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**Original Article**

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## Prefectural public health nurses' support in human resource development of municipal public health nurses in Japan

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**Objective** This study aimed to explore the support extended by prefectural public health nurses (PHNs) toward the human resource development (HRD) of municipal PHNs in Japan.

**Methods** We performed a qualitative descriptive study involving nine prefectural PHNs from April 2019 to May 2020. The data were collected through semi-structured interviews using an interview guide, described qualitatively, coded, and then categorized.

**Results** Five categories were extracted. “Clarifying the needs and problems related to HRD and daily PHN activities in the municipalities,” “Creating an environment where all municipal PHNs have equal opportunities for off-the-job training,” and “Helping municipal PHNs recognize the meaning of practice and develop an evaluation perspective” were extracted from the prefectural government PHNs and prefectural health center (HC) PHNs. “Clarifying problems and future prospects to encourage the growth of PHNs” and “Creating an environment where the significance and value of the activities of PHNs are recognized within the organization and HRD can easily take place” were extracted from the HC PHNs.

**Conclusion** Much of the HRD support provided by the prefectural PHNs to the municipal PHNs was analogous to the PHN activities provided to the community and residents. To promote HRD effectively, prefectural PHNs should apply their individual care skills to the HRD of municipal PHNs.

**Key words** : Education, Human resource development, Japan, Municipality, Prefecture, Public health nurses

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### I. INTRODUCTION

Human resource development (HRD) and training in public health are among the 11 essential public health functions defined by the Pan American Health Organization/World Health Organization. These functions are necessary to improve public health practices and the overall performance of health systems<sup>1</sup>.

Prefectures and municipalities are central government entities responsible for public health in Japan.

The Community Health Act of 1994 defines the roles of prefectures and municipalities<sup>2,3</sup>. Prefectures are responsible for patients with intractable diseases, complex mental disabilities, and infectious diseases. Municipalities are responsible for mothers, children, and people with mental disabilities<sup>4</sup>. Therefore, the prefectures' main responsibility is to extend logistical support to the municipalities. Moreover, prefectural health centers (HCs) support municipalities from a professional and broad perspective<sup>5</sup>. The 2013 Public Health Nurse (PHN) Activity Guidelines<sup>6</sup> emphasized the importance of prefectural support for municipalities. HRD is an essential aspect in which HCs can support municipalities in promoting community health. Therefore, prefectural PHNs must strengthen HRD.

Regarding the HRD for municipal PHNs, HC PHNs have provided support to people with mental disorders<sup>7</sup> and community residents in disaster areas<sup>8</sup>. Additionally, the reports<sup>9,10</sup> clarify where prefectures should provide support to formulate HRD plans for municipal PHNs. These studies and reports

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are limited to the prefectural PHNs' support requested by municipalities for specific situations. Therefore, the kind of HRD support the prefectural PHNs comprehensively provide to the municipal PHNs remains unclear.

As specified by the PHN Activity Guidelines<sup>5,6)</sup>, prefectural PHNs need to recognize HRD support for municipalities as part of their duties and take initiative to provide such support. The number of HCs in Japan decreased from 636 in 1991 to 355 in 2020<sup>11)</sup> due to administrative reforms<sup>12)</sup>. Consequently, opportunities for prefectural PHNs to interact with residents and municipal PHNs decreased significantly<sup>13)</sup>. Therefore, it is widely perceived that prefectural PHNs may find it difficult to grasp the issues faced by municipalities and communities. Thus, it is necessary to explore the HRD support provided to municipal PHNs by their prefectural PHNs. We aimed to explore the details of the HRD support by prefectural PHNs for municipalities.

## II. METHODS

### 1. Design and sample

We conducted a qualitative descriptive study<sup>14)</sup> to explore the HRD support extended by prefectural PHNs toward the municipal PHNs. The inclusion criteria were prefectural PHNs with more than 20 years of experience and managers or assistant managers. Prefectural PHNs work in Prefectural Governments (PGs) and HCs. Both PG PHNs and HC PHNs were included. Snowball sampling was conducted based on the researchers' connections as well as the connections between the research participants. We requested cooperation from 11 prefectural PHNs, among whom nine agreed; one PHN found it difficult to participate the interview owing to the lack of support from municipalities, and another was busy combatting COVID-19.

