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A study of nutritional management at a group home for elderly individuals with dementia

WADA, Ryoko
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認知症高齢者グループホームの栄養管理の検討

和田　涼子
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Abstract

Group homes (GH) for elderly individuals with dementia are residential nursing facilities where residents live together in a home-like environment. At GHs, residents generally prepare food in cooperation with the care staff. However, GH dietitians typically do not prepare specialized meals for residents with dementia and very few GHs implement nutritional management strategies that target individuals with dementia. Nutritional management is a key factor for maintaining health in the elderly. In this study, we surveyed the actual status of food supply services and nutritional management for residents with dementia residing in GHs in the Tokyo region. Respondents included 71 facilities, and more than 80% indicated that “Nutritional management is necessary,” although 91.6% of facilities reported that “There is no dietitian at GH for elderly individuals with dementia” and 53.3% reported that “There is neither an advisor nor a consulting system” for nutritional management services focused on residents with dementia. Some residents had eating/swallowing difficulties and consequently required special care to eat. We concluded that a new system was needed. Here the dietitian will able to regularly advise the care staff within GHs for elderly individuals with dementia. This might include a visiting dietitian service and establishment of a consulting station to improve food supply services and help maintain optional nutritional status of elderly individuals with dementia residing in GHs.

要約

認知症高齢者グループホームでは認知症の高齢者が家庭に近い環境で共同生活を営んでいる．食事の提供は介護職員と利用者が共同で行うことが原則となっているが，特別養護老人ホームと違い栄養士の配置がないために栄養管理は行われていない．高齢者の栄養状態を良好に保つためには栄養管理が必要であると考え，都内にある認知症高齢者グループホームの食事提供の現状と栄養管理について調査し検討した．回答を得た71施設のうち「栄養管理が必要」とするのが80％以上であったが，その一方で「施設に栄養士がいない」が 91.6％，「相談やアドバイスしてくれる栄養士が身近にいない」が 53.3％であった．認知症高齢者グループホームには摂食・嚥下が難しい利用者もおり，栄養士に定期的に相談可能な制度やシステムを構築することで，食事内容が改善され，高齢者の栄養状態を良好に保てると考える．

Key words：group home for elderly with dementia, food provision, nutritional management, nursing care staff, dietitian
キーワード：認知症高齢者グループホーム，食事提供，栄養管理，介護職員，栄養士

1. Background and study purpose

In 2015, the proportion of the Japanese population considered “aged” was 26.7%. In the same year, the number of aged with dementia was 4.62 million. This amounts to one in seven people aged 65 or older. By the year 2025, we expect the number to rise to one of five, according to the Ministry of Health, Labour and Welfare Survey[1].

Thanks to the policy “Social security that leads to safety society, no turnover of workers quitting jobs to provide nursing care,” the nursing care service system have been reviewed,

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deregulated, and are presently undergoing accelerated development.

Group homes (GHs) for elderly individuals with dementia (herein after, GHs residents with dementia) are residential nursing facilities designed for elderly individuals living with dementia or those who have challenges to activities of daily living. Residents typically live together in a single unit those houses anywhere from five to nine residents who are supported by a specialist staff.[2] GHs seek to provide family-like living environments that blend into neighborhoods. A benefit of GHs is that the elderly can reside in a home-like atmosphere within a small-scale facility. In many GHs, residents prepare meals in cooperation with nursing staff as a part of their routine daily life activities. Facilities covered by the long-term care insurance system, including intensive care homes for the elderly, carry out nutritional care management for each resident. However, at GHs for residents with dementia nutritional management is not implemented since there is rarely a dietitian/registered dietitian (herein after dietitian) on site.[3]

A 2013 survey of GHs for residents with dementia found that nursing care staff were concerned about both food supply and nutritional management services and felt a need for improvement[4].

Nursing care in community/home life is carried out according to government policy, and GHs for residents with dementia are considered very important facilities. Improving nutritional management challenges at GHs should help extend health life expectancy and maintain/improve QOL for residents.

We researched food and nutritional management functions of GHs that serve residents with dementia and examined both the role of the dietitian and the demand for nutritional management services.

2. Survey Contents and Methods

The survey contents were as follows; Outline of the GH serving residents with dementia, number of dietitians, how each meal was provided, process for providing snacks and event foods, and how the GH cares for residents who have difficulty swallowing. In addition, we asked respondents to express comments or concerns by a free response option.

Sample: GHs serving residents with dementia in Tokyo

Sample facilities were chosen from the "List of GH for individuals with dementia" which is publically-available on the web site of Bureau of Social Welfare and Public Health, Tokyo Metropolitan Government, as of May 2015. First, we made phone calls to 120 facilities seeking participation. Of the facilities contacted, 97 GHs serving residents with dementia accepted. Survey respondents were GH administrative managers or other employees who were well acquainted with nutritional management processes carried out by the facility.

Survey period: May-July, 2016

Statistical Procedure: Excel and SPSS for Windows 14.00J

3. Result and Discussion

3.1 Overview of the facilities

A total of 71 surveys were returned and subjected to analysis, indicating a response rate of 72.4%.

Types of GH management organizations

There were 46 (64.8%) private companies, 12 (17.1%) social welfare corporations, 9 (12.9%) medical corporations, 2 (2.9%) NPOs, and 1 (1.4%) classified as "other." Private companies, in response to deregulation, now account for a sizeable percentage of organizations engaged in nursing care management[5]. Additionally, GHs serving residents with dementia are categorized as Type 2 social welfare services that any type of organization can start after providing notice to the governor of the prefecture; consequently, more and more private companies are entering the GH industry.

