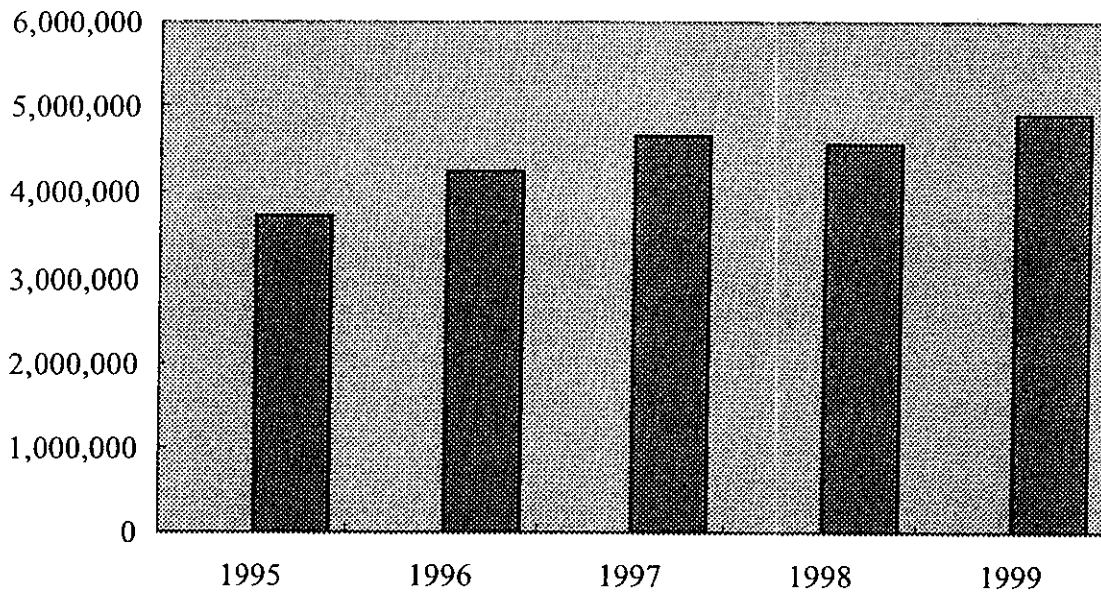
Ethnic groups: Japanese 99.4%, other 0.6% (mostly Korean)

4-6. Population movements (within the country, people travelling into Japan (endemic/non-endemic countries), people travelling to the other countries (endemic/non-endemic).

Net migration rate: -0.34 migrant(s)/1,000 population (1999 est.)

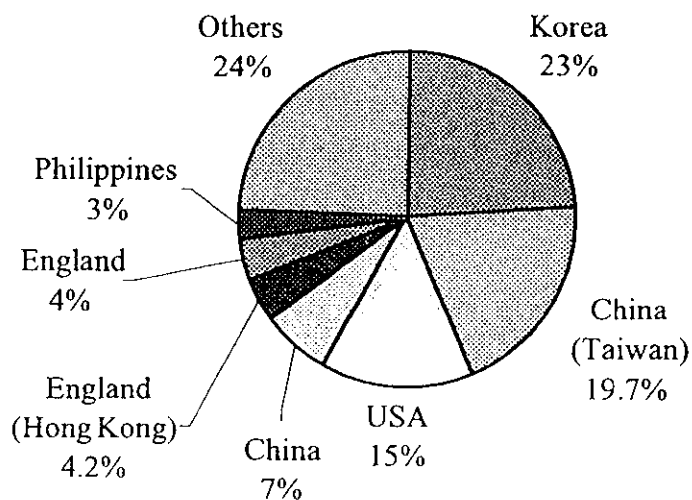
In 1999, the number of foreigners entered in Japan reached almost 5 millions, the highest in the history of Japan. The recent increase of total numbers of entered people is shown in the following table and figure.

| Year | 1995 | 1996 | 1997 | 1998 | 1999 |
|------|-----------|-----------|-----------|-----------|-----------|
| | 3,732,450 | 4,244,529 | 4,669,514 | 4,556,845 | 4,901,317 |



Over half of these foreigners from abroad are either from Korea, China and other Asian countries as shown in the following table and figure. The numbers are from 1999 report.

| Country | Korea | China (Taiwan) | USA | China | China (Hong Kong) | England |
|---------|-----------|----------------|---------|---------|-------------------|---------|
| | 1,160,034 | 963,701 | 720,142 | 327,005 | 208,172 | 188,036 |



4-7 Structure of health care system

4-7-1. Development and Present Condition of Medical Facilities

The number of hospitals increased from 7,047 in 1965 to 10,096 in 1990, but it decreased to 9,606 in 1995. The number of beds is 1,669,951 (1995), which is composed of general (75.2%), psychiatric (21.6%) and other wards (3.2%) (Table 4-2).

Table 4-2 Number of Medical Facilities, Percentage, Distribution and Ratios per 100,000 Population, 1970-98

| | 1970 | 1980 | 1985 | 1990 | 1995 | 1998 |
|---------------------------------|-------------------------------------|---------|---------|---------|---------|---------|
| | Number of facilities | | | | | |
| Total | 106,882 | 125,500 | 134,075 | 143,164 | 155,082 | 161,540 |
| Hospital | 7,974 | 9,055 | 9,608 | 10,096 | 9,606 | 9,333 |
| Mental hospitals | 896 | 977 | 1,026 | 1,049 | 1,059 | 1,057 |
| Communicable diseases hospitals | 35 | 20 | 12 | 10 | 5 | 5 |
| Tuberculosis sanatoriums | 160 | 39 | 27 | 15 | 8 | 5 |
| Leprosariums | 14 | 16 | 16 | 16 | 15 | — |
| General hospitals | 6,869 | 8,003 | 8,527 | 9,006 | 8,519 | 8,266 |
| General clinics | 68,997 | 77,611 | 78,927 | 80,852 | 87,069 | 90,556 |
| Dental clinics | 29,911 | 38,834 | 45,540 | 52,216 | 58,407 | 61,651 |
| | Ratio per 100,000 population | | | | | |
| Total | 103.0 | 107.2 | 110.8 | 116.8 | 131.1 | 127.1 |
| Hospital | 7.7 | 7.7 | 7.9 | 8.2 | 7.7 | 7.4 |
| Mental hospitals | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Communicable diseases hospitals | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tuberculosis sanatoriums | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Leprosariums | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | — |
| General hospitals | 6.6 | 6.8 | 7.0 | 7.3 | 6.8 | 6.5 |
| General clinics | 66.5 | 66.3 | 65.2 | 65.4 | 69.3 | 71.6 |
| Dental clinics | 28.8 | 33.2 | 37.6 | 42.2 | 46.5 | 48.7 |

Note: Including Okinawa Prefecture since 1975

Source: "Report on survey of Medical Care Institutions", Statistics and Information Department, MHW.

Table 4-3 Number of Hospitals by Establishing Body, 1970-98

| | 1970 | 1980 | 1985 | 1990 | 1995 | 1998 |
|---------------------------|-------|-------|-------|-------|-------|-------|
| Government | 444 | 453 | 411 | 399 | 398 | 375 |
| Public organization | 1,389 | 1,369 | 1,369 | 1,371 | 1,372 | 1,369 |
| Social insurance bodies | 156 | 140 | 140 | 136 | 134 | 133 |
| Medical juridical persons | 2,089 | 2,896 | 3,450 | 4,245 | 4,744 | 5,157 |
| Individuals | 3,167 | 3,433 | 3,406 | 3,081 | 2,110 | 1,458 |
| Others | 729 | 764 | 832 | 864 | 858 | 841 |

Note: Including Okinawa Prefecture since 1975

Source : "Report on survey of Medical Care Institutions", Statistics and Information Department, MHW.

4-7-2. Current Health Personnel Situation

Table 4-4 shows recent trends in health personnel in the country, with the reported number and population ratio of each profession at the end of 1975 and 1996. As indicated in this table, there has been a notable increase in the number of various medical technicians in medical service in the past several years. The number of medical doctors and dentists has been increasing so rapidly that it is said to have reached a nearly excessive level.

It is worth noting that the number of nurses hasn't been increasing proportionately to that of medical doctors. One of the characteristics seen during the last decade is that the number of technicians for rehabilitation medicine who are primarily concerned and engaged in returning hospitalized patients to society has increased. In 1986, the Orthotists and Prosthetists' Act was enacted to establish qualifications for orthoptists and prosthetists, in addition to physical therapists, occupational therapists, and orthoptists. In the same year, the Clinical Engineers' Act was also enacted to establish qualification for those who operate and maintain medical instruments in clinical settings.

Table 4-4 Actual Number and Population Ratio of Health Personnel (1975-98)

| Category of personnel | Total actual number | | Per 100,000 population | |
|---------------------------------|---------------------|-----------|------------------------|-------|
| | 1975 | 1998 | 1975 | 1998 |
| Physicians | 132,476 | 248,611 | 117.0 | 196.6 |
| Dentists | 43,586 | 88,061 | 38.1 | 69.6 |
| Pharmacists | 94,362 | 205,953 | 83.5 | 162.8 |
| Public health nurses | 15,962 | 34,468 | 14.3 | 27.3 |
| Midwives | 28,927 | 24,202 | 25.8 | 19.1 |
| Registered nurses | 187,251 | 594,447 | 167.3 | 470.0 |
| Assistant nurses | 208,412 | 391,374 | 186.2 | 309.4 |
| Dental hygienists | 11,440 | 61,331 | 10.1 | 48.5 |
| Dental technicians | 13,622 | 36,569 | 12.1 | 28.9 |
| Radiology technicians | 11,251 | 46,354 * | 10.0 | 36.6 |
| Clinical laboratory technicians | 20,770 | 135,147 * | 18.4 | 106.8 |
| Health laboratory technicians | 22,824 | 130,779 * | 20.2 | 103.4 |
| Physical therapists | 1,849 | 21,330 * | 1.6 | 16.9 |
| Occupational therapists | 558 | 11,039 * | 0.5 | 8.7 |
| Orthoptists | 374 | 3,616 * | 0.3 | 2.9 |
| Clinical engineers | — | 12,780 * | — | 10.1 |
| Prosthe-orthotists | — | 2,409 * | — | 1.9 |

* figures of total licensees

Besides the professions shown in the table, there are various health related personnel whose qualifications have never been specified by law, for example, speech therapists, medical social workers, and so on.

