

# Interprofessional Work Model for Dementia Care in Hospitals for Community-Based Care

Kenji Hamabata<sup>1,2\*</sup>, Hideyuki Shiotani<sup>1</sup>, Keiko Sekido<sup>3</sup>

<sup>1</sup>Graduate School of Health Sciences, Kobe University, Hyogo, Japan

<sup>2</sup>School of Nursing, Jichi Medical University, Tochigi, Japan

<sup>3</sup>School of Nursing, Kyoto Prefectural University of Medicine, Kyoto, Japan

Email: \*hamabata@jichi.ac.jp

**How to cite this paper:** Hamabata, K., Shiotani, H. and Sekido, K. (2020) Interprofessional Work Model for Dementia Care in Hospitals for Community-Based Care. *Health*, 12, 1543-1561.

<https://doi.org/10.4236/health.2020.1212112>

**Received:** November 7, 2020

**Accepted:** December 14, 2020

**Published:** December 17, 2020

Copyright © 2020 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

---

## Abstract

In this manuscript the authors have studied interprofessional work model for dementia care in hospitals for community-based care. As present situations and problems of dementia patients in hospitals for community-based care, 8 core categories (19 categories) were extracted and as actual situations of interprofessional work for dementia care, 8 core categories (13 categories) were obtained. The authors examined a function of interprofessional work model and practice contents using these categories. The results revealed that better interprofessional work can be expected by six specialists of nurses rehabilitation specialists, MSW, pharmacists, dietitians and care workers developing dementia care based on “Family handling function” “ADL maintenance and improved function” “Staff member education and empowerment function”.

## Keywords

Dementia Care, Interprofessional Work Model

---

## 1. Introduction

According to the information data of Ministry of Internal Affairs and Communications [1], the population of elderly in Japan as of 2020 is 36,170,000 and the ratio among the total population became 28.7%. This is a record-high number, and it is known that the post-baby boom generation reaches the latter-stage elderly person of 75 years or older in 2025. As a measure for these social present situations in Japan, Local Medicine Plan [2] was considered and developed in all prefectures based on Act on Promotion of Comprehensive Securing of Medical Care. The Regional Medicine Plan is intended to build up appropriate local

medical provision systems, and the number of required hospital beds is examined by classifying medical functions into highly acute phase, acute phase, recovery phase and chronic phase. Local Medicine Plan Adjustment Meeting [3] was launched in 2017, and the committees consisting of medical group representatives from the local communities, medical institution managers, local government and insurer have discussed the above issue so far. Furthermore, hospitals for community-based care have been founded in accordance with the revision of medical service fees in 2014, and Hospital Fee and Hospital Treatment Management Fee (hereinafter called Hospital Fee/Management Fee) I and II were established. The increase in elderly to whom conventional acute phase medical service is not adapted and the presence of elderly who require discharge support through rehabilitation influence it in its background [4]. Roles in acceptance of patients after acute phase, support at the time of sudden change of home care patients and support for patients who return home are required for hospitals for community-based care. In particular, the support for patients who return home has come to be performed through two phases of in-hospital and local multi-job-title collaboration [5]. The in-hospital multi-job-title collaboration assumes rehabilitation, eating function therapy, mouth care, nutrient instruction, dementia care, drug reduction adjusting, patient compliance instruction, discharge support and adjustment. In the local multi-job-title collaboration, medical social workers (hereinafter called MSW) and care managers arrange home care service that enables patients to return home and resume daily life. In this way, multi-professional collaboration is essential for hospitals for community-based care, and its role in support for patients who wish to return home is important. Medical service fees were also revised in 2018, and the hospital fee and management fee of the hospitals for community-based care were classified into four phases. In this revision, the home return rate was not changed from 70% while the home return support was confined to Hospitalization Management Fee I and II at the present. A final report on the present situation of the hospitals for community-based care has been submitted from Japanese Association of Hospitals for Community-based Care [6]. According to their inpatients survey, their average age was 76.6 years old, and their main diseases were various such as musculoskeletal system, respiratory system, injury, burn injury, poisoning, digestive system disease, kidney and urinary system diseases and so on. The hospitals for community-based care aim to achieve patients' discharge within 60 days, though there is a concern that addition for dementia care and nursing staff night assignment might make it difficult to treat their main diseases. In particular, when acquiring the addition, dementia patients needing care accounts for a half or more for Dementia Care Addition I, and the ratio of dementia patient is to be more than 30% to acquire the addition for nursing staff night assignment. In this way, since the hospitals for community-based care were launched in 2014, actual scenes of discharge support for dementia patients and their families presumably have become complicated. Further, Horinouchi *et*

*al.* [7] reviewed literature from 2016 through 2019 for the trend of studies on hospitals for community-based care. The study purposes of the literature they had examined focused on discharge support, outcomes, readmissions, stress and growth of the nursing professions, usability of the hospitals for community-based care and pharmacists and so on. Therefore, this study analyzed the present situations and problems of the dementia elderly hospitalized in wards for community-based care and the qualitative data collected from reality of collaboration and cooperation for dementia elderly care, aiming at clarifying inter-professional work model for dementia care.

## **2. Term Definition**

Interprofessional work model: A team for dementia care, consisting of all sorts of specialists including nurses, full-time rehabilitation specialists who are to be assigned to the wards and staff members in charge of supporting home return (MSW).

## **3. Method**

### **3.1. Subject and Data Collection Method**

For hospitals that the subject patients belong to, the authors selected hospitals having 200 beds or less that acquired Hospital Fee/Management Fee I for the hospitals for community-based care and Dementia Care Addition II. The reason why the above hospitals were selected was that it would probably be possible to reveal the real conditions of dementia patients who returned home in hospitals that acquired Hospital Fee/Management Fee I. Furthermore, it was supposed that the hospitals that acquired Dementia Care Addition II worked on dementia care actively aiming at the acquisition of Dementia Care Addition I. For these reasons, the present situation and problems of dementia care and multi-job-title collaboration are visualized by discussion by plural different professionals working in the hospitals for community-based care, which enables us to explore interprofessional work model, we presume. Focus group interviews (hereinafter called FGI) were performed for plural professionals in three hospitals in which permission was obtained from their hospital presidents, senior nursing officers and general chief nurses. Conditions for selecting subjects were arranged so that nursing professions, rehabilitation specialists and MSW who were determined to be assigned to wards for community-based care would participate in the study. Decision for participation of specialists other than the above was entrusted to the hospitals. The participants were 7 workers from 6 job titles in Hospital A, 5 workers from 4 job titles in Hospital B and 7 workers from 6 job titles in Hospital C. The participants discussed on the interview items “The present situation and problems of dementia elderly hospitalized in hospitals for community-based care” and “Reality of collaboration and cooperation of dementia elderly care” for 60 - 80 minutes. We asked the hospitals to set the place for discussion and quiet private rooms were selected. The data collection period was from December 4,

2018 to March 15, 2019. The subjects' basic attributes collected were job title, gender, age, years of experience in the job title, years of experience in hospitals for community-based care.

### 3.2. Data Analysis Method

The contents obtained in FGI were recorded verbatim, and the contents that corresponded to the interview items "The present situation and problems of dementia elderly hospitalized in hospitals for community-based care" and "Reality of collaboration and cooperation of dementia elderly care" were extracted. First, meaning of the data extracted from the three hospitals was read for each of the hospitals and the contents were coded. Furthermore, similar codes were summarized and categories were extracted. Moreover, core categories were extracted by integrating the categories and codes extracted from the three hospitals. For the analysis, we asked two study participants to check analysis results to secure stringency and certainty. Further, it was necessary to examine the analysis process for reaching core categories and therefore our study was supervised by nursing researchers familiar with qualitative studies so as to raise the validity.

### 3.3. Ethical Consideration

The participants were explained about the study contents including the study purpose, and were informed that participation in the study was based on free will and they had a right to reject the participation both orally and in document form before the interviews. Further, they were informed that the data would not be used for the purposes other than those of this study, handled carefully and the study results would be presented at conferences and published in magazines with their personal information protected. Based on the above, consents were obtained in document from the participants. Further, conversation in FGI was recorded with an IC recorder upon agreement made beforehand. At the interviews, number cards were put on a table or a desk, and they call each other by the numbers during the conversation to secured anonymity. This study was approved by the Ethics Committee of Kobe University Graduate School of Health Sciences (approval number 418-1).

## 4. Results

### 4.1. Outline of the Hospitals

As shown in **Table 1**, for all of the three hospitals, four years passed since the establishment of words for community-based care, they acquired "Hospital Fee/Management Fee I" and "Dementia Care Addition II".

### 4.2. Outline of the Study Subjects

As shown in **Table 2**, 19 study subjects were employed, and they consisted of 5 nurses (26.3%), 4 MSWs (21.1%), 4 rehabilitation specialists (2 physical therapists and 2 occupational therapists) (21.1%) and 3 pharmacists (15.8%). In addition,

**Table 1.** Outline of the subject hospitals.

Hospital	Hospital A	Hospital B	Hospital C
Region	Tohoku	Kanto	Hokkaido
Years since the establishment of the hospital for community-based care	4 years	4 years	4 years
Hospital fee and hospital treatment management fee 1 for hospitals for community-based care	Acquired	Acquired	Acquired
Dementia care addition 2	Acquired	Acquired	Acquired
Interview time	59 min 05 s	80 min 06 s	80 min 41 s
Number of job titles	6 job titles	4 job titles	6 job titles
Number of participants	7	5	7

**Table 2.** Outline of the study subjects.

Hospital A	Staff A	Staff B	Staff C	Staff D	Staff E	Staff F	Staff G
Job title	Nurse	MSW	MSW	PT	OT	Pharmacist	Clinical technologist
Gender	Female	Female	Female	Male	Female	Female	Female
Age	40's	50's	30's	30's	40's	40's	40's
Years of experience in the job title	25 - 30 yrs.	25 - 30 yrs.	5 - 10 yrs.	5 - 10 yrs.	10 - 15 yrs.	20 - 25 yrs.	25 - 30 yrs.
Years of experience in the ward for community-based care	4 yrs.	4 yrs.	4 yrs.	4 yrs.	4 yrs.	4 yrs.	4 yrs.
Hospital B	Staff H	Staff I	Staff J	Staff K	Staff L		
Job title	Nurse	Nurse	MSW	PT	Nurse		
Gender	Female	Female	Female	Male	Female		
Age	50's	40's	40's	50's	30's		
Years of experience in the job title	25 - 30 yrs.	25 - 30 yrs.	20 - 25 yrs.	30 - 35 yrs.	5 - 10 yrs.		
Years of experience in the ward for community-based care	4 yrs.	4 yrs.	4 yrs.	4 yrs.	4 yrs.		
Hospital C	Staff M	Staff N	Staff O	Staff P	Staff Q	Staff R	Staff S
Job title	Nurse	Nurse	MSW	OT	Pharmacist	Dietitian	Care worker
Gender	Female	Female	Male	Male	Female	Female	Female
Age	40's	30's	30's	40's	60's	40's	50's
Years of experience in the job title	10 - 15 yrs.	10 - 15 yrs.	10 - 15 yrs.	10 - 15 yrs.	35 - 40 yrs.	15 - 20 yrs.	20 - 25 yrs.
Years of experience in the ward for community-based care	3 yrs.	3 yrs.	4 yrs.	4 yrs.	4 yrs.	4 yrs.	4 yrs.

\*MSW (medical social worker), PT (physical therapist), OT (occupational therapist).

1 dietitian, 1 clinical technologist and 1 care worker participated in the study. Their gender composition was 4 males 15 females and 9, 5, 4 and 1 subjects were of 40's, 30's, 50's and 60's, respectively. The years of experience in their job titles and those in wards for community-based care are as shown in **Table 2**.

### 4.3. Contents of “The Present Situation and Problems of Dementia Elderly Hospitalized in Hospitals for Community-Based Care”

The extracted core categories, categories, codes and law data are indicated with [ ], < >, << >>, and “ ”, respectively. Eight core categories, 19 categories and 42 codes were obtained by integrating the codes and the categories obtained from the three hospitals. The extracted core categories were [Words for community-based care becoming complicated], [Difficulty of dementia care], [Family who cannot understand dementia], [Difficulty of discharge support], [Lack of required energy amount], [Difficulty of adjustment of medicine], [Dilemma regarding ethical problems such as suppression] and [Disincentive of interprofessional work]. The details of the categories and codes are as shown in **Table 3**. [Words for community-based care becoming complicated] consists of <<Treatment of the main disease can hardly progress in a dementia patient>> and <<Diagnosis and treatment of dementia to be performed by a physician remain unclear>>, and <Treatment of both the main disease and dementia is required>. Further, as for the addition in medical fee, the codes <<Thirty percent of hospitalized patients show dangerous behaviors, and do not understand instructions and therefore their social hospitalization is increasing>> and <<Home return is difficult in the case of 60-day hospitalization>> were obtained and one subject narrated “You know, you need to make a cast for a brace and it would take 3 to 4 weeks to revise it... it would be too short if we try to have rehabilitation for 7 weeks, for instance”. Here, <Dementia patient case harder than expected> is added to the above, and <<Being unable to be discharged worsen the dementia as an another hurdle to be cleared>> is obtained. Furthermore, the comment <<Respite and social hospitalization are seen because of the priority given to treatment, and the ratio of dementia patients rises>> was obtained. For [Difficulty of dementia care], <Dementia patients who are confused> has been suggested, as seen in <<The patient themselves cannot be aware of dementia of them>> and <<The patient cannot accept themselves becoming unable to understand and become unable to make decisions themselves>>. Furthermore, <<Diagnosis for dementia classification is difficult, and the patient becomes irritable after around 30 days>> was obtained and a subject narrated “One month after the patient’s hospitalization, kind of a turning point, I know I have to be able to see something after reaching the goal, you know before the patient becomes irritable, for instance”. For [Family who cannot understand dementia], <Difficulty that the patient’s family feel> was captured as seen in <<Family of a dementia patient does not want to come to the hospital and it is difficult for them to return to their daily life>> and <<Family of elderly or a dementia patient cannot accept them>>. Furthermore, <<The patient’s family does not recognize initial symptoms and minor symptoms as those of dementia>>, <<Family cannot recognize correctly if the mark, color or company of the medicine are different>> and <<Family believes dementia is transient even though they do not look at the patient being conscious about it>> were obtained. A subject

**Table 3.** The present situation and problems of dementia elderly in hospitals for community-based care hold.

Core category	Category	Code		
Wards for community-based care becoming complicated	Treatment of both the main illness and dementia is needed	Treatment of the main disease can hardly progress in a dementia patient		
		Diagnosis and treatment of dementia to be performed by a physician remain unclear		
	Dementia patient case harder than expected	Lack in information on the patient's dementia before hospitalization		
		Thirty percent of hospitalized patients show dangerous behaviors, and do not understand instructions and therefore their social hospitalization is increasing		
Difficulty in returning home	Difficulty in returning home	Home return is difficult in the case of 60-day hospitalization		
		Being unable to be discharged worsen the dementia as an another hurdle to be cleared		
Difficulty in dementia care	Dementia patients who are confused	Respite and social hospitalization are seen because of the priority given to treatment, and the ratio of dementia patients rises		
		The patient themselves cannot be aware of dementia of them		
	Stress by being unable to have place where the patient is discharged to	The patient cannot accept themselves becoming unable to understand and become unable to make decisions themselves		
Family who cannot understand dementia	Difficulty that the patient's family feel	Diagnosis for dementia classification is difficult, and the patient becomes irritable after around 30 days		
		Family of a dementia patient does not want to come to the hospital and it is difficult for them to return to their daily life		
	The family believes that the patient will be recovered	Family of elderly or a dementia patient cannot accept them		
		The patient's family does not recognize initial symptoms and minor symptoms as those of dementia		
		Family believes dementia is transient even though they do not look at the patient being conscious about it		
The patient's family cannot understand dementia without an opportunity	Family cannot recognize correctly if the mark, color or company of the medicine are different			
Difficulty of discharge support	Control such as suppression, medicine and diet is not performed well	Family can understand dementia only after the patient is hospitalized		
		Suppression, medicine, diet and ADL influence where the patient is discharged to		
	The patient does not have money living alone, and there is not a network to support them in the local community	Conditions of a dementia patient vary even in one week	While thinking that we must not let the patient leave, we need to think about their next place to live	
			Resources for supporting the patient's single life or their family after discharge are short	
		The patient lives alone and there are no guarantors and money while the number of facilities is insufficient	The local community needs to be interested in dementia patients and it is necessary for neighborhood residents to support them	
I feel worried with the situation that the patient's sleep hours in the daytime are long while results are demanded	Dementia patients do not often reach the goal of their rehabilitation			
		Activity of the dementia patient cannot be increased		
Lack of required energy amount	The patient's food intake decreases under the influence of cognitive function degradation and medicine	Information on the patient's diet is insufficient since they are hospitalized		
		The patient's eating function does not have problems, but their preference is unconfirmed and food intakes do not increase		

**Continued**

		Difficult for us, including the eating swallowing team, to find reasons for appetite decreased and not eating
		Food intake decreases under the influence of oral medicine
	It is necessary to watch calorie intake	It is necessary to think about the meaning of food intake and calorie intake
	The patient is re-hospitalized for being unable to do self-management	It is difficult for a patient to manage medication by themselves and therefore the nurses cannot leave it to them
Difficulty of adjustment of medicine	Psychotropic drugs used from hospitalization exerts an influence on the patient's life	Psychotropic drugs for stable hospitalization life influences the patient's life after ADL and discharge
		Psychotropic drugs influences rehabilitation
		Roommates are also influenced by the unrest state of the patient
	Worried for prescription	When psychotropic drugs is prescribed, pharmacists may hesitate but there are not places where they can share it
Dilemma regarding ethical problems such as suppression	Dilemma occurs for setting a limit to the patient's behaviors	Use mitten or sensor mat for being unable to respond to the symptoms of the dementia patient
		Limit dementia patients' behaviors for their safety
	Cannot provide the cares that I want because of restriction in the duties time	Sedative is used to suppress the symptom but the nurses feel dilemma
		The nurses' duties are divergent and dilemma occurs for ADL maintenance
		Rehabilitation specialists' involvement is short, which causes dilemma for prevention of dementia progress
		Negative things occur for activities to be performed by each job title or multi-job titles
Disincentive of multi-professional cooperation	The dependence on specialist prevents cooperation	Knowledge of local and home care is short due to the dependence on specialists for discharge
		Nurses feel that the dependence on specialized job titles is the disincentive for cooperation

mentioned “The patient’s family can understand that it’s not kind of degrees that they can manage by themselves. I feel maybe it’s difficult unless there is an episode that promotes their understanding”, and <<Family can understand dementia only after the patient is hospitalized>> was obtained. <The patient’s family cannot understand dementia without an opportunity> was found. For [Difficulty of discharge support], as a subject narrated “Information is transmitted to the care manager beforehand and she make a plan based on it and prepare for a meeting. What often happens at a meeting is, you know, we find the information is different from the last time”, <<Conditions of a dementia patient vary even in one week>> was obtained. Further, <Control such as suppression, medicine and diet is not performed well> was extracted and influenced where the patient is discharged to. In addition, <<The patient lives alone and there are no guarantors and money while the number of facilities is insufficient>> was obtained, and some subjects mentioned “It would be nice if there was an environment in which we can take care of such patients. But the local itself does not grasp that there are such patients living in the local.” and “It’s quite normal that we have never seen the neighbors’ face”. Furthermore, other subjects narrated “The presence of dementia greatly affects the situation.” and “I’m worried everyday for how I should



work to have better outcomes”. The code <<Dementia patients do not often reach the goal of their rehabilitation>> was obtained. For [Lack of required energy amount], narrations such as “Some dementia patients cannot open their mouth easily.” and “Patients’ preference is the biggest problem. We can serve only the taste they prefer. So it’s difficult to handle such requests in mass feeding.” were obtained and the code <<It’s difficult to determine the cause of appetite decreased and refusal to eat, including the eating swallowing team>> was obtained. Moreover, <<Food intake decreases under the influence of oral medicine>> was obtained as seen in the comment “They need a lot of water to take medicines. Their stomachs get swollen with it. Then, they need to take a break and cannot go further. This often happens”. One subject narrated “You know, nurse follows the patients’ intake. I wonder... we do not think much about the amount of calories the patient needs and <<It is necessary to think about the meaning of food intake and calorie intake>> was obtained. For [Difficulty of adjustment of medicine], subjects narrated “It’s too risky to leave adjustment to the patients. They didn’t take medicine quite often” and “Medication of psychotropic drugs mostly begins while the patient is hospitalized” “For having stable life. Maybe” and <<It is difficult for a patient to manage medication by themselves and therefore the nurses cannot leave it to them>> was obtained. Moreover, the codes <<Psychotropic drugs influences rehabilitation>> and <<Roommates are also influenced by the unrest state of the patient>> were obtained. Further, a one subject narrated “We cannot easily share such stories. You know, there is not such a place. Patients are given medicines for delirium but the pharmacist may hesitate to give psychotropic drugs the elderly in some cases” and the subcategory <Worried for prescription> was obtained. For [Dilemma regarding ethical problems such as suppression], the narrations “We all know, for rehabilitation and for the hospital, it’s not good to calm a patient down using medicine” and “When we find a patient removing injections, we need to have them wear mitten. But for healthcare workers it is a constraint for the patient while they wish to give priority to the treatment. Thinking about a risk for fall, we need to take measure like having a sensor mat and so on” were obtained. As seen in the narration “The patient’s goal can be set higher but maybe... you know... we stop it, I feel...”, the code <<Limit dementia patients’ behaviors for their safety>> was obtained. Further, one subject commented “The patient actually wants to go to the restroom but we cannot let him go... and I can see his sadness and painfulness from his eyes. I was asking myself if it’s really good to force him to live like that...”. The narrations “The patients basically live on bed so the symptoms easily worsens. I want to stop such worsening...” and “I personally want to do it. We all knew it in these several years... but you know we are lack human resource in addition... and it makes it even more difficult” were obtained. The category <Cannot provide the cares that I want because of restriction in the duties time> was obtained. For [Disincentive of interprofessional work], a subject narrated “When a patient has dementia, I cannot really afford to think

about how their family are feeling... or the family does not know what they should do and we always ask the local cooperation for their help. You know, nurses' knowledge is not enough for it. I feel we often leave some jobs to them while we listen to their opinions". Furthermore, the code <<The nurses understand that their dependence on specialists is the disincentive for cooperation >> was obtained as seen in the narration "It is nurses who might be missing it. The nurses entrust things to the rehabilitation section so may not clearly understand the extent that they can cover".

#### 4.4. "Reality of Collaboration and Cooperation for Caring Dementia Elderly"

Eight core categories, 13 categories and 30 codes were extracted by Integration of the categories and codes obtained from the three hospitals. The core categories extracted were [Dangerous behavior responded by multi-job-titles], [Diet support by multi-job-titles], [Drug assessment and usage of medicine examined by multi-job-titles], [Approach to increased activity in the daytime by multi-job-title collaboration], [Collective approach by multi-job-title], [Dementia and its care in the local community and at home learned from multi-job-titles], [Empowerment by multi-job-titles] and [Home support by multi-job-titles]. Details of the categories and code are as shown in **Table 4**. For [Dangerous behavior responded by multi-job-titles], the narrations "There is a team that separate the patients by their arousal state to see drug effects", "Like... this patient moves actively during this time so this drug will be effective in that time rage... you know" and "Patients with intense symptoms, those who often wander are treated that way" were obtained. "Moreover, the code <<The rehabilitation specialists and pharmacists assume the role of observation of dementia patients and their dangerous behaviors>> was obtained as seen in the comments "The rehabilitation staff takes care of the patients both morning and afternoon. They do a lot of things" and "The pharmacist in charge of the ward takes care of the patients carefully observing the patients". For [Diet support by multi-job-titles], <<Usage of nutritional supplementary food mainly centered on diet is important>> was obtained as seen in the narrations "Some patients cannot finish all so they are given oral supplement to fix the calorie they take. The pharmacist prescribes high calorie stuff like Ensure" and "The goal is, the patients take medicine while they enjoy eating". The code <<Discuss eating ability, tableware and diet arrangement with multi-job-titles>> was captured as seen in the narrations "We consult the dietitian for the form of the diet after a patient is hospitalized, but we can probably do it at an earlier stage" and "We currently confirm the patient situation with nurses in a cooperation room at the time of hospitalization and share information. For the patient's eating ability, we assess it with STs from the rehabilitation section and share what we do thinking about the form with the dietitian". For [Drug assessment and usage of medicine examined by multi-job-titles], polypharmacy was suspected as seen in the narrations. "I feel things

**Table 4.** Actual situation of collaboration and cooperation of dementia elderly care.

Core category	Category	Code
Dangerous behavior responded by multi-job titles	Practice of observation of dangerous behaviors and care by the prediction	Nurses examine dangerous behaviors of the dementia patient by separating colors to confirm drug effects
		The rehabilitation specialists and pharmacists assume the role of observation of dementia patients and their dangerous behaviors
Diet support by multi-job titles	Investigation of the diet forms and the use of food and medicine	Usage of nutritional supplementary food mainly centered on diet is important Multi-job title cooperation led by dietitians is required for food intake methods or diet forms
	Investigation of place for diet, sitting position maintenance and tableware sizes	Discuss eating ability, tableware and diet arrangement with multi-job titles Adjustment of the diet environment is required for dementia care
Drug assessment and usage of medicine examined by multi-job titles	Being able to arrange medicines at the time of hospitalization and information exchange with the specialists in the local community	The pharmacist should be involved before and at the time of hospitalization Hospital pharmacists and pharmacists in local community need to collaborate The pharmacists cooperates with the specialists in the local community while sharing medicines
	Investigation of medicine effects and medicine usage for the hospitalized patients	Description of medication management in consideration of the patient's living conditions is required Multi-job title cooperation led by the pharmacist is required for usage and adjustment of medicines
Approach to increased activity by multi-job title collaboration in the daytime	Raise the patient's activity by collaboration of rehabilitation specialists and nurses	Cooperate with other specialists and consider rehabilitation and life in the daytime New ideas such as rehabilitation or walk in the daytime are required
	Consideration of specific support including transfer and portable restrooms	Adjustment of the care environment through the conference by rehabilitation specialists and nursing professions is required Cooperation of MSWs, nurses and rehabilitation specialists is practiced mainly for medicine and rehabilitation in the hospital
Collective approach by multi-job title	Need of tracking support and in-hospital daycare as staff member education	Relation by groups is required as in-hospital multi-job title cooperation and conversation between patients leads to prevention In-hospital daycare will be part of the staff member Practice of tracking support have an effect not only on patients but also staff education
	Review of the patient's livelihood time and investigation of their relation with others	New ideas are required for bathing time, how to spend after dinner and communication between patients
Dementia and its care in the local community and at home learned from multi-job titles	Promotion of learning and workshop of dementia	Need of new learning about dementia and learning for recapturing dementia Staff members of hospitals should learn about cares in the local community and at home and about characteristics of the places where patients are discharged to Effects of dementia workshop and multi-job title collaboration are seen, and trainees are also stimulated well
Empowerment by multi-job titles	Empowerment by multi-job titles	It is important to notice what the dementia patient can do Find what the dementia patient can do Encourage the dementia patient cooperating with multi-job titles
		Provide the local specialists with an opportunity to grasp the situations of hospitalized patients Predischarge visit by collaboration of nursing professions, rehabilitation specialists and MSWs
Home support by multi-job titles	Respect for the patient's ability and self-determination at home	Support the dementia patient's self-determination on the basis of the life they wish Belief that positive power works when the patient return home The patient can return home with understanding of their family and local

would go more smoothly if the patient's family could bring their medicine or medicine note a few days before the hospitalization" and "You know, the medicine increases as requested and cannot be arranged eventually... And they go other hospitals and get.... you know... medicine for this symptom... Even if the symptom gets better but go different hospitals. But the symptom got better with this so this medicine cannot be reduced....like this" and <<The pharmacist should be involved before and at the time of hospitalization>> was captured. Further, as seen in the narration "Hospital pharmacists like us would recommend to crush the tablet if the patient became unable to swallow them but those at dispensing pharmacies think about patients so they would think the patient still may be choked even if the tablets are crushed and know that it would be difficult for them to take it three times a day", the code <<Hospital pharmacists and pharmacists in local community need to collaborate>> was obtained. Moreover, <<interprofessional work led by the pharmacist is required for usage and adjustment of medicines>> was captured as seen in the narration "You know, it would be impossible to reduce the drugs of all patients. When the prescription is changed, it would be nice if they could tell us.. or the word leader about it". For [Approach to increased activity in the daytime by multi-job-title collaboration], the code <<Cooperate with other specialists and consider rehabilitation and life in the daytime>> was captured as seen in "I guess it's about role sharing. We entrust what we cannot handle to the rehabilitation section....while sharing information, you know" and "When we give the 'rehabilitation', patients would say they wouldn't need it but without using the 'rehabilitation', like...let's take a walk with a nurse I experienced. You know, a little different form of stepping exercise that can take". Further, <<Adjustment of the care environment through the conference by rehabilitation specialists and nursing professions is required>> was obtained as seen in the comment "As for the patients risk of fall, you know, we want to assess together like.... location of the portable restroom is good here or... we can reduce the risk doing this and that... so that we can organize the environment", and they worked on <Approach to increased activity in the daytime by multi-job-title collaboration>. For [Collective approach by multi-job-title], subject described "If the hour of rising while being hospitalized was increased, they would communicate with others" and "Well, you know, when a patient meets another, although both have dementia and weak hearing, they feel like talking. They do not really understand each other but seem to enjoy talking". Further, subject commented "Although join a good training session to learn a method to become part of the local society resource more, I seem to abandon various chances before very my eyes, being in a team of professionals. In-hospital day care by multi-job-titles is really good, I believe" and "It does not happen like... this is what we do and this is not... because our job title is this", and <<In-hospital daycare will be part of the staff member>> as captured. Furthermore, as seen in the narration "I think the tracking support demonstrates a great effect. A slightly irritable patient shows calm face