### 2. Measures

Semi-structured interviews were conducted between April 2019 and May 2020, using an interview guide. The questions were "What kind of support do you provide to municipal PHNs from the HRD perspective?" and "What issues do you think exist regarding HRD in the municipalities?" The interviews lasted 56–94 (SD = 12.4) min and were audio-recorded and transcribed verbatim. Field notes were taken after the interviews.

The participants were informed of the study purpose, procedure, and contributions and of their right to refuse participation. Interview data were anonymized. The researcher explained the process of data storage, handling, and publication of results. Written informed consent was obtained from all participants. The institutional review board of the Graduate School of Medicine, The University of Tokyo approved this study's protocol (No. 2018200NI, April

24, 2019).

### 3. Analytical strategy

Three members of the research team analyzed the narrative data. First, we carefully read the transcripts. Next, we extracted portions related to the prefectural PHNs' support for municipal PHNs in HRD and coded the data. Similar data were collated into categories and sub-categories. During analysis, we explored the differences in the support provided by PG and HC PHNs. MAXQDA 12 was used to organize the data and assist with the analysis.

We used the criteria of credibility, transferability, and confirmability<sup>15)</sup> to ensure the trustworthiness and consistency of the findings. The first researcher conducted all interviews to ensure consistent and high-quality data collection (credibility). Further, we considered the results' implications (transferability). We were concerned that a bias might affect the findings. Therefore, an expert in qualitative research methods supervised the results, and the members discussed the results (confirmability). Subsequently, we refined the naming of the categories and sub-categories.

## III. RESULTS

### 1. Participants

Overall, nine PHNs participated (Table 1). The participants were four assistant managers and five managers, all female (mean age = 52.8 years, SD = 3.6). The mean duration of working as PHNs was 30.2 (SD = 4.1) years. Six PHNs were based in the

**Table 1** Participants' characteristics ( $N=9$ )

Characteristics	Mean (SD) number (%)	Range
Age (years)	52.8(3.6)	48–59
Sex		
Female	9(100.0)	
Workplace		
PG	3(33.3)	
HC	6(66.7)	
PHN's work experience	30.2(4.1)	26–38
Current position		
Assistant managerial level	4(44.4)	
Managerial level	5(55.6)	
Region		
Kanto	6(66.7)	
Kansai	1(11.1)	
Kyusyu	1(11.1)	
Shikoku	1(11.1)	
Education institution		
Vocational school & junior college	8(88.9)	
University or college	1(11.1)	

Note: PG: Prefectural government  
HC: Prefectural health center

**Table 2** Prefectural PHNs' supports in HRD of municipal PHNs

Categories	Sub-categories
1 Clarifying the needs and problems related to HRD and daily PHN activities in the municipalities	1-1 Collecting information on the current status of HRD from municipalities and clarifying HRD problems 1-2 Identifying the needs and problems of municipal PHNs regarding PHN activities
2 Creating an environment where all municipal PHNs can have equal opportunities for off-the-job training	2-1 Securing training opportunities on off-the-job training for all municipal PHNs in the prefecture 2-2 Proactively intervening to ensure that PHNs in the municipalities with HRD problems get the necessary off-the-job training opportunities
3 Helping municipal PHNs recognize the meaning of practice and develop an evaluation perspective	3-1 Giving them a wider perspective on national, prefectural, and municipal plans and activities 3-2 Acquiring an evaluation perspective
4 Clarifying problems and future prospects to encourage the growth of PHNs	4-1 Providing an opportunity to reflect on their own vision as a PHN 4-2 Providing an opportunity to think about the challenges as a PHN
5 Creating an environment where the significance and value of PHNs' activities are recognized within the organization and HRD can easily take place	5-1 Advising the PHN directors to be clearly positioned within the organization 5-2 Providing logistical support to ensure that the personnel section and section manager that the PHNs belong to understand the PHNs and their activities

Note: HRD: Human resources development  
PHN: Public health nurse

Kanto region, one in Kansai, one in Kyushu, and one in Shikoku; among them, six worked at HCs.

## 2. Prefectural PHNs' supports in HRD for municipal PHNs

Five categories were extracted during the qualitative descriptive analysis. The categories and sub-categories are described in Table 2. The categories, sub-categories, and raw data are described below, along with illustrative quotations.

### 3. Clarifying the needs and problems related to HRD and daily PHN activities in the municipalities

Prefectural PHNs valued gathering information from municipal PHNs to identify problems and needs related to HRD and daily PHNs' activities. This category was extracted by PG and HC PHNs.

#### 1) Collecting information on the current status of HRD from municipalities and clarifying HRD problems

The HC PHNs collected information from the municipal PHNs to clarify in-service education problems. They grasped how municipal PHNs work by understanding aspects such as job rotation, decentralized assignment, and what they value in their activities. PG PHNs identified municipalities that needed exceptional support by surveying yearly indicators related to HRD.

*I heard from the municipal PHN that there had been no job*

*rotation in about ten years, and in the event of a disaster, different departments have difficulty communicating with each other, even within a municipality (ID h, HC).*

#### 2) Identifying the needs and problems of municipal PHNs regarding PHN activities

HC PHNs thought they needed an opportunity to exchange and share information with the municipal PHNs and proposed holding a meeting during their work.

*During the past typhoons, the HCs did not receive information from the municipalities. Therefore, we were not able to gather information on the health (activity) needs of the municipalities. Based on this experience, we decided with the municipalities that if there occurred a disaster and they needed support, we would send PHNs from the HC to the municipalities. During this typhoon, I went around with the director of the HC to understand and identify the health needs of the municipalities (ID = h, HC).*

Although the PG was separated by physical distance from the municipalities, PG PHNs made identical efforts as the HC PHNs to understand what assistance was required by municipalities.

*The PG PHNs made sure to ask the municipal PHNs what they wanted them to help with (ID c, PG).*

### 4. Creating an environment where all municipal PHNs can have equal opportunities for off-the-job training

The PG PHNs created an environment where

municipal PHNs working anywhere could receive the necessary in-service education. The HC PHNs took a population approach to all municipalities, while the PHNs involved themselves individually with municipalities in need of assistance with HRD. We extracted this category from PG and HC PHNs' interviews.

- 1) Securing training opportunities on off-the-job training for all municipal PHNs in the prefecture

The PG PHNs created an environment where all municipal PHNs in the prefecture could easily participate in the training. Additionally, the PG PHNs communicated the results of the meeting through in-service education to all municipal PHNs who did not participate and shared the status and problems of the in-service education with everyone.

*PHNs are initially assigned to the health department. After three years, they are often transferred to the welfare department or the disability department. It is difficult for PHNs to receive the central training organized by the prefecture, so we set the central training until the third year (ID e, PG).*

- 2) Proactively intervening to ensure that PHNs in the municipalities with HRD problems get the necessary off-the-job training opportunities

The prefectural PHNs actively supported small municipalities and municipalities with low participation rates in training conducted by the prefecture. Administrative organizations assign a PHN director who is responsible for the overall coordination and promotion of the public health activities and can provide technical and professional guidance. Some municipalities do not have PHN directors; thus, the prefectural PHN was involved for support.

*Because small towns and villages cannot do HRD, I feel the need to support them as a PHN in the prefecture. We have a role to play in raising municipalities where there is no PHN director (ID f, HC).*

#### **5. Helping municipal PHNs recognize the meaning of practice and develop an evaluation perspective**

Prefectural PHNs intentionally created opportunities for municipal PHNs to objectively organize and reflect on their activities. Particularly, prefectural PHNs made municipal PHNs aware of community health problems. Moreover, HC PHNs determined the municipal PHNs' evaluation perspectives, helping them develop a wider perspective, and municipal plans connected and supported them in understanding the meaning of their activities. We extracted this category from PG and HC PHNs' interviews.

- 1) Giving them a wider perspective on national, prefectural, and municipal plans and activities

HC PHNs encouraged municipal PHNs to develop the perspective that national, prefectural, and municipal health care plans are vertically connected. Additionally, both HC and PG PHNs were conscious

of communicating their relationship with the career ladder guideline for PHNs formulated by the national government when training municipal PHNs.

*The PG PHNs tell the municipal PHNs, "The training you will receive is related to this content of the career ladder" (ID e, PG).*

- 2) Acquiring an evaluation perspective

Because municipal PHNs' primary focus remain the work they have been assigned. PHNs only see things shortsightedly. Therefore, municipal PHNs tend to forget the evaluation perspective. The HC PHNs used the logic model to visualize the perspectives of goal-setting and evaluation of municipal PHNs.

*PHNs tell the viewpoint of evaluation to municipal PHNs. As a result, the municipal PHN said, "I have established that it is important to set and implement evaluation indicators" (ID b, HC).*

#### **6. Clarifying problems and future prospects to encourage the growth of PHNs**

HC PHNs encouraged municipal PHNs to think about their outlook and challenges as a PHN. We extracted this category from HC PHNs' interviews.

- 1) Providing an opportunity to reflect on their own vision as a PHN

The HC PHNs created opportunities to make the municipal PHNs aware of the image they aspire to uphold as PHNs.

*Municipal PHNs have yet to develop their vision. "I have a vision of the kind of PHN I want to be. I am at this stage of the career ladder. So, I want to acquire these things this year. I want to go to this kind of training," I will support municipal PHNs to think about this (ID g, HC).*

- 2) Providing an opportunity to think about the challenges as a PHN

Municipal PHNs had few opportunities to share their problems with anyone in their profession. HC PHNs focused on this and created opportunities for municipal PHNs to face challenges.

*We thought that municipal PHNs needed an opportunity to think about challenges concerning the career ladder. The HC PHNs interviewed the municipal PHNs and asked them this question. We hope that this will give the municipal PHNs a chance to talk and think about difficult things in their daily lives (ID f, HC).*

#### **7. Creating an environment where the significance and value of PHNs' activities are recognized within the organization and HRD can easily take place**

They encouraged municipal PHN directors to think organizationally about HRD. Additionally, PG PHNs sought to ensure that municipal PHNs were recognized within the organization. PG PHNs directly informed the administration manager about the characteristics of PHN activities and the need for educational opportunities in the profession. This category was extracted by HC PHNs.

- 1) Advising the PHN directors to be clearly

positioned within the organization

To be recognized within the organization, HC PHNs emphasized the importance of having a PHN director in the municipality. They also informed municipal PHNs that the establishment of a PHN director should be clearly stated in the municipal document.

*I think it is important to document the establishment of a PHN director in the official documents. I do not think it should be known only to PHNs (ID g, HC).*

- 2) Providing logistical support to ensure that the personnel section and section manager that the PHNs belong to understand the PHNs and their activities

Prefectural PHNs believed that it was necessary for the personnel section and section manager to understand the activities of the PHNs in the municipal organizations. Therefore, when the prefectural PHNs visited the municipalities, they created opportunities to talk with the personnel section and section manager and informed them of their roles, the purpose of their activities, and the need for training.

*When I talk with the head of the personnel section and section manager, I inform them of the role of PHNs and the purpose of their activities (ID i, HC).*

#### IV. DISCUSSION

##### 1. Support provided by PG and HC PHNs

Both PG and HC PHNs provided three types of support. Prefectural PHNs valued gathering information from municipal PHNs to identify HRD-related problems and needs and daily PHN activities. Community health assessment is a public health activity conducted by PHNs to identify community health problems, implement plans, and evaluate efforts. It is a professional skill used to improve the health and quality of life of entire community in Japan and abroad<sup>16,17</sup>). Prefectural PHNs used this technique for the community residents in their HRD support to municipal PHNs.

Prefectural PHNs consciously created opportunities for municipal PHNs to receive in-service training. PHNs have a philosophy of working with communities and residents from a perspective of health equity for all<sup>18,19</sup>). It can be inferred that prefectural PHNs aim to ensure that residents from all municipalities receive at least a certain level of health service. Prefectural PHNs identified municipalities with low participation rates during the on-the-job training. Subsequently, they created an environment that would make it easier for municipal PHNs to participate in the training seminar and training course. Specifically, prefectural PHNs communicated the need for training to the personnel section and section manager and requested for their cooperation. It is clear they actively work with and provide individual support to municipalities that require follow-up. According to the years of ex-

perience, training participation rate is higher among new-term PHNs than mid-career and management-phase PHNs<sup>20</sup>); therefore, the support of prefectural mid-career and management-phase PHNs may be important.

Prefectural PHNs gave municipality PHNs better perspectives on national, prefectural, and municipal plans and activities. Additionally, they acquired an evaluation-based perspective. Prefectural PHNs made municipal PHNs aware of the policy system and helped them implement the Plan-Do-Check-Act (PDCA) cycle. PHNs are required to have policy evaluation skills in Japan and abroad<sup>6,17</sup>). Educational programs for developing health service-planning skills of middle-level PHNs were designed<sup>21</sup>). Investigation of the status and issues of the health promotion program implementation process of municipalities suggests that the program evaluation needs to be improved. With the support of the national and prefectural governments, municipalities should acquire the ability to evaluate programs based on the PDCA cycle<sup>22</sup>). Therefore, prefectural PHNs exercised a supervisory function and provided guidance and support.

These three types of support can be provided as an extension of the daily community and resident support of PHNs and are not special. However, since the enactment of the Community Health Law in 1994, municipal PHNs primarily focus on health promotion in maternal, geriatric, and working populations<sup>4</sup>). Therefore, they have regular contact with residents. In contrast, although prefectural PHNs provide disaster support and work with patients having mental disorders or infectious diseases, most of their other work relates to planning and coordination<sup>21</sup>). Therefore, prefectural PHNs may find it difficult to provide support. Given the connection among regular resident, community, and personnel development support for municipal PHNs, the first step for prefectural PHNs would be to review their regular PHN activities. Additionally, personnel exchanges between the prefecture and municipalities would be an effective tool. Sending inexperienced prefectural PHNs to municipalities can help them gain experience in community and resident activities. Moreover, municipal PHNs can gain experience in activities not conducted in municipalities such as infection control.

##### 2. Support provided by HC PHNs

Two types of support were provided by HC PHNs. They provided the municipal PHNs with opportunities to think about their own problems and prospects as PHNs and about how they wanted to grow as PHNs. This support is similar to empowerment that community residents in dialogue efforts directed at community targets can enhance control and beliefs in the ability to change people's lives<sup>23</sup>). Municipal PHNs can also learn to interact with the support of prefectur-

al PHNs and help them work as a municipal PHNs.

HC PHNs encouraged municipal PHNs (especially PHN directors) to consider HRD seriously. Approximately 97.9% of the prefectures have a PHN director, while less than half of the municipalities have one<sup>24</sup>. Therefore, HC PHNs approached the personnel section head to assign a PHN director recognized within the administration who understands the significance and value of PHNs' activities. Additionally, 70% of the municipalities considered it difficult to explain the personnel development plan's purpose to the section manager and obtain their agreement<sup>25</sup>. HC PHNs who have information on other municipalities can also convey good practices from other municipalities, which is a strength of HCs as they operate in large regions<sup>26</sup>. HC PHNs likely utilized their wide-area position to play the role of a mediator in areas where the municipalities had difficulties. The nurse also has a role as a mediator<sup>27</sup>. The goal of a mediator is to help the involved parties understand each other at different levels and agree on actions<sup>27</sup>. Thus, HC PHNs aimed to promote mutual understanding by mediating between the head of the personnel section and municipal PHNs.

### 3. Limitations and future directions

The first limitation of this study is the small sample size, since some of the interviews had to be canceled due to the COVID-19 pandemic. Similarly, we planned to conduct interviews across Japan but only did so in some areas due to COVID-19-related complications. Interviewing more PHNs in more areas may help obtain new results. Additionally, participants are interested in HRD in municipalities, which may affect the results. In the future, more information could be obtained by expanding the number of interviews and the areas sampled. Further, an in-depth analysis would also be valuable by focusing on factors that influence involvement.

## V. CONCLUSION

Much of the HRD support provided by prefectural PHNs was analogous to that of the PHN activities provided to the community and residents. These results suggest that prefectural PHNs could apply their individual care skills to the HRD of municipal PHNs to promote HRD effectively. However, the opportunities for prefectural PHNs to be involved with the community and residents are decreasing. Therefore, it is recommended that inexperienced prefectural PHNs be dispatched to municipalities so that they experience firsthand PHN activities for the betterment of the community.

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