

**ORIGINAL****Collaborative agencies and quality discharge support for the long-term care inpatients with mental illness**Ai Kawamura<sup>1</sup>, Tetsuya Tanioka<sup>2</sup>, Toshiko Tada<sup>2</sup>, Beth King<sup>3</sup>, and Rozzano C Locsin<sup>3</sup>

<sup>1</sup>Hosogi Unity Hospital, Kochi, Japan, <sup>2</sup>Department of Nursing, Graduate School of Health Biosciences, the University of Tokushima, Tokushima, Japan, <sup>3</sup>Department of Nursing, Christine E. Lynn College of Nursing, Florida Atlantic University, USA

**Abstract :** Long-term hospitalization is a problem for psychiatric care in Japan. The purpose of this research was to clarify the demands placed on public health nurses' (PHN) involved in the discharge of long-term inpatients (LIPs) with mental illness, and their lack of support. A questionnaire was mailed to 516 health centers, and 112 health centers replied. The response rate was 21.7 percent. The mail survey questionnaire was based on original questionnaire developed by the authors. Significant differences were found among collaborative agencies selected as essential for the discharge support project for the LIPs with mental illness. These differences were evident in the following question items on insufficiency of support : "Incompatibility with the policy of the public health center on discharge support" ; "Opposition to discharge of a LIPs with mental illness by hospital staff" ; and "Shortage of PHN in charge of the discharge support project for the LIPs with mental illness". It was clarified that the discharge support project required not only the involvement of health and medical welfare personnel but also the cooperation of local human resources such as local residents, neighbor associations, social workers, real-estate agencies and others. *J. Med. Invest.* 60 : 52-60, February, 2013

**Keywords :** long-term inpatients with mentally illness, social hospitalization, discharge support, community nursing, collaborative agencies

**INTRODUCTION**

In Japan, the average length of hospital stay (LOS) of patients in psychiatric hospitals is 300 days or more (1), thus standing out from the averages of the other parts of the world (2). Currently, one of the important issues of psychiatric hospitals in Japan is to shorten LOS of their patients. Prolonged and unnecessary psychiatric hospitalization isolates

a patient from society and reduces their human dignity and quality of life.

In August 2004, the Ministry of Health, Labour and Welfare presented two reports : "Conference on Psychiatric Beds" (3) and "Conference on Community-Life Support for the Mentally Ill" (4) as measures against the issue of long term hospitalization in psychiatry. Within this context a basic 10-year policy was established, to restructure the system of mental health welfare by reducing the number of psychiatric hospital beds by about 70,000 (5).

Actions towards deinstitutionalization have been conducted in order to encourage "discharge of those LIPs with mental illness who are able to live in the community if certain conditions are met" (6, 7).

Received for publication May 30, 2012 ; accepted October 31, 2012.

Address correspondence and reprint requests to Ai Kawamura, RN, MSN, Hosogi Unity Hospital, 100 Nishimachi, Kochi city, Kochi Pref, Japan, Zip code : 780-8535 and Fax : +81-88-822-7211.

Among the LIPs with mental illness in psychiatric hospitals, social independence is encouraged among those with relatively stable symptoms and who are able to live in the community with training prior to discharge (8). In April 2006, the discharge support project for the LIPs with mental illness began and the project has been in operation in regions as a community-life support project since October 2006 (9).

Until today, in community mental healthcare units, PHN have conducted such community nursing activities among LIPs with mental illness as compulsory hospitalization, and household support. However, the discharge support project for the LIPs with mental illness can be seen as a new approach among the socially hospitalized patients who were under discharge support from the time of hospitalization and were continuously supported in their daily life in the community. Finding solutions to long-stay hospitalization for mentally ill patients, especially those LIPs with schizophrenia is a current challenge in Japan.

The purpose of this research was to clarify demands made by PHN who were involved in the discharge support project for the LIPs with mental illness and their lack of support.

## METHODS

### *Subjects*

After selecting 516 public health centers nationwide from the homepage of the Japanese Association of Public Health Center Directors (10), a representative PHN working in each of the centers was chosen as respondent to the survey questionnaire.

These PHNs met the selection criteria approved by the research committee

### *Duration of the Study*

The survey period was from May to August 2008.

### *Investigative methods*

A letter of request for participation stating the purpose of the research and the survey questionnaire were sent to 516 individuals who were identified from each of the 516 centers selected. The subjects were asked to respond anonymously to the questionnaire and to return in the survey questionnaire inside the envelope provided.

### *Survey items*

The question items contained the demographic status of the discharge support project, averages of LOS in psychiatric hospitals within the catchment area of a public health center (hereinafter referred to as “the catchment area”), and community features of the catchment area. Additionally, the questionnaire included questions such as “What kind of a cooperative agency do you think is essential for the discharge support project for the LIPs with mental illness?” and “What do you think is insufficient in this project?” and so on (Table 1).

### *Analytical methods*

From the responses to the questionnaire, the answers and ratios for each of the questionnaire items were calculated: the operation status of the project, the average LOS in the catchment area, and its community features. The responses on the operation

Table 1. The contents of the questionnaire

#### Face Sheet

- (1) Implementation status of the discharge support project of your public health center
- (2) Average length of psychiatric hospital stay in the catchment area of your public health center
- (3) Community characteristic of the catchment area of your public health center

#### Question Items

- (1) “What kind of a cooperative agency do you think essential for discharge support project for the long-term inpatients with mentally illness?”
- (2) “What cooperative role do you think necessary for this project?”
- (3) “What kind of a cooperative agency have a good understanding about this project?”
- (4) “What kind of a cooperative agency have a poor understanding about this project?”
- (5) “What kind of a cooperative agency has cooperated for this project?”
- (6) “What kind of a cooperative agency has not cooperated for this project?”
- (7) “What do you think is insufficient in this project?”

status of the project were classified into the following 4 groups : the group of having started the project more than 2 years before ; the group having started it more than 1 year before ; the group having started it less than 1 year before ; and the group not having started it at all.

For the average LOS in the catchment area, the hospital stay of  $320.3 \pm 10.0$  days as the equivalent to the national average (11) was considered, and the responses were classified into the following 4 groups : the group of centers with a shorter hospital stay than the national average (less than 310 days), the group with a longer hospital stay (331 days or more), the group with the same level of hospital stay (311~330 days), and the group with no clear hospital stay stated.

For community features, the subjects were asked to select whether their region was "urban" or "non-urban". Where one subject identified its region as both, it was treated as a "mixed area". Fisher's exact test (extend) and residuals analysis were conducted for the question "What collaborative agency do you think is necessary?"

For the question "Whether or not you consider essential resources as insufficient", the responses were evaluated by a five-point Likert scale, the higher point representing the less insufficient level that the subjects felt. A test of homogeneity of variance was conducted on each of the 15 questions on the operation status, the average length, and community features. On responses to the questions on the operation status and the average length, the Kruskal-Wallis test and a Schaffe's multiple comparison test were conducted. For clarifying community features, the Mann-Whitney U test was used. For analysis of each question item, SPSS 11.5 for Windows was used.

#### *Ethical consideration*

When requesting participation, each subject was sent a letter clearly stating the purpose of the research and the declaration that results will be used only for the research and/or educational purposes. Additionally, the questionnaire was made anonymous for the sake of the subjects' privacy. Approval was obtained from the Ethical Review Board of the University of Tokushima (No.657).

## RESULTS

The overall returned questionnaire copies were

176 (33.7%), including ones made by phone or e-mail. The case number of the demographics operation status for each group was as follows : 33 cases (18.8%) for the group having started the discharge support project for the LIPs with mentally illness more than 2 years before ; 33 cases (18.8%) for the group having started it more than 1 year before ; 20 cases (11.4%) for the group having started it less than 1 year before ; and 56 cases (31.8%) for the group not having started it yet. This research treated those responses answering all Question 1 to 6 as valid, and the return rate was 112 cases (21.7%)

Among the collaborative agencies, the one in which significant differences were observed was a real-estate agency. In the group having started the project more than 1 year before, the ratio of the PHN who chose a real-estate agency was 84.4%, which was significantly high ( $p < 0.05$ ). Also, in the group not having started the project yet, 36.0% of PHN responded that a real-estate agency was essential, which was a significantly low ratio ( $p < 0.01$ ) (Table 2).

According to the operation status of the project, a comparison was made on what the subjects felt was insufficient of essential resources for the project and the level of the insufficiency. An analysis on the contents and levels of the insufficiency is shown in (Table 3).

The items in which significant differences were particularly found included : The item of "Incompatibility with the policy of the public health center on discharge support ( $H=9.31$ ,  $p < 0.05$ )". Although the multiple comparisons were performed, there was no significant difference between each group. The item of "Opposition to discharge of the LIPs with mental illness by hospital staff ( $H=11.51$ ,  $p < 0.05$ )" and "Shortage of PHN in charge of the operation of the project ( $H=9.65$ ,  $p < 0.05$ )" were significantly different by those who started more than 2 years ago and those who have not started at all.

On the following items on insufficiency of resources effective for raising resident consciousness and re-socialization support, the PHN felt that there was insufficient support items and the average values were low overall : "Insufficient promotion of discharge support to local residents" ; "Shortage of local supporters involved in discharge support" ; "Shortage of local personnel for supporting the LIPs with mental illness" ; "Shortage of essential social resources for the operation of the project" ; and "Shortage of PHN in charge of the operation of the project".

**Table 2.** Required collaborative agencies for the on the discharge support project for person with mentally illness : Difference by the period from discharge support project start

Items	More than 2 Yrs. Passed (N=32)		More than 1 Yr. (N=32)		Less than 1 Yr. (N=20)		Not Started (N=25)		Total (N=109)	χ <sup>2</sup> value	p value
	N(%)	adjusted residual	N(%)	adjusted residual	N(%)	adjusted residual	N(%)	adjusted residual	N(%)		
Psychiatric caring agencies	32(100%)		32(100%)		20(100%)		25(100%)		109(100%)		
Medical											
Day-care center	31(96.9%)	1.6	29(90.6%)	0.2	19(95.0%)	0.8	19(76.0%)	-2.6	98(89.9%)	7.63	n.s.
Home-visit nursing station	26(81.3%)	0.4	25(78.1%)	0.1	17(85.0%)	0.7	18(72.0%)	-1	86(78.9%)	1.28	n.s.
Welfare office	32(100%)	1.5	30(93.8%)	-0.5	19(95.0%)	-0.1	23(92.0%)	-0.9	104(95.6%)	2.41	n.s.
Community-life support center	30(93.8%)	0	31(96.9%)	0.9	17(85.0%)	-1.7	24(96.0%)	0.6	102(93.6%)	3.27	n.s.
Group-home	31(96.9%)	1.1	29(90.6%)	-0.5	19(95.0%)	0.4	22(88.0%)	-1	101(92.7%)	1.99	n.s.
Small-scaled workplace for the disabled	29(90.6%)	0.7	28(87.5%)	0.1	17(85.0%)	-0.3	21(84.0%)	-0.5	95(87.2%)	0.65	n.s.
Social Welfare											
Ambulant vocational aid center	30(93.8%)	1.5	29(90.6%)	0.9	15(75.0%)	-1.6	20(80.0%)	-1	94(86.2%)	5.00	n.s.
Aid dormitory	30(93.8%)	2	24(75.0%)	-1.3	15(75.0%)	-1	21(84.0%)	0.2	90(82.6%)	4.89	n.s.
Municipal heal center	25(78.1%)	-0.6	28(87.5%)	1	14(70.0%)	-1.5	22(88.0%)	0.9	89(81.7%)	3.48	n.s.
Welfare home	24(75.0%)	0.8	24(75.0%)	0.8	11(55.0%)	-1.6	17(68.0%)	-0.2	76(69.7%)	2.93	n.s.
Social welfare council	21(65.6%)	-0.1	21(65.6%)	-0.1	14(70.0%)	0.4	16(64.0%)	-0.2	72(66.1%)	0.19	n.s.
Mental health and welfare center	18(56.3%)	0.2	18(56.3%)	0.2	11(55.0%)	0	13(52.0%)	-0.3	60(55.0%)	0.13	n.s.
Real-Estate Agency	25(78.1%)	1.4	27(84.4%)	2.3†	14(70.0%)	0.1	9(36.0%)	-4	75(68.8%)	17.46	*
Association of families with mentally ill members	18(56.3%)	-0.1	20(62.5%)	0.8	13(65.0%)	0.8	11(44.0%)	-1.5	62(56.9%)	2.65	n.s.
Community Life											
Other sections in a city office#	13(41.9%)	-0.5	16(50.0%)	0.6	8(40.0%)	-0.5	12(48.0%)	0.3	49(45.4%)	0.73	n.s.
Neighbor Association	13(40.6%)	-0.2	19(59.4%)	2.3	8(40.0%)	-0.2	6(24.0%)	-2.1	46(42.2%)	7.34	n.s.
The community safety division of police station	6(18.8%)	-1.2	10(31.3%)	0.7	5(25.0%)	-0.2	8(32.0%)	0.7	29(26.6%)	1.76	n.s.

Only the portion answered “yes” was indicated to the table.  
 Psychiatric caring agencies : all the replies are yes  
 Fisher’s exact test (extend), \* p< 0.01  
 # There was a case of no-answering in “More than 2 Yrs. Passed”.  
 Adjusted residual † : p< 0.05, n.s.= not significant

Regarding LOS, a comparison was made on whether the subjects considered essential resources as insufficient and the level of the insufficiency. On the average LOS, an analysis was conducted to the 3 groups : “Longer” ; “Shorter” ; and “The same level” comparing these with the national average. The analysis on the contents and levels of the insufficiency in relation to the project is shown in (Table 4).

The items in which significant differences were particularly found included : “Incompatibility with

the policy of the hospital on discharge support (H= 7.35, p<0.05)” ; and “Shortage of local personnel for supporting the mentally illness (H=6.96, p< 0.05). Although multiple comparisons were performed, there was no significant difference between each group. The item of “Shortage of local supporters for the LIPs with mental illness (H=9.14, p< 0.05)” and “Shortage of social resources essential for the operation of the project (H=10.16, p<0.05)” were significantly different between “the longer group” and “the shorter group.”

**Table 3.** Considered essential resources as insufficient and the level of the insufficiency : Difference by the period from discharge support project start

		Total (n=109) mean± S.D.	A : More than 2 Yrs. Passed (n=32) mean± S.D.	B : More than 1 Yr. (n=32) mean± S.D.	C : Less than 1 Yr. (n=20) mean± S.D.	D : Not Started (n=25) mean± S.D.	Df	H	P	Multiple comparison	P
Insufficient Awareness	Incompatibility with the policy of the public health center on discharge support	4.1± 0.7	4.3± 0.7	4.2± 0.5	3.9± 0.6	3.8± 1.0	3	9.31	*	Not applicable	
	Opposition to discharge of a mentally illness patient by hospital staff	3.6± 0.7	3.8± 0.6	3.7± 0.8	3.6± 0.6	3.2± 0.8	3	11.5	*	A vs D	†
	Lack of the understanding of medical agencies on the project#	3.5± 0.9	3.4± 0.9	3.4± 0.9	3.8± 0.5	3.4± 1.1	3	2.91	n.s.		
	Incompatibility with the policy of the hospital on discharge support	3.4± 0.9	3.5± 0.8	3.4± 1.0	3.7± 0.7	3.0± 1.1	3	7.45	n.s.		
	Disagreement among the parties locally involved in the project	3.4± 0.8	3.5± 0.8	3.3± 0.9	3.4± 0.7	3.2± 0.7	3	2.90	n.s.		
	Opposition to discharge of a mentally illness by local residents	3.0± 0.7	3.1± 0.7	3.1± 0.8	3.0± 0.8	2.9± 0.7	3	2.78	n.s.		
	Insufficient promotion of discharge support to local residents	2.4± 0.8	2.5± 0.9	2.3± 0.8	2.6± 1.0	2.1± 0.7	3	4.96	n.s.		
Insufficient Resource	Lack of the cooperation of medical agencies on the project#	3.5± 0.9	3.6± 0.9	3.3± 1.1	3.8± 0.5	3.3± 1.0	3	5.30	n.s.		
	Unable to find a collaborative agency for discharge support	3.4± 0.8	3.6± 0.7	3.4± 0.8	3.4± 0.7	3.1± 1.0	3	3.06	n.s.		
	Shortage of community nurse in charge of the project	2.8± 1.0	3.2± 0.9	2.8± 0.9	2.7± 1.0	2.4± 0.9	3	9.65	*	A vs D	†
	Shortage of local supporters involved in discharge support	2.4± 0.9	2.6± 1.0	2.3± 0.8	2.3± 1.1	2.3± 0.9	3	1.19	n.s.		
	Shortage of local personnel for supporting the mentally illness	2.3± 0.9	2.4± 1.1	2.2± 0.8	2.3± 0.9	2.1± 0.8	3	0.52	n.s.		
	Shortage of social resources essential for the operation of the project	2.0± 1.0	2.1± 1.0	1.9± 0.9	2.1± 1.1	1.7± 0.8	3	3.20	n.s.		
Insufficient Information	Unable to obtain the information of a particular target for the project from medical agencies	3.4± 0.9	3.6± 1.0	3.5± 0.9	3.4± 0.8	3.1± 0.9	3	5.12	n.s.		
	Unable to find a possible target for discharge support	3.2± 1.0	3.3± 1.0	3.1± 1.1	3.5± 1.0	3.3± 1.0	3	2.74	n.s.		

The Kruskal-Wallis Test, \*p&lt; 0.05, n.s. = not significant

The Schaffe's multiple comparison † : p&lt; 0.05

The higher the point was, the less insufficient the subjects felt (the Max. of 5-point and the Min. of 1-point)

Table 4. Considered essential resources as insufficient and the level of the insufficiency : Difference by the length of hospital stay

		Total (n=62) mean± S.D.	A : Longer (n=35) mean± S.D.	B : Shorter (n=19) mean± S.D.	C : The Same Level (n=8) mean± S.D.	Df	H	P	Multiple comparison	P
Insufficient Awareness	Incompatibility with the policy of the public health center on discharge support	4.0± 0.7	4.0± 0.7	4.1± 0.5	3.6± 0.9	2	2.12	n.s.		
	Opposition to discharge of a mentally illness patient by hospital staff	3.6± 0.5	3.5± 0.6	3.8± 0.4	3.6± 0.5	2	3.31	n.s.		
	Lack of the understanding of medical agencies on the project	3.5± 0.7	3.4± 0.7	3.6± 0.6	3.6± 0.5	2	0.39	n.s.		
	Incompatibility with the policy of the hospital on discharge support	3.3± 0.8	3.0± 0.8	3.6± 0.8	3.6± 0.5	2	7.35	*	Not available	
	Disagreement among the parties locally involved in the project	3.3± 0.8	3.2± 0.9	3.4± 0.8	3.4± 0.7	2	1.32	n.s.		
	Opposition to discharge of a mentally illness by local residents	3.0± 0.8	2.9± 0.8	3.2± 0.8	2.8± 1.0	2	1.60	n.s.		
	Insufficient promotion of discharge support to local residents	2.3± 0.8	2.1± 0.8	2.4± 0.8	2.6± 1.0	2	2.61	n.s.		
Insufficient Resource	Lack of the cooperation of medical agencies on the project	3.5± 0.7	3.4± 0.8	3.7± 0.6	3.5± 0.5	2	0.76	n.s.		
	Unable to find a collaborative agency for discharge support	3.4± 0.8	3.2± 0.8	3.6± 0.7	3.4± 0.7	2	3.01	n.s.		
	Shortage of community nurse in charge of the project	2.8± 1.0	2.6± 1.1	3.1± 1.0	3.0± 0.8	2	2.04	n.s.		
	Shortage of local supporters involved in discharge support	2.3± 1.0	2.0± 0.7	2.9± 1.2	2.0± 0.8	2	9.14	**	A vs B	†
	Shortage of local personnel for supporting the mentally illness	2.2± 1.0	2.0± 0.8	2.8± 1.1	1.9± 0.7	2	6.96	*	Not available	
	Shortage of social resources essential for the operation of the project	1.9± 1.0	1.6± 0.8	2.6± 1.1	1.8± 0.7	2	10.16	**	A vs B	‡
Insufficient Information	Unable to obtain the information of a particular target for the project from medical agencies	3.5± 0.9	3.4± 1.0	3.6± 0.8	3.3± 0.9	2	0.70	n.s.		
	Unable to find a possible target for discharge support	3.2± 1.0	3.4± 0.8	3.3± 1.2	2.6± 1.1	2	3.31	n.s.		

The Kruskal-Wallis Test, \*p< 0.05, \*\*p< 0.01, n.s. = not significant

The Schaffe's multiple comparison † : p< 0.05, ‡ : p< 0.001

The higher the point was, the less insufficient the subjects felt (the Max. of 5-point and the Min. of 1-point)

Moreover, the average values were low overall for the following items on the insufficiency of awareness and resources : “Insufficient promotion on discharge support to local residents” ; “Shortage of local supporters for the LIPs with mentally illness” ; “Shortage of social resources essential for the operation of the project” ; and “Shortage of PHN in charge of the project”.

Considering each community feature, a comparison was made on whether the subjects found essential resources for the project insufficient and the levels of the insufficiency. The analysis on the contents of and levels of the insufficiency in relation to the discharge support project is shown in (Table 5).

The items in which significant differences were found included : “Insufficient promotion of discharge support to local residents ( $p < 0.05$ )” and “Shortage of social resources essential for the operation of

the project ( $p < 0.05$ )”. The average values were low overall in the following items on the insufficiency of awareness and resources : “Insufficient promotion of discharge support to local residents” ; “Shortage of local supporters involved in discharge support” ; “Shortage of local personnel for supporting the LIPs with mental illness” ; “Shortage of social resources essential for the operation of the project” ; and “Shortage of PHN in charge of the project”.

## DISCUSSION

The overall response rate was 21.7%. Among the returned responses, the largest portion of 31.8% were from the group which had not started the discharge support project for the LIPs with mental illness. Although the discharge support project for

**Table 5.** Considered essential resources as insufficient and level of insufficiency : Difference by the urban versus rural

		Total (n=104) mean ± S.D.	Urban (n=23) mean ± S.D.	Non-urban (n=81) mean ± S.D.	Z	P
Insufficient Awareness	Incompatibility with the policy of the public health center on discharge support	4.1 ± 0.7	4.0 ± 0.7	4.2 ± 0.7	-1.30	n.s.
	Opposition to discharge of a mentally illness patient by hospital staff	3.6 ± 0.7	3.6 ± 0.6	3.6 ± 0.8	-0.51	n.s.
	Lack of the understanding of medical agencies on the project	3.4 ± 0.9	3.6 ± 0.7	3.4 ± 0.9	-0.95	n.s.
	Incompatibility with the policy of the hospital on discharge support	3.4 ± 0.9	3.5 ± 0.7	3.3 ± 1.0	-0.33	n.s.
	Disagreement among the parties locally involved in the project	3.3 ± 0.8	3.2 ± 0.8	3.3 ± 0.8	-0.55	n.s.
	Opposition to discharge of a mentally illness by local residents	3.0 ± 0.8	3.2 ± 0.9	3.0 ± 0.7	-1.40	n.s.
	Insufficient promotion of discharge support to local residents	2.3 ± 0.9	2.7 ± 1.0	2.2 ± 0.8	-2.04	*
Insufficient Resource	Lack of the cooperation of medical agencies on the project	3.5 ± 0.9	3.7 ± 0.7	3.4 ± 1.0	-1.02	n.s.
	Unable to find a collaborative agency for discharge support	3.3 ± 0.8	3.6 ± 0.7	3.3 ± 0.8	-1.38	n.s.
	Shortage of community nurse in charge of the project	2.8 ± 1.0	3.1 ± 0.8	2.7 ± 1.0	-1.74	n.s.
	Shortage of local supporters involved in discharge support	2.4 ± 0.9	2.3 ± 0.9	2.4 ± 1.0	-0.16	n.s.
	Shortage of local personnel for supporting the mentally illness	2.3 ± 0.9	2.4 ± 0.8	2.2 ± 0.9	-0.97	n.s.
	Shortage of social resources essential for the operation of the project	1.9 ± 1.0	2.3 ± 1.0	1.8 ± 1.0	-2.10	*
Insufficient Information	Unable to obtain the information of a particular target for the project from medical agencies	3.4 ± 0.9	3.6 ± 1.0	3.3 ± 0.9	-1.48	n.s.
	Unable to find a possible target for discharge support	3.2 ± 1.0	3.2 ± 0.9	3.2 ± 1.1	-0.16	n.s.

Mann-Whitney U Test, \* $p < 0.05$ , n.s. = not significant

The higher the point was, the less insufficient the subjects felt (the Max. of 5-point and the Min. of 1-point)

※5 cases of “mixed area” were excluded from the analysis.

the LIPs with mental illness has been encouraged since October 2006 (9), many communities have not implemented it, or had inadequate implementation. Therefore, it was thought to be the cause of community differences for this study. Additionally, this study revealed cases where the project operation was assigned to other agencies in some regions versus other region's social workers being in charge of the project instead of a PHN. Therefore, it was suggested PHN have viewpoints of community nursing who cannot participate in the discharge support for people with mental disorders.

As an issue in the care of patients with psychiatric illness in Japan, a long LOS has been pointed out, and further community gaps exists that contributes as another problem (11). Without grasping the information in one catchment area, it may not be possible to set a goal of adequate discharge support. Consequently, appropriate support for patients is considered unlikely. It is necessary to set goals in the hospital and to let an interdisciplinary team work to achieve them (12), particularly focusing on goal setting as the most important for the discharge support.

On essential collaborative agencies for the discharge support project, many PHN responded that medical or social-welfare agencies were necessary. It can be inferred that such agencies are required for discharge support during hospitalization, support after discharge and daily activities in the community. It was shown that the Welfare office and the Daily life support center are more nearly required than Mental-health and welfare centers. It is thought that PHN needs agencies with stronger presence within the area. Meanwhile, not many of the subjects chose local resources such as neighboring association as necessary. It was considered that they might have thought that such a resource could be necessary for life after discharge but not for the stage of discharge support. There was a significant difference in a real-estate agency in the experienced group in discharging support which has started the project. Also, they pointed out that securing the dwelling is a big problem in the promotion of discharge support for long-term inpatient with mental illness. Therefore, it is thought that the experienced group felt that the real estate agency is necessary.

In this research, taking into account the overall demands made on collaborative agencies, many were about increase or fulfillment of the current service. Even in the questions on insufficiency, PHN

considered current social resources as insufficient for the discharge support project. As it was also pointed out that Japan had not sufficiently used its economic resources for the development of social resources in the mental health welfare, their demands were thought to reflect the shortage of social resources. A future task is to construct a system which allows an effective use of social resources for discharge support. Additionally, the demands from the subjects included the one requiring understanding and cooperation from local residents. In the questions on insufficiency, the subjects' responses suggest the insufficiency of promotion to local residents, the shortage of local supporters involved in discharge support, and the shortage of local personnel for supporting the LIPs with mental illness are critical to its success. As a challenge for the future, it is necessary to enhance the promotion of discharge support to local residents in order to achieve their understanding and collaboration and to increase the number of supporters for a quality discharge support project.

## CONCLUSION

PHN's in charge of mental health welfare at 516 public health centers nationwide were selected as respondents for this questionnaire survey. This survey was to clarify their demands in the operation of the discharge support project for the LIPs with mental illness in order to obtain fundamental data to operate a higher quality of discharge support. As a result, the following findings were gained : (1) In the discharge support for the LIPs with mental illness, not only the involvement of health and medical welfare but also local resources such as local residents, neighbor associations, social workers, real-estate agencies were essential. (2) Support has also changed in its form as seen from cases where the project was consigned to other agencies or social welfare personnel were in charge of the project in some regions. From the above findings, this research was useful in clarifying future tasks in the discharge support project for the LIPs with mental illness.

## ACKNOWLEDGMENT

We would like to thank all those who co-operated with this survey.



## REFERENCE

1. Ministry of Health, Labour and Welfare (2009) : Welfare labor-statistics list, Health statistics of 2009-degree our country : <http://www.mhlw.go.jp/toukei/saikin/hw/hoken/national/dl/22-03.pdf> (accessed 10 August 2012)
2. Takasaka Y : Normalization of mental medical treatment seen from a certain private hospital-Various problems that can be on the way put. *Kokoro To Syakai* 118 : 17-24, 2004 (In Japanese)
3. Ministry of Health, Labour and Welfare (2004) : Panel on Psychiatric Units. Available at : <http://www.mhlw.go.jp/shingi/2004/08/dl/s0806-5a.pdf> (accessed 20 December 2008). (In Japanese)
4. Ministry of Health, Labour and Welfare (2004) : Panel on Role of the Community-Life Support for People with Mental Disorders. Available at : <http://www.mhlw.go.jp/shingi/2004/08/dl/s0806-4a.pdf> (accessed 20 December 2008). (In Japanese)
5. Ministry of Health, Labour and Welfare (2004) : Comprehensive Evaluation Report in fiscal year 2004. Available at : <http://www.mhlw.go.jp/wp/seisaku/jigyuu/04sougou/index.html> (accessed 20 December 2008). (In Japanese)
6. Ryu Y, Mizuno M, Sakuma K, Munakata S, Takebayashi T, Murakami M, Falloon IR, Kashima H : Deinstitutionalization of long-stay patients with schizophrenia : the 2-year social and clinical outcome of a comprehensive intervention program in Japan. *Aust N Z J Psychiatry* 40(5) : 462-70, 2006
7. Mizuno M, Sakuma K, Ryu Y, Munakata S, Takebayashi T, Murakami M, Falloon IR, Kashima H. The Sasagawa project : a model for deinstitutionalisation in Japan. *Keio J Med* 54 (2) : 95-101, 2005
8. Ministry of Health, Labour and Welfare Social Welfare and War Victims' Relief Bureau and trouble health Social Affairs Division Handicapped Person's Welfare Division (2004) : The mentally illness' promotions of leaving hospital. Available at : <http://www.mhlw.go.jp/topics/bukyoku/syakai/z-fukushi/gyousei/gyousei04.html> (accessed 20 December 2008). (In Japanese)
9. Kato N : Role requested by public health nurse now, for the mentally illness' community shifts. *Journal of public health nurse* 64(7) : 612-615, 2008 (In Japanese)
10. Japanese Association of Public Health Center Directors (2008). Available at : <http://www.phcd.jp/index.html> (accessed 15 February 2008). (In Japanese)
11. Ministry of Health, Labour and Welfare (2007) : General condition of medical facilities, investigations and hospital reports in 2007. Available at : <http://www.mhlw.go.jp/toukei/saikin/hw/iryosd/07/kekka03.html> (accessed 14 October 2008). (In Japanese)
12. Tanioka T, Mano M, Takasaka Y, Tada T, Kawanishi C : Challenge of psychiatric rehabilitation for patients with long-term hospitalizations using the Nirje's normalization principles as a valuation standard : two case studies. *J Med Invest* 53(3-4) : 209-17, 2006