when I hear his story”, <<Practice of tracking support have an effect not only on patients but also staff education>> was obtained. For [Dementia and its care in the local community and at home learned from multi-job-titles], as seen in the narration “Well dementia patients are increasing every year. Its symptoms worsen continuously. You know, something is strong, or... the symptom itself is strong... those patients become outstanding continuously. I feel it every year but our learning about dementia is not catching up with such situations”, the code <<Need of new learning about dementia and learning for recapturing dementia>> was obtained. Further a subject described “You know, we launched a project for improving response capacity for dementia, started a work shop, and had training sessions twice a year. Our response got much better. There were much less staff who nagged patients who tried to move themselves” and <<Effects of dementia workshop and multi-job-title collaboration are seen, and trainees are also stimulated well>> was captured. For [Empowerment by multi-job-titles] and [Home support by multi-job-titles], subject narrated “BPSD presents many peripheral symptoms but I don’t feel that there is nothing we can do, you know. It’s only.. ah... there are many things we cannot do and I don’t realize there are actually many things I can do for the patient” and “It’s really good. You know, I always see what I cannot do so it’s really good to look for what we can”. Moreover, as seen in the comments “Nurses and other staff often talk to me caring about how I’m doing. They’ve come to give me words like ‘Oh you’re doing good!’, you know” and “I feel many people talk to me and it really encourages me”, <<Empowerment by multi-job-titles>> was captured. For [Home support by multi-job-titles], as seen in the comments “They all say that the interprofessional work is a discharge adjustment conference but there are no others in which care managers join observation tour for rehabilitation work. Unique aspect in our hospital” and “It’s highly rated that care managers can directly talk with other specialists. You know they can directly learn like, ‘this is dangerous’ or ‘this risk is bra bra...’ all kinds of possible behaviors”, <<Observation tour for rehabilitation by local specialists and visit before the discharge>> was obtained. Furthermore, one subject commented “Once a patient goes home, there are many things they can get back. If they are in a completely new environment, they wouldn’t be able to pile up their energy but you know, going back to their own home where they originally had their life, they could start their life with some advantage. I believe such a power”.

## 5. Discussion

### 5.1. The Present Situation and Problems of Dementia Elderly Hospitalized in Hospitals for Community-Based Care

This study was conducted in three hospitals that had had wards for community-based care for four years. As a result of interviewing 19 specialists, the following eight categories were extracted: [Wards for community-based care becoming complicated], [Difficulty of dementia care], [Family who cannot under-

stand dementia], [Difficulty of discharge support], [Lack of required energy amount], [Difficulty of adjustment of medicine], [Dilemma regarding ethical problems such as suppression] and [Disincentive of multi-professional cooperation]. These categories correspond to “Rehabilitation, NST, dementia care and polypharmacy” described in “Present situation and problems of the wards for community-based care [8]”. First, for [Wards for community-based care becoming complicated], it was supposed that the actual sites were confused from the following three points. First, specialists are pressed by care of the patients’ main disease and dementia during the hospitalization of up to 60 days. From the interview conducted in this study revealed the opinion that 60 days are too short because the number of days for rehabilitation after orthopedics is insufficient. Secondly, unexpectedly hard dementia care is performed because of acquisition of dementia care addition and addition for nursing staff night assignment, the authors presume. Thirdly, the problem is not only that the patient’s dementia turns worse and they cannot leave the hospital but the symptom of the dementia patient who cannot leave the hospital turns worse, which makes the dementia re even more difficult. Next, for [Difficulty of dementia care], dementia patients feel difficulty in accepting that they are losing themselves. In particular, those in an early period of dementia generally think that they cannot forget things. Such a symptom continues for a while, while the patients show anger or denial repeatedly. The results obtained in this study have shown that such situations overlap and the specialists working in the actually sites could not afford to respond them, we presume. Moreover, what is the most difficult is that the patients’ family who are originally wished to be on the supporting side cannot function. As symbolized by the words “elderly care by elderly” and “dementia care by dementia”, it is difficult to obtain support from the patients’ family, and in some cases their families need to be hospitalized socially. In this study, all three hospitals reported that the patients’ family cannot understand dementia. Furthermore, this complicates words for community-based care, we infer. In this way, if a dementia patient and their family cannot understand dementia correctly, explanation by specialists is really difficult for them. Furthermore, it is difficult for a dementia patient who lives alone to return home, and they cannot enter facilities and therefore cannot leave the hospital. Moreover, if the dementia symptom turned worse in the hospital, it would be a vicious circle, which makes it even more difficult to be discharged. For [Difficulty of discharge support], the patient’s diet decrease combined with this vicious circle, hospitals are forced to choose to use the medicine prescribed for symptom control. Influence of decreased diet and the medicine’s side effects appear in this situation, which affects the rehabilitation. In such a situation, it would be needed to set drip infusion, nutrient and excretion tubes. At this time point, [Dilemma regarding ethical problems such as suppression] occurs. The specialists want to do something about it while they are pressed by daily duties. Here, it is wished to improve the dementia patients’ QOL by smooth approach based on multi-job-title collaboration. However, they are all pressed by their own duties and cannot avoid to de-

pend on each other's roles, which becomes [Disincentive of interprofessional work]. The problems identified in this study that we have surveyed so far correspond to the study by Horinouchi [9] *et al.* that aimed at [Clarification of the present situation]. They also present [Usability of ward pharmacist]. As for pharmacists, the results of this study show that they are necessary for interprofessional work. Thus, there is a current situation in which appropriate professional staffing and systems are not yet in place to provide dementia care. In addition, it was found that there was a problem of not being able to secure a discharge site in the community, and professionals were not able to develop case management to connect the hospital and the community. Therefore, it was thought that appropriate staffing and system development of professionals, securing a discharge site in the community, and case management would have a significant impact on dementia care.

## 5.2. Actual Situation of Collaboration and Cooperation for Dementia Elderly Care

The following eight core categories were extracted from the results obtained in this study: [Dangerous behavior responded by multi-job-titles], [Diet support by multi-job-titles], [Drug assessment and usage of medicine examined by multi-job-titles], [Approach to increased activity by multi-job-title collaboration in the daytime], [Collective approach by multi-job-title], [Dementia and its care in the local community and at home learned from multi-job-titles], [Empowerment by multi-job-titles] and [Home support by multi-job-titles]. [The core category Dangerous behavior responded by multi-job-titles] means that all specialists must keep dementia patients safe. Nakai *et al.* [10] developed Point Of Care (POC) rehabilitation and reported that occupational therapists resided in a ward for community-based care, and provided service at the time when a dementia patient was unrest. Similarly in this study, not only nursing profession but also rehabilitation specialists and pharmacists corresponded to dangerous behaviors. Further, in this study, it has been found that there is a hospital that performed drug effects measurement using colors.

It is a method to support dementia patients while observing drug effects on their dangerous behaviors, and it can be a clue for dementia care based on interprofessional work in each hospital. Moreover, for [Diet support by multi-job-titles], [Drug assessment and usage of medicine examined by multi-job-titles] and [Approach to increased activity by multi-job-title collaboration in the daytime], dietitians, pharmacists and rehabilitation specialists need to play a key role in urging specialists. Furthermore, for [Collective approach by multi-job-title]. In this study, one hospital already has started tracking support, and it has been narrated that being able to secure time to talk led made the dementia patients feel security. This indicates that it is important to have somebody who is always near the dementia patient and snuggles up to them. One of the collective approaches includes an in-hospital daycare. Yoshida [11] expected that it would improve the relation with patients and ability to support them, leading to the pa-

tient' and their family's confidence on their life after discharge. It is desired to consider in-hospital daycare in accordance with characteristics of each hospital. For [Dementia and its care in the local community and at home learned from multi-job-titles] and [Home support by multi-job-titles], it is needed to newly continue learning of dementia. In addition, it is necessary to learn more about characteristics of the actual site of home medical care and place to which the patient is discharged. Pre-discharge visit is a good chance for the specialists to see local community and home and therefore it is needed for them to participate in it positively. Further, for [Empowerment by multi-job-titles], Amagi *et al.* [12] describe that nursing to draw the patient's strength is effective in any treatment place and is an important factor for dementia nursing. Similarly in this study, the codes <<It is important to notice what the dementia patient can do>>, <<Find what the dementia patient can do>> and <<Encourage the dementia patient cooperating with multi-job-titles>> were obtained. Those who provide support and are supported can look at good points of each other and therefore it is expected to be a good method. Furthermore, it is transmitted by encouraging a dementia patient with multi-job-titles that many people need the dementia patient. As we have seen so far, the actual situations of the multi-job-title collaboration are diverse, and it might support dementia patients and their family.

### 5.3. Model of Interprofessional Work for Dementia Care

**Table 5** shows a tentative plan of a model of interprofessional work for dementia acquired by organizing problems of dementia patients and actual situations of interprofessional work obtained in this study. Nursing professions, rehabilitation specialists and discharge support specialists (MSW) are the arrangement standard for the wards for community-based care. In this study, actual situations of cooperation among pharmacists, dietitian and care workers have been clarified. Therefore, the authors propose dementia cares by 6 specialists, to which these 3 job titles are added. The reason why we propose the first "Family handling function" is because there were not many cases of the approach to family by multi-job-titles in this study. This is because there is a concern that when a family has a dementia patient, they tend not to come to see the patient in the hospital. Above all, such a family does not admit that the patient is dementia as a background. Therefore, it has been shown by the categories that even if the patients' family talks with each job title, approaches are not made by multi-job-titles. Therefore, it is necessary to build up a familiar-face relationship with the family who are confused with the situation, and to respond to them by multi-job-titles spending sufficient time. Secondly, we propose "ADL maintenance and improved function". Here, as practice contents of the dementia care, categories related to medicine, diet, rehabilitation and physical restriction were given. It has also been revealed that they work on these problems based on interprofessional work. Much of the content of the practice is taking place, suggesting the need to continue to do so in the future. At the same time, it would be difficult to discharge



**Table 5.** Interprofessional work model for dementia care.

The authors propose a dementia care special team consisting of six specialists below (nurse, rehabilitation specialist, MSW, pharmacist, dietitian, care worker).

Reason for choosing the six job: The arrangement standard of nursing professions, rehabilitation specialists and MSWs includes “full-time work”.

Moreover, pharmacists and dietitians showed their wish to participate in wards for community-based care. Care workers are not only is adjacent to ADL but also capable of collecting information including the family and the patient’s back ground.

Functions and practice contents of the multi-job title cooperation	Base: The present situation and problems (19 categories)	Base: Actual situation of collaboration and cooperation by the multi-job titles (13 categories)
<p>1. Family handling function (family)</p> <ul style="list-style-type: none"> <li>*Provide the family with an opportunity to learn dementia correctly</li> <li>*Explain that the patient is dementia spending time after description is given by the physician,</li> <li>*Have the family see the situation of ADL and treatment during the hospitalization</li> <li>*Confirm wishes about the medication management and explain changes one by one</li> <li>*Talk about the life after the discharge including the place where the patient is discharged to</li> <li>*Support the life of the family and the patient comprehensively</li> </ul>	<p>Treatment of both the main illness and dementia is needed</p> <p>Difficulty that the family has</p> <p>The family believes that the patient will be recovered</p> <p>The patient’s family cannot understand dementia without an opportunity</p>	<p>Respect for the patient’s ability and self-determination at home</p>
<p>2. ADL maintenance and improved function (dementia patient)</p> <ul style="list-style-type: none"> <li>*Grasp diet habit or internal use situation at the time of hospitalization and provide the ward with it.</li> <li>*Perform periodical assessment of ADL and share it among specialists</li> <li>*Reduce recumbency in the daytime and perform investigation not to have the patient be confined to bed</li> <li>*Regularly assess the influence of psychotropic drugs on diet and rehabilitation</li> <li>*For effect measurement of psychotropic drugs, examine dangerous behaviors by separating them by colors</li> </ul>	<p>Control such as suppression, medicine and diet is not performed well</p> <p>The patient’s food intake decreases under the influence of cognitive function degradation and medicine</p> <p>It is necessary to watch calorie intake</p> <p>The patient is re-hospitalized for being unable to do self-management</p> <p>Psychotropic drugs used from hospitalization exerts an influence on the patient’s life</p> <p>Worried for prescription</p> <p>Dilemma occurs for setting a limit to the patient’s behaviors</p> <p>I feel worried with the situation that the patient’s sleep hours in the daytime are long while results are demanded</p> <p>Cannot provide the cares that I want because of restriction in the duties time</p> <p>The dependence on specialist prevents cooperation</p>	<p>Investigation of the diet forms and the use of food and medicine</p> <p>Investigation of place for diet, sitting position maintenance and tableware sizes</p> <p>Being able to arrange medicines at the time of hospitalization and information exchange with the specialists in the local community</p> <p>Investigation of medicine effects and medicine usage for the hospitalized patients</p> <p>Raise the patient’s activity by collaboration of rehabilitation specialists and nurses</p> <p>Consideration of specific support including transfer and portable restrooms</p> <p>Practice of observation of dangerous behaviors and care by the prediction</p> <p>Predischarge visit and observation rehabilitation of the local specialists</p>
<p>3. Staff member education and empowerment function (specialist)</p> <ul style="list-style-type: none"> <li>*Provide places where staff can learn new knowledge about dementia</li> <li>*Provide information on cares in the local community and at home particularly on characteristics of the place where the patient is discharged to</li> <li>*Respond to dangerous behaviors by tracking support</li> <li>*Examine time zones and places which dementia patients can be involved with each other safely</li> <li>*Examine in-hospital daycare and increase activity in the daytime</li> <li>*Tell the meaning of the empowerment to the dementia patient, their family and staff members</li> <li>*Invite the local specialists to an observation tour of rehabilitation and cooperate with them for discharge support</li> </ul>	<p>Dementia patient case harder than expected</p> <p>Dementia patients who are confused</p> <p>Stress by being unable to have place where the patient is discharged to</p> <p>The patient does not have money living alone, and there is not a network to support them in the local community</p> <p>Difficulty in returning home</p>	<p>Empowerment by multi-job titles</p> <p>Review of the patient’s livelihood time and investigation of their relation with others</p> <p>Need of tracking support and in-hospital daycare as staff member education</p> <p>Promotion of learning and workshop of dementia</p>

the patient unless these problems are solved. Therefore, one method to connect a hospital and local community is to have specialists in the local community watch rehabilitation performed in the hospital a multi-job-title approach. Thirdly, we propose “Staff member education and empowerment function”. For education opportunity and training for dementia, each organization seems to be making efforts. Furthermore, it is required to plan opportunities for specialists to learn together as well as to activate tracking support and in-hospital daycare. In addition, the empowerment of patients with dementia, which is done in multi-job-titles setting, holds the promise of better interprofessional work.

#### **5.4. Study Limitations**

This study targeted specialists working in hospitals and wards for community-based care and the number of specialists have variability. Further, analyses covering the regional characteristics have not been performed. In the future, it is necessary to examine the number of regional characteristics and specialists.

#### **6. Conclusion**

As present situations and problems of dementia patients in hospitals for community-based care, 8 core categories (19 categories) were extracted and as actual situations of interprofessional work for dementia care, 8 core categories (13 categories) were obtained. The authors examined a function of interprofessional work model and practice contents using these categories. The results revealed that better interprofessional work can be expected by six specialists of nurses rehabilitation specialists, MSW, pharmacists, dietitians and care workers developing dementia care based on “Family handling function” “ADL maintenance and improved function” “Staff member education and empowerment function”.

#### **Acknowledgements**

The authors sincerely thank all professionals involved in dementia care, the hospital presidents, senior nursing officers and service directors for their cooperation with this investigation.

#### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

#### **References**

- [1] Statistics Bureau, Ministry of Internal Affairs and Communications (2020) Elderly in Japan Seen from Information Data Statistics (Date of Browsing 9.20). <https://www.stat.go.jp/data/topics/topi1260.html>
- [2] Ministry of Health, Labour and Welfare (2016) Local Medicine Plan (Date of Browsing 9.20). <https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000080850.html>
- [3] Tsuchida, A. (2018) Local Medicine Plan That Has Begun to Change. *Nikkei Health Care*, **350**, 56.

- 
- [4] Nikkei Health Care Editorial Department (2016) Hospitals for Community-Based Care that Bring Great Advantage—Income Rise and Ease of Use as Features. *Nikkei Health Care*, **325**, 26-27.
- [5] Nakai, M. (2016) The Ideal Physician for Hospitals for Community-Based Care. *Japan Hospital Association Journal, Japan Hospital Association*, **63**, 39-57.
- [6] Association of Hospitals for Community-based Care (2016) Survey on Functions of *Hospitals for Community-Based Care*, **1**, 25.
- [7] Horinouchi, W. and Uchino, Y. (2020) Trend of the Studies on Medical Service and Nursing with Hospitals for Community-Based Care as a Base. *Japanese Society for Nursing Administration and Management journal*, **2**, 11-16.
- [8] Nakai, M. (2019) The Present Situation and Problems of Hospitals for Community-Based Care. *Community Caring*, **21**, 12-17.
- [9] Horinouchi, W. and Uchino, Y. (2020) Trend of the Studies on Medical Service and Nursing with Hospitals for Community-Based Care as a Base. *Japanese Society for Nursing Administration and Management Journal*, **2**, 14.
- [10] Nakai, M., Ueda, Y. and Nishide, N. (2016) Strategy for Dementia in the Largest and Strongest Hospital for Community-Based Care Strongest. *Japanese Psychogeriatric Society Journal*, **27**, 155.
- [11] Yoshida, Y. (2016) Activities of “Dementia Support Team” Aiming at an Acute Phase Hospital Kind to Dementia. *Nursing Prospects*, **41**, 31-36.
- [12] Amagi, N., Momose, Y. and Matsuoka, H. (2014) Dementia Nursing Practice for Dementia Elderly Receiving Hospital Treatment in General Hospital—Judgment of Authorized Nurse. *Japan Society of Nursing Research journal*, **37**, 63-72.