There are a few other nationally-qualified workers concerned with acupuncture, moxa-cauterization, massage and Judo therapy. These workers may engage in their work at places prepared for them exclusively. These professionals play role for rehabilitation for residual paralysis cases.

Most qualified health and medical workers, except medical doctors and dentists, may do their work only under the supervision of medical doctors or dentists, as provided in each profession's act. Therefore, the behavior of so-called co-medical workers is rather restricted in a sense. In the Act established in recent years, there are certain provisions which stress the importance of building up close connections among all health personnel.

4-7-3. Medical Doctors

The number of medical doctors has been increasing, especially since the middle of the 1970's. The Survey of Physicians, Dentists and Pharmacists shows at the end of 1975, the reported total number was 132,426 or 117.0 per 100,000 population. It reached 240,908, or 191.4 per 100,000 population, at the end of 1996. Personnel planning for medical doctors, or the policy for controlling the number of medical doctors, is referred to in Section 6.3.1. In this section, the number of medical doctors is overviewed in terms of varieties, roles and distribution.

(1) Facility Variety

There are a variety of facilities where medical doctors are engaged.

As shown in Table 4-5, the total reported number of 230,297 medical doctors work for medical care facilities, including clinics, hospitals and health facilities for the elderly accounting for 95.6% of the total number. The rest are researchers, administrators, and educators, etc. in health and medical science, accounting for less than 5% of all qualified doctors.

Table 4-5 Medical Doctors Working for Various Facilities (1996)

| Variety of roles | Actual numbers | % |
|---|----------------|--------------|
| Total | 240,908 | 100.0 |
| In medical facilities | 230,297 | 95.6 |
| as establishers | 66,488 | 27.6 |
| as employees | 178,914 | 70.0 |
| Others | 7,577 | 3.1 |
| in educational institutions (organization for education or research in medical science) | 3,918 | 1.6 |
| organization for health and welfare related administration | 1,881 | 0.8 |
| Miscellaneous | 1,906 | 0.8 |

Table 5-3 shows the number of medical doctors working for university, general, or community hospitals, including teaching hospitals for clinical training. Table 4-7 shows the number of medical doctors working in clinics, as managers and employees, respectively.

In recent years, more and more medical doctors seek jobs in working places where they will be employees. Generally, the younger they are, the more they tend to work for hospitals. Therefore, as shown in Table 4-5, the number of medical doctors as managers of medical care facilities, who account for a high percentage of the medical doctors working for clinics, has been decreasing. As a result, the number of medical doctors working as employees has now exceeded that of owners of medical care facilities.

Table 4-6 Medical Facilities for Medical Doctors Working as Employees (1996)

| Facilities | Numbers | % |
|---|----------------|--------------|
| Total | 230,297 | 100.0 |
| Hospitals other than university hospitals | 100,940 | 41.9 |
| Clinics | 82,098 | 34.1 |
| University hospitals | 41,163 | 17.1 |
| Health facilities for the elderly | 1,128 | 0.5 |

Table 4-7 Number of Medical Doctors Working for Clinics (1996)

| Categories | No. of doctors |
|-------------------------|----------------|
| Total | 82,098 |
| Establishers of clinics | 66,488 |
| Employees of clinics | 15,610 |

The so-called general practitioner or family physician is not provided for under Japanese law. To meet national health and medical needs, medical doctors who serve such a function should be produced through certain education or training. The government is planning a model program for such training for medical doctors.

The number of health/medical administration-related medical doctors is rather few. In this field, the number of medical doctors is insufficient concerning national demand and need.

(2) Various Specialties

There are a variety of specialties which are permitted to advertise as their medical facilities by the Medical Service Act. However, formally there is no law by which medical doctors may advertise themselves, for instance, as an orthopedist, a pediatrician, etc.

As shown in Table 5-5, medical doctors engaged in internal medicine represent 31.6% of the total number. In pediatrics the percentage is 6.0%, in surgery 10.6%, for orthopedists 7.1%, for otolaryngologists 3.8%, for obstetrician-gynecologist 4.7%, etc. There is a lot of overlapping coverage, which explains the higher figure of total doctors than reported. Medical doctors engaged in hospitals tend to be in charge of a single specialty, whereas those in clinics have more than one specialty.

Viewed from differentiation by sex, the number of males is the largest in internal medicine, followed by pediatrics, surgery, digestive organology, orthopedics, and so on.