The capacity of the facilities

Forty-two facilities reported a capacity of 18 (59.2%), 14 (19.7%) reported a capacity of 9, and 9 (12.7%) reported a capacity of 27, as of March 2016. Until 2014, regulations stipulated that GHs retain a maximum capacity of 18 (9 person x 2 units). Because of this, many GHs continue to have capacity for only 18 individuals. An increased capacity of 27 (9 person x 3 units) was allowed by the "Policy for Dementia" announced March 2016 and the revised "Long-term care Benefit Act," so it is likely that more and more GHs will emerge, moving forward, with the higher capacity of 27 residents. (Table 1)

Table 1 Overview of the Facilities

		Number of responses(n = 71)	(%)
Organization type	Private company	46	64.8
	Social welfare corporation	12	17.1
	Medical corporation	9	12.9
	NPO	2	2.9
	Other	1	1.4
Capacity	27 residents (3 units)	9	12.7
	18 residents (2 units)	44	62.0
	9 residents (1 unit)	14	19.7
	Fewer than 9 residents	4	5.6

3.2 Overview of residents

Average Nursing Care Level

Forty-eight (67.6%) facilities featured level 2 to 3 care. Most residents with dementia required nursing care level 2 and greater,

given observed difficulties in daily activities. GHs serving residents with dementia anticipate serving individuals who "need support level 2" and "nursing care level 1 or more."

The degree of independence in activities

In all the facilities, 56% of residents walked independently, however 45% of residents need support for walking including wheel chairs, walking assistive devises and canes. The responses suggested that many residents required intensive nursing care[6].

Food intake

Forty-three (60.6%) of facilities reported serving residents with eating and swallowing difficulties. On average, 2.2 persons at each GH exhibited eating and swallowing difficulties.

In GHs, increasing numbers of residents have difficulty walking and eating; as a result, the workload of nursing care staff has increased and higher levels of care are required[7]. Presumably concerns about nursing care among GH care staff are increasing. (Table 2)

Table 2 Overview of the residents

		Number of responses(n = 71)	(%)
Average nursing care level	1-2	5	7.0
	2-3	48	67.6
	3-4	15	21.1
	N/A	3	4.2
	Other	1	1.4
Have resident(s) with swallowing difficulties	Yes	43	60.6
	No	44	39.4

3.3 Person in charge of cooking

Most of GHs incorporate cooking into the residents' daily life since they can share the work depending on their abilities.[8]

In 9 facilities, the "care staff" was in charge of cooking; in 60 facilities "staff and residents" were in charge of cooking, and in 2 facilities "others" were responsible. No facility responded "only by residents." Approximately 85% of facilities made efforts to involve residents with cooking.(Table 3)

Table 3 Person in charge of cooking

Person in charge of cooking	Number of responses (n = 71)	(%)
Nursing care staff	9	12.7
Staff and residents	60	84.5
Residents	0	0
Other	2	2.8

3.4 Dietitian

Number of dietitians within GHs

In 65 facilities (91.5%) there was no dietitian, 3 (4.2%) facilities had 1 dietitian, and 3 (4.2%) had 2 dietitians. As a result, 6 of 71 facilities (8.5%) employed a dietitian. Some private company respondents answered that they employed a dietitian even though there was no dietitian onsite within the actual GH that served residents with dementia. Of the 65 facilities without a dietitian, 27 (41.5%) responded "Have supportive dietitian," 35 (53.8%) responded "Do not have any supportive/advisory person," and 3 facilities did not respond. In all, 35 of 71 facilities had no way to ask advice or seek suggestions regarding nutritional management, either inside or outside the GH.

3.4.1 Need for a nutritional management specialist

Regarding the question "Do you feel dietitian should be employed with your GH serving residents with dementia?," 39 (54.9%) facilities responded "Yes," 28 (39.4%) responded "No," and 4 (5.6%) facilities did not respond. (Table 4)

Table 4 Dietitian

		Number of Responses (n = 71)	(%)
Do you have dietitian at your GH?	Yes	6	8.5
	No	65	91.5
Do you feel that your GH should employ a dietitian?	Yes	39	54.9
	No	28	39.4
	N/A	4	5.6

3.5 Nutritional Management

Need for nutritional management

When asked if the facility needed nutritional management, 60 (84.5%) responded "Yes," 3 (4.2%) responded "No," 6 (8.5%) responded "Do not know," 2 facilities offered no response. Approximately 85% of respondents indicated that "nutritional management is necessary," although 91.5% of facilities did not have a dietitian and many GHs serving individuals with dementia had no means of obtaining advice or suggestions regarding nutritional management.

Considering residents' opinions during nutritional management

Thirty-eight (52.1%) answered "Yes," 27 (38.0%) responded that the question was "Difficult to answer," 5 (7.0%) responded "No" and 2 facilities offered no response.

Set nutritional targets

Thirty-seven (51.2%) responded "Yes," 36 (50.7%) responded "No," 8 (11.3%) responded "Unknown," and 4 facilities did not respond.

Person in charge of planning the menu

Most facilities [27 (38.0%)] indicated the "Care Staff" planned the menu, 11 (15.5%) responded "Dietitian," 7 facilities reported that the "Residents" planned the menu, and "Cooperation of residents and care staff" was 6 (8.5%), 17 (23.9%) stated that "Others" planned the menu, and 3 facilities did not respond. Residents of 13 GHs serving residents with dementia (18.3%) took a role in planning the menu. (Table 5)

Table 5 Nutritional Management

		Number of Responses (n = 71)	(%)
Do you think nutