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< Review >

Public health center (Hokenjo) as the frontline authority of public health in Japan: Contribution of the National Institute of Public Health to its development

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Abstract

In Japan, the public health center (Hokenjo) has greatly contributed, as the frontline authority of public health, to improve the health of local residents since 1937. The National Institute of Public Health (NIPH) has also continuously implemented education and training of Hokenjo personnel. This paper outlines the activities performed by Hokenjo, and describes how the NIPH will contribute to Hokenjo and the public health system of Japan.

The Community Health Act established in 1994, which is an amendment of the Public Health Center Act of 1947, has formed the framework for municipalities to provide public health services that affect the daily lives of local residents and the Hokenjo provide broad-based public health services, public health services requiring specialized technologies, and services requiring collaboration of various healthcare professionals. The Hokenjo is established by local governments, which include prefectures, designated cities, core cities, special wards in Tokyo Prefecture, etc. As of April 1, 2019, the number of Hokenjo is 359 in 47 prefectures and 113 in 107 cities and special wards, a total of 472. The number has continued to decrease gradually and was almost halved during the past 30 years.

Hokenjo performs a wide range of services related to the health of local residents, from personal health services to environmental health services, including vital statistics, nutrition improvement and food sanitation, environmental sanitation, medical and pharmaceutical affairs, public health nursing, public medical services, maternal and child health and health for the elderly, dental health, mental health, medical care and social support for patients with intractable/rare diseases, the prevention of HIV/AIDS, tuberculosis, sexually transmitted diseases, and other infectious diseases, hygiene inspections and examination, etc. In addition, since 1994, Hokenjo has been providing new services, including healthy community development, public health services requiring specialized technologies, collection, proper organization, and utilization of information, survey and research, support for municipalities (in the case of Hokenjo in prefectures), health crisis management, planning and coordinating. The function of health crisis management in particular was significantly developed.

The personnel at Hokenjo consist mainly of the public health center director, medical doctors, dentists, pharmacists, veterinarians, public health nurses, midwives, nurses, clinical radiologic technologists, clinical laboratory technologists, registered dietitians, dietitians, dental hygienists, statisticians, etc. The number of Hokenjo personnel decreased from 34,680 in 1989 to 27,902 in 2017. Although the number of public health nurses, pharmacists, veterinarians, and registered dietitians have increased slightly, the number of medical

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doctors, including public health center directors, has been decreasing.

The main education and training programs that the NIPH provides for Hokenjo personnel are “professional education program” and “short-term training program.” As for the former, the 3-month course to educate candidates of public health center directors has produced approximately 20 graduates who have the high-quality competency suitable for public health center director every year, even while the numbers of Hokenjo and medical doctors in Hokenjo have been decreasing. Furthermore, in the short-term training programs with a duration of 2 to 28 days intended to have trainees acquire the latest knowledge and skills in public health practice, the NIPH has quickly responded to newly emerging health issues including health crisis management and various needs of local governments, has planned and conducted high-quality programs suitable for them, and has developed many relevant human resources, which have been increasing in number every year. NIPH intends to continue implementing such high-quality education and training programs matching the local needs on a constant and stable basis in the future.

keywords: public health center (Hokenjo), community health, local government, health crisis management, human resource development

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I. Introduction

In Japan, various measures have been put in place to maintain and improve the health of citizens. “Hokenjo,” which means public health center in Japanese, is the authority established by the local government to govern these measures at the local level. Hokenjo was first established in 1937 in Japan. Since then, for more than 80 years, the Hokenjo has greatly contributed, as the frontline authority of public health, to improve the health of local residents. Meanwhile, there have been significant changes in the social environment surrounding the health of local residents, such as an increase in the aging population and a low birth rate and changes in the structure of diseases in the community. While flexibly responding to these changes, Hokenjo has addressed numerous health problems. The National Institute of Public Health (NIPH) has also started to educate and train personnel to work in public health settings at the same time when the Hokenjo was established, which has improved the skills of the Hokenjo personnel to a great extent. The experience of the Hokenjo and the NIPH will be useful for foreign countries that are developing or reforming a public health system.

This paper outlines the activities performed by public health center (Hokenjo) that have contributed to the development of public health in Japan, and describes how the NIPH supported Hokenjo and how the NIPH will contribute to the activities of Hokenjo and the public health system of Japan in the future.

II. Outline of the central and local governments in Japan

The principle of the Japanese administrative system is

decentralization of power. According to the Local Autonomy Act [1], local governments must apply autonomous and comprehensive local administration to enhance the welfare of the residents. The central government entrusts administrative services that affect the daily lives of local residents to the local authorities as far as possible [1]. Thus, local governments must provide public health services related to daily life and establish an organization that is responsible to provide the services, that is, Hokenjo.

Local governments in Japan can be grouped into prefectures or municipalities [1]. A municipality is a fundamental local governmental body, whereas a prefecture is a local governmental body covering a wider area that includes multiple municipalities. Municipalities can be grouped into cities, towns, or villages. Cities are further classified into designated cities, namely, cities with a population of $\geq 500,000$ people that are also allowed to establish wards in the city; core cities, namely, cities with a population of $\geq 200,000$ people; and other cities. Designated cities and core cities can partially manage prefectural affairs, including Hokenjo [1]. In addition, Tokyo Prefecture, the capital of Japan, can establish special wards, and special wards can partially manage Tokyo Prefecture's affairs [1]. Among these, prefectures, designated cities, core cities, special wards, and cities designated by other ordinances must establish Hokenjo [2]. Thus, Hokenjo can be grouped into Hokenjo established by a prefecture and Hokenjo established by a city or special ward.

III. History of the public health center (Hokenjo) in Japan

In 1937, “an urban health center” and “a rural health center,” which became the models for Hokenjo, were estab-

lished in Tokyo City (currently known as Tokyo Prefecture) and Saitama Prefecture, respectively [3,4]. In 1938, the Institute of Public Health, the predecessor of NIPH, was established. The establishment of these institutions was financially supported by the Rockefeller Foundation in the United States. In 1937, the first Public Health Center Act was established and a plan to establish Hokenjo across the country was developed. However, the plan failed to make progress because of the outbreak of World War II in 1941 [4].

In 1947, after World War II, the memorandum “Matter Concerning the Expansion and Enhancement of Public Health Centers” was issued by the General Headquarters, the Supreme Commander for the Allied Powers (GHQ/SCAP). Based on this memorandum, the Public Health Center Act was revised on a full scale [3-5]. The revised Public Health Center Act specified that Hokenjo must conduct public health workforce development, maternal and child health, vital statistics, clinical laboratory tests, dental health, nutrition improvement, health education, prevention of infectious diseases, tuberculosis, and sexually transmitted diseases, etc., which were requested in the memorandum, and other services including sanitation of housing and cleaning services [4]. This specification has determined the general scope of services currently provided by Hokenjo. Regarding therapeutic practice, the Hokenjo was only allowed to perform dental treatment and preventive treatment for sexually transmitted diseases and tuberculosis, which were strongly requested by GHQ/SCAP [4]. Although the Hokenjo is still currently legally allowed to perform therapeutic practice, almost none is actually performed.

In the 1950s, there was a decrease in the prevalence of such diseases as tuberculosis and acute infectious diseases, and a significant improvement in the infant mortality rate due to an increase in public awareness of hygiene, advances in chemotherapy, and improvement in the living environment, to which various Hokenjo-initiated activities primarily contributed. Meanwhile, there were discussions on reorganizing the roles and functions of Hokenjo to respond to a shift in the population structure due to an increase in the aging population and a low birth rate, and in disease structures from acute to chronic diseases [4,6].

In 1994, the Public Health Center Act was amended, and the Community Health Act [2] was established, which was fully enforced in 1997. The Community Health Act specifies the responsibilities of central and local governments, aiming to “assure the comprehensive promotion of strategies in the Maternal and Child Health Act and other laws related to community health measures in the local areas and thereby maintain and promote local residents’ health” (Article 1) [2]. Although the Public Health Center Act included a specifi-

cation on the establishment of “Hokenjo” as the authority responsible for the health of local residents, the Community Health Act additionally specified the responsibilities of municipalities that could not establish Hokenjo. Accordingly, municipalities were required to provide public health services for local residents, specifically including health checkups, health education, health consultation, and health guidance. The Hokenjo was required to provide broad-based services, services requiring specialized technologies, and services requiring collaboration of various healthcare professionals. In addition, municipalities are allowed to establish a municipal health center as a base to provide public health services.

Behind this amendment to the law, there were circumstances such as significant improvement in the health status of citizens after the war by the actions taken by Hokenjo, including maternal and child health measures, nutrition improvement, and measures against infectious diseases. Meanwhile, it was perceived that further improvement of the health status would require more community-based public health services. This was because it had become increasingly difficult for Hokenjo to provide detailed public health services suited to the different health levels and health problems of multiple municipalities a Hokenjo is in charge of. In addition, municipalities underwent several large-scale consolidations and the number of municipalities, which had approximately been 10,000 in 1945 after the war, was approximately 3,000 in the 1960s, fewer than 2,000 in the 2000s, and is 1,718 at present [7]. This resulted in growth in the size of municipal populations with associated improvement of their financial power and human resources, thereby allowing them to implement health education and health guidance by themselves by employing healthcare professionals such as public health nurses and dietitians.

IV. Activities of the public health center (Hokenjo) in Japan

1. The number of Hokenjo

Figure 1 shows the transition in the number of Hokenjo. As of April 1, 2019, the number of Hokenjo was as follows: 359 in 47 prefectures, 113 in 107 cities and special wards (26 in 20 designated cities, 58 in 58 core cities, 6 in 6 cities, and 23 in 23 special wards), a total of 472 [8]. Although the number of Hokenjo was 848 (632 in prefectures and 216 in cities and special wards) in 1989, it decreased to 706 (525 in prefectures and 181 in cities and special wards) in 1997 when the Community Health Act was fully enforced [8]. The number thereafter continued to decrease gradually and was almost halved during the past 30 years.

The cause for the decrease in the number of Hokenjo

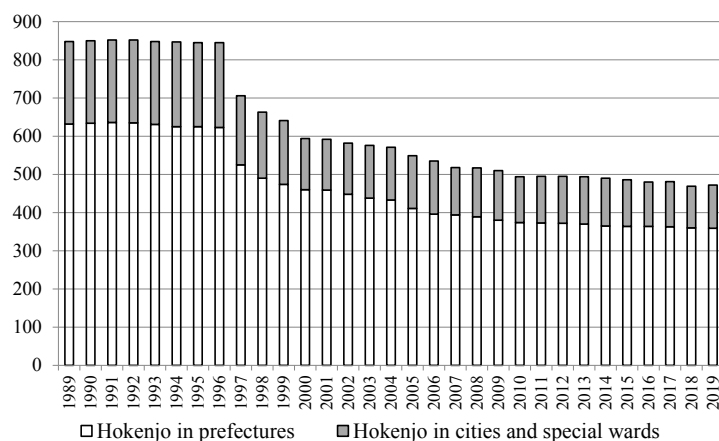


Figure 1 The number of Hokenjo (Public Health Centers) in Japan

in prefectures is that municipalities have been allowed to perform some of the public health services previously performed by Hokenjo, and thus the role of Hokenjo in prefectures has been restricted to providing broad-based public health services and public health services requiring specialized technologies, which resulted in the concentration of services provided by Hokenjo within each prefecture. This was a change that reflected the division of roles between municipalities and prefectures, as described in the Community Health Act.

The cause for the decrease in the number of Hokenjo in cities and special wards is that although one Hokenjo was previously established in each ward in designated cities, they have been consolidated into one in all designated cities, except for Fukuoka City. In contrast, the number of cities establishing a Hokenjo has been increasing. Specifically, the number of designated cities, which was 11 in 1989, has increased to 20 as of April 1, 2019. Regarding the core city, which was institutionalized in 1996, the number was as few as 12 at first, but has increased to 58 as of April 1, 2019. Designated cities, core cities, cities designated by the Community Health Act, and special wards need to conduct services provided by both the Hokenjo and the municipality. Therefore, it should be noted that the Hokenjo in prefectures and those in cities and special wards are slightly different in organizational structure and services.

2. The role of Hokenjo

Services provided by Hokenjo are specified in the Community Health Act as follows [2]:

- Matters concerning the promotion and enhancement of public awareness related to community health
- Matters concerning vital statistics and other statistics related to community health
- Matters concerning nutrition improvement and food sanitation

- Matters concerning environmental sanitation including housing, water supply, sewerage, waste disposal, and public cleaning
- Matters concerning medical affairs (medical care inspection, etc.) and pharmaceutical affairs (provision of licenses to open pharmacies, etc.)
- Matters concerning public health nursing
- Matters concerning the improvement and enhancement of public medical services
- Matters concerning maternal and child health and the health for the elderly
- Matters concerning dental health
- Matters concerning mental health
- Matters concerning medical care and social support for patients with intractable/rare diseases or other special diseases
- Matters concerning the prevention of HIV/AIDS, tuberculosis, sexually transmitted diseases, infectious diseases, and other diseases
- Matters concerning hygiene inspections and examination
- Other matters concerning the maintenance and enhancement of the health of local residents

The Hokenjo performs a wide range of services related to the health of local residents - from personal health services to environmental health services. While these services are being continued since the establishment of the Public Health Center Act in 1947, the following services are being provided since 1994 [9];

- (1) Promotion of healthy community development (including the generation and utilization of social capital)
- (2) Promotion of public health services requiring specialized technologies (including mental health, intractable/rare disease measures, HIV/AIDS control measures, food safety, environmental sanitation, and medical and pharmaceutical affairs)
- (3) Promotion of the collection, proper organization, and

utilization of information

- (4) Promotion of survey and research activities
- (5) Support for municipalities and promotion of liaison and coordination between municipalities (including training of municipality personnel, etc., in the case of Hokenjo in prefectures)
- (6) Enhancement of the function as a base for health crisis management in the area
- (7) Enhancement of planning and coordinating functions (including involvement in plans related to health and welfare)

It is also specified in Article 4 of the Community Health Act to establish “the basic guideline on the promotion of community health measures [9]” for the smooth and comprehensive promotion of community health measures. This specification indicates a framework related to community health measures supposed to be taken by governmental bodies such as municipalities, prefectures, and the central government, which has been revised several times. In Japan, it is possible to take measures quickly and appropriately to respond to changes in the circumstances surrounding community health by revising this guideline without an amendment to the Community Health Act [10]. For example, the roles of Hokenjo in health crisis management are detailed in this guideline, not in the Community Health Act itself, and were revised based on the lessons learned in large-scale disasters that occurred in Japan, such as the Great Hanshin-Awaji Earthquake or the Great East Japan Earthquake.

3. Hokenjo personnel

The Hokenjo personnel mainly consist of a public health

center director (“Hokenjo-cho” in Japanese) as the top official, medical doctors, dentists, pharmacists, veterinarians, public health nurses, midwives, nurses, clinical radiologic technologists, clinical laboratory technologists, registered dietitians, dietitians, dental hygienists, and statisticians [2]. Various professionals such as physical therapists and occupational therapists are also assigned. Thus, the personnel in Hokenjo are performing services through multidisciplinary collaboration.

A public health center director must be a medical doctor in principle. An individual who meets any of the following criteria is appointed as a public health center director: (1) has work experience in public health for ≥ 3 years, (2) has completed the education and training program by the NIPH (described later), and (3) has been identified to have skills or experience equivalent to or superior to the above, as specified in the Community Health Act [2].

The number of Hokenjo personnel was 27,902 as of 2017 [11]. Of these, the number of technical officials, including medical doctors and public health nurses, was 17,307 (62%), and the number of administrative officials was 10,595 (38%). Although the number of Hokenjo personnel was 34,680 in 1989, it decreased to 29,948 in 1997 when the Community Health Act was fully enforced [11]. After a slight decrease, the number has now reached 27,902. The number of personnel per Hokenjo rose from 41 in 1989 to 58 in 2017, because the magnitude of the reduction in the number of Hokenjo was greater than that of the personnel.

Figure 2 shows the transition in the number of Hokenjo personnel by occupation. Among the occupations, the number is the largest for administrative officials. The number, which was 18,635 in 1989, declined significantly to 11,456 in

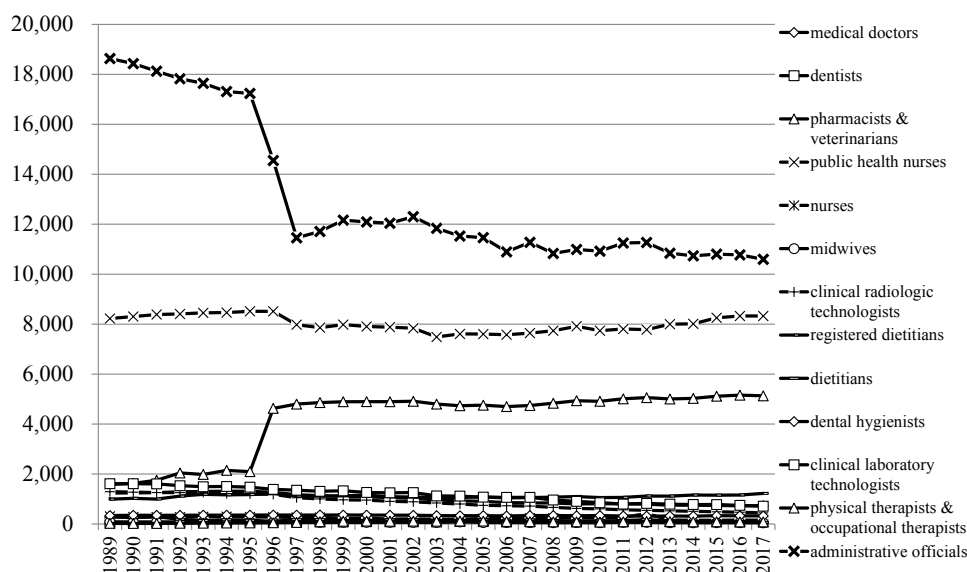


Figure 2 The number of Hokenjo personnel by occupation

1997 when the Community Health Act was fully enforced. After another slight decrease, the number now stands at 10,595 [11]. This result indicates that the reduction in the number of Hokenjo has led to the consolidation of their secretarial and administrative departments and thereby to higher efficiency of the management of Hokenjo.

Among the technical officials, public health nurses account for the largest number: 8,326 as of 2017. The number was 8,224 in 1989, and, although it slightly dropped in 1997 when the Community Health Act was fully enforced, it has slightly increased thereafter [11]. The second largest number is that of pharmacists and veterinarians at 5,131 as of 2017. Although the number was 1,580 in 1989, it rose significantly to 4,629 in 1996 and has slightly increased since then [11]. This is because the services they are involved in, including food and environmental sanitation, have been specified to be enhanced by the Community Health Act.

Figure 3 shows the transition in the number of Hokenjo personnel by occupation, excluding administrative officials, public health nurses, pharmacists, and veterinarians. The number of medical doctors, which was 1,239 in 1989, has been decreasing after the enforcement of the Community Health Act and was 730 as of 2017 [11]. The number of medical doctors per Hokenjo is calculated to be fewer than 2 because the number of Hokenjo is 472, and thus, the public health center director is the only medical doctor at many Hokenjo. The public health center director, who handles many managerial/administrative tasks, cannot fully serve as a medical doctor. Therefore, the reduction in the number of medical doctors at Hokenjo may become a major obstacle to the performance of public health services that require medical knowledge and skills. Although the Ministry of

Health, Labour and Welfare and related societies have been promoting activities to secure a sufficient number of public health doctors, they have not been able to achieve sufficient results.

Regarding other occupations, the number of registered dietitians has increased because the needs for the advanced services related to improvement of nutrition of infants and elderly people, etc. have increased. However, the number of clinical radiologic technologists and clinical laboratory technologists has decreased due to the centralization of hygiene inspections and examination to some Hokenjo in prefectures.

4. Health crisis management as the most important role of Hokenjo

The activity that Hokenjo currently emphasizes the most is health crisis management. After the establishment of the Community Health Act in 1994, health crisis events threatening citizens' lives and health occurred in multiple places, for example, the Great Hanshin-Awaji Earthquake and the Tokyo Subway Sarin Gas Attack in 1995, mass infection with enterohemorrhagic *Escherichia coli* O-157 in Sakai City in 1996, the case of curry spiked with poison in Wakayama City in 1998, and the criticality accident concerning uranium at JCO in Tokai Village in 1999. A health crisis management system was built up to take proper actions for such events, and Hokenjo was specifically positioned as a base for local health crisis management in the guideline [9].

The table 1 shows the roles of Hokenjo in health crisis management [12]. The Hokenjo is generally aware of information about health, medical care, and welfare in the community. Therefore, when any health crisis events such

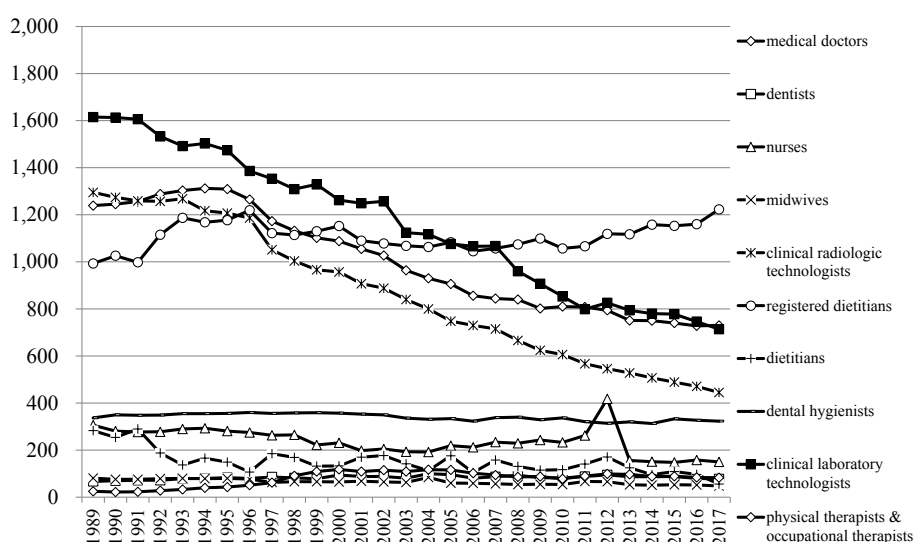


Figure 3 The number of Hokenjo personnel by occupation, excluding administrative officials, public health nurses, pharmacists, and veterinarians

Table 1 Roles of Hokenjo in health crisis management

Provisions made during ordinary times	1)Prevention of the occurrence of health crisis events /assurance of regular infectious disease measures and inspections 2)Preparation for the occurrence of health crisis situations /collection and analysis of information related to health crises (e.g., natural environment, residents requiring support [e.g., patients with rare and intractable diseases or mental illnesses, elderly people, handicapped people, pregnant women, children, and people on artificial respirators], and medical resources) /development of manuals for health crisis management /establishment of the organizational structure to quickly respond to health crisis events (e.g., command and control system, information and communication technology in emergencies) /cooperation and role sharing with local organizations concerned (e.g., police, fire services, medical associations, medical institutions, volunteer groups, and the Self-Defense Forces) /maintenance of storage and transportation systems of stockpiles (e.g., pharmaceutical products, medical instruments, and materials) /the conduct of training to respond to health crisis events
Actions undertaken to respond to health crises	1)Response to health crisis situations /collection, compilation, and management of various information such as the damage situation (e.g., places of occurrence, date and time of occurrence, symptoms of victims, and number of victims), information related to causes, status of response (e.g., status of rescue of victims and status of medical activities at the site), status of providing medical services (e.g., status of vacant wards that can admit patients at medical institutions, and status of obtainment of pharmaceutical products), etc. /quick and appropriate provision of information to local residents, organizations concerned, and other parties such as mass media /coordination of healthcare services provided to victims, their families, and other local residents 2)Prevention of the spread of damage due to the health crisis situation /public awareness activities (providing information on the status of damage, precautions, and other related information to local residents) /securing the safety of drinking water and foods /care for individuals vulnerable to disaster /management of the health of victims, their families, and local residents (e.g., medical checkups, health counseling, and psychological care, especially, care for post-traumatic stress disorder)

as natural disasters occur, they are able to decide on the optimal measures to secure the health and safety of victims based on these data and to take prompt actions in cooperation with other concerned organizations, such as the fire services, police, Self-Defense Forces, medical institutions, municipalities, volunteer groups, and other related parties.

However, at the time of the Great East Japan Earthquake in 2011, there was the problem that some Hokenjo were affected by the disaster and thus became dysfunctional in providing health crisis management services. To solve this problem, the Disaster Health Emergency Assistance Team (DHEAT) was organized in 2018 with much support from the National Association of Prefecture and Designated City Health Directors and the Japanese Association of Public Health Center Directors. DHEAT primarily comprises prefectural personnel who have completed technical training to support affected Hokenjo and other related organizations, who are dispatched when support is requested by affected prefectures. The roles of DHEAT are mainly as follows [13]:

- Establishment of a health crisis management organization and development of a system of direction and coordination.
- Collection, analysis, and evaluation of disaster-related information and planning of measures.
- Coordination of the delivery of support by a healthcare

team and integration, direction, and coordination of countermeasures through meetings.

- Reporting to Healthcare Coordination Headquarters and Hokenjo, request for support, and resource procurement.
- Public relations.
- Securing the safety of personnel in affected prefectures, etc., and management of their health.

NIPH mainly performs the planning and implementation of training for DHEAT, the provision of technical support and information related to training for DHEAT in the prefecture, and the provision of information required for DHEAT's activities, by using the Health Crisis and Risk Information Support Internet System (H-CRISIS), etc.

V. The role of the NIPH to enhance the public health center (Hokenjo)

NIPH is one of the research institutes affiliated with the Ministry of Health, Labour and Welfare. The mission of NIPH is to perform education and training of personnel engaged in activities of public health, environmental health, and social welfare and to conduct research in these areas. The Institute of Public Health, the predecessor of NIPH, was established on March 29, 1938. Subsequently, the Institute of Public Health was merged with other research insti-

tutes on April 1, 2002, to be newly established as the NIPH [14]. The objectives of education and training are to provide professional education to personnel in the central and local governments (including Hokenjo), who are engaged in activities related to public health (medical doctors, dentists, pharmacists, veterinarians, public health nurses, registered dietitians, etc.) and those intending to engage in these activities, with the goal of improving the level of public health in Japan [14].

NIPH performs various types of education and training programs. Of these, the main programs for Hokenjo personnel are “professional education programs” and “short-term training programs.” The course in administrative management of health and welfare, which is included in the professional education program, is intended to develop the high-level competency required to become a leader in public health and corresponds to an “education and training program by NIPH,” which is one of the qualifications for a public health center director as specified in the Community Health Act [2]. The program requires 1 year of study and consists of the first stage of 3-month duration comprising 6 curricula, namely, basic theory of public health, public health administration, theory and practice of health crisis management, biostatistics and epidemiology, organization management, and public health practice, and the second stage, which includes the preparation of a research article. Although the Community Health Act specifies that the completion of the first stage is adequate to meet the qualifications for a public health center director, NIPH recommends completion of the second stage to further improve their quality. An additional curriculum that allows individuals who have completed the first stage, but find it difficult to study throughout the year, to complete the second stage over a period of 3 years is also available.

Short-term training programs are also offered with the aim of equipping individuals engaged in work related to public health with the latest knowledge and skills involved in their work, specifically the following areas [14]:

- (1) community health area: health crisis management including training for the DHEAT leaders, prevention of NCD (non-communicable diseases), tobacco control, prevention of child abuse, public health nursing, health promotion planning and monitoring, dental and oral health, intractable/rare disease measures, etc.
- (2) infectious diseases control area: HIV/AIDS control measures, measures for pandemic influenza and emerging/re-emerging infectious diseases, bacteriological and virological inspections, etc.
- (3) medical services delivery area
- (4) environmental health area: water supply system, water and sanitation, sanitation in buildings, healthy housing,

radiation safety, environmental sanitation inspection, etc.

- (5) food sanitation and pharmaceutical affairs area
- (6) social welfare area
- (7) information and statistics area: information and communication technology (ICT) for health, epidemiology, economic evaluation of healthcare programs, etc.

The duration of the training is from 2 to 28 days. The programs cover a wide variety of health challenges and help trainees acquire technical knowledge and skills required to cope with each health challenge.

Many of these programs are well designed to allow trainees to develop practical skills by allocating a considerable amount of time to exercises. Some programs also adopt a split-type curriculum. Specifically, after completing a basic curriculum with a duration of approximately 5 days, trainees return to their own work and address health problems in their work field. They then gather at the NIPH again in the latter half of the year to present the results of issues they tackled in their field to each other and mutually share the knowledge they obtained. This type of curriculum does not only allow trainees to acquire practical skills, but also the Hokenjo to which the trainees belong to obtain clues to solve relevant health problems.

Figure 4 shows the transition in the number of graduates from education and training programs corresponding to qualifications for public health center directors. While “education and training program by NIPH,” which is one of the qualifications for public health center directors, has been being conducted since 1999, the Institute of Public Health, the predecessor of NIPH, conducted a 6-week training program (“advanced course in public health”) for public health center directors and candidates. Therefore, the number of graduates from the “advanced course in public health” is included in this figure. Data were also obtained from annual reports of the Institute of Public Health (1989-2001) and annual reports of the National Institute of Public Health (2002-2018).

The number of graduates started increasing in 1991, and by the time when the Community Health Act was established (1994) and fully enforced (1997), the program had produced a large number of human resources with high-level competencies in organizational management and leadership. Although the number of graduates decreased significantly in 1999, it has remained around 20 despite the decrease in the number of Hokenjo, and the program has continuously supplied competent personnel suitable to serve as public health center directors every year.

Figure 5 shows the transition in the number of graduates from short-term training programs mainly for Hokenjo personnel, which specifically cover the following areas:

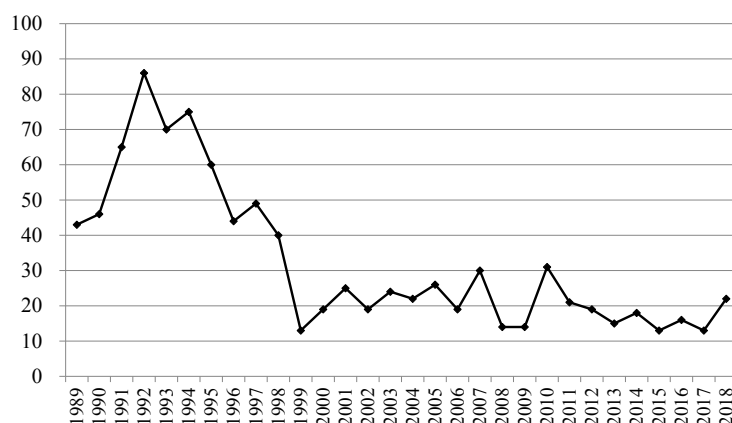


Figure 4 The number of graduates from education and training programs corresponding to the qualifications for public health center directors

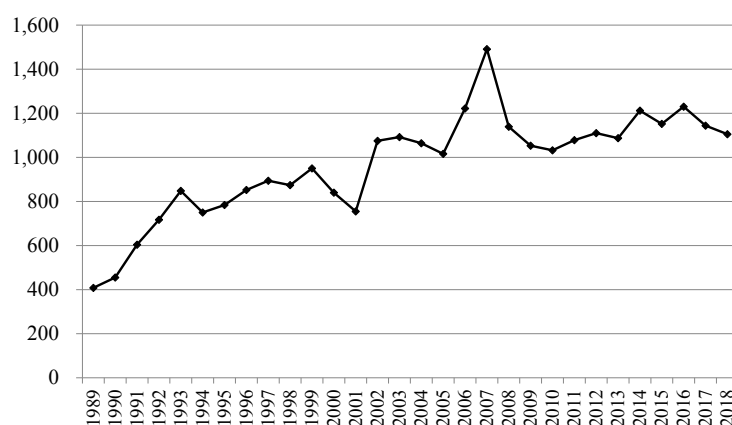


Figure 5 The number of graduates from short-term training programs mainly for Hokenjo personnel

(1) community health, (2) infectious diseases control, (4) environmental health, (5) food sanitation and pharmaceutical affairs, and (7) information and statistics. Data were obtained from the same reports as those used in Figure 4. Although the number of graduates decreased in 2001 due to the limitation on accepted trainees in preparation for re-organization and relocation in 2002, the number has been increasing throughout the Heisei Era (1989-2018). This trend also did not show significant changes before and after the establishment of the Community Health Act (1994) or its full enforcement (1997). This indicates that NIPH has been stably developing human resources capable of responding to local health issues without being affected by changes in laws or systems. It also suggests that short-term training programs, which NIPH started to immediately respond to many health issues that surfaced during the Heisei Era (e.g., health crisis events, child abuse, and emerging/re-emerging infectious diseases), were suited to the needs of Hokenjo

personnel.

VI. Conclusion

The Hokenjo, which continues to be the frontline authority of public health in Japan to date, has greatly contributed to the improvement of citizens' health and the average life expectancy after World War II. The Community Health Act established in 1994 has formed the framework whereby municipalities provide public health services that affect the daily lives of local residents, and Hokenjo provide broad-based public health services and public health services requiring specialized technologies. Although this resulted in a reduction in the number of Hokenjo and administrative officials, the number of public health nurses who represent the largest number of technical officials, pharmacists and veterinarians responsible for food and environmental sanitation, and registered dietitians responsible for nutrition improve-

ment, has been increasing. As a result, the functions of Hokenjo could be concentrated and enhanced. Particularly, the function of Hokenjo related to health crisis management was developed significantly, and the system to protect the lives, health, and safety of local residents in Japan, where natural disasters frequently occur, has been established.

On the contrary, there are some challenges, one of which is concern about securing a sufficient number of medical doctors, including public health center directors. After enforcement of the Community Health Act, the number of medical doctors at Hokenjo has been decreasing, which may become a major obstacle in maintaining the functions of Hokenjo. However, concerning this issue, the Japan Board of Public Health and Social Medicine has been conducting lifelong education and accreditation of board certified physicians and board certified supervisory physicians in public health and social medicine since 2017, aiming to secure a sufficient number of young public health doctors and developing their competency, which is expected to generate improvement.

Another issue is that citizens' needs for health have become more diversified, making it difficult for municipalities and Hokenjo to provide public health services suitable to all of these needs. In addition, some prefectural Hokenjo have a weak connection with municipalities because of the progress of role sharing between the prefecture and municipalities. Regarding this issue, a new initiative, that is, the promotion of community health utilizing "social capital," has been introduced. It aims to develop a system whereby local governments promote community health in collaboration with schools, companies, private organizations, including nonprofit organizations, volunteer organizations, self-help groups, and other concerned parties. However, this initiative has been launched only recently, and there are some issues that need to be considered, such as how governments and organizations or groups composed of local residents should collaborate with each other and how the roles and responsibilities of organizations, groups, and local residents in community health should be specified [10].

Under the above-mentioned circumstances, NIPH, since its establishment in 1938, has continuously implemented education and training of public health specialists, produced a number of excellent human resources, and has greatly contributed to the enhancement of the functions of Hokenjo and improvement in the health status of local residents. Particularly, the 3-month course to educate public health center directors has produced approximately 20 graduates with high-quality competency suitable for public health center directors every year, even while the numbers of Hokenjo and medical doctors at Hokenjo have been decreasing. Furthermore, in the short-term training programs intended

to have trainees acquire the latest knowledge and skills in public health practice, NIPH has quickly responded to newly emerging health issues such as health crisis management and various needs of local governments, planned and conducted suitable high-quality programs, and developed many relevant human resources, which have been increasing in number every year. NIPH intends to continue to implement such high-quality education and training programs matching local needs on a constant and stable basis in the future.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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日本の公衆衛生の第一線機関としての保健所 —その発展への国立保健医療科学院の貢献—

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抄録

日本において、保健所は1937年に初めて設置され、それ以来、公衆衛生の第一線機関として、地域住民の健康水準の改善に貢献してきた。また国立保健医療科学院は保健所職員に対する養成訓練を継続的に実施してきた。本稿では、保健所の活動を概観するとともに、国立保健医療科学院がどのように保健所や日本の公衆衛生システムに貢献してきたかを論述する。

地域保健法は、1947年の保健所法の改正法として1994年に制定され、これによって、市町村は地域住民に身近な公衆衛生サービスを実施し、保健所は広域的サービス、専門的技術を要するサービス、多種の保健医療専門職によるチームワークを要するサービスを提供することとなった。保健所は、都道府県、指定都市、中核市、地域保健法によって定められる市、特別区によって設置され、2019年4月1日現在、47都道府県に359、107市・特別区に113、計472の保健所が設置されている。保健所数は減少傾向をたどり、この30年間でおよそ半数に減少した。

保健所は、人を対象とした業務から環境を対象とした業務まで、地域住民の健康に関わる幅広い業務を実施している。具体的には、地域保健に関する思想の普及及び向上、人口動態統計等の統計、栄養の改善及び食品衛生、環境衛生、医事及び薬事、保健師、公共医療事業、母性及び乳幼児の保健並びに老人の保健、歯科保健、精神保健、治療方法が確立していない疾病その他の特殊の疾病により長期に療養を必要とする者の保健、エイズ、結核、性病、伝染病、その他の疾病の予防、衛生上の試験及び検査などである。また1994年から、健康なまちづくり、専門的かつ技術的業務、情報の収集・整理・活用、調査研究、市町村に対する援助及び市町村の相互間の連絡調整（都道府県保健所の場合）、地域における健康危機管理の拠点としての機能の強化、企画及び調整の機能の強化に関する業務が追加された。特に健康危機管理に関する機能は顕著に強化されている。

保健所の職員は、保健所長を筆頭に、医師、歯科医師、薬剤師、獣医師、保健師、助産師、看護師、診療放射線技師、臨床検査技師、管理栄養士、栄養士、歯科衛生士、統計技術者などで構成される。保健所職員の数は、1989年に34,680人であったが、2017年現在は27,902人に減少している。保健師、薬剤師、獣医師、管理栄養士の数は若干増加しているが、保健所長を含む保健所医師の数は減少傾向が続いている。

国立保健医療科学院における保健所職員を対象とした主な養成訓練は「専門課程」と「短期研修」である。前者に関しては、保健所長の養成を目的とした3か月コースにおいて、保健所数や保健所医師数が減少している中、保健所長としての高い資質を備えた修了生を毎年約20名、継続的に輩出している。また公衆衛生実務の最新の知識、技術の修得を目的とした2～28日間の短期研修では、健康危機管理など、新たに発生した健康問題や地方自治体のニーズを素早く察知し、それらに対応するための質の高いプログラムを企画、実施し、毎年多くの人材を育成し、その数は年々増加傾向にある。国立保健医療科学院は、今後もこのような地域のニーズに適合した質の高い養成訓練を継続的・安定的に実施していく所存である。

キーワード：保健所、地域保健、地方自治体、健康危機管理、人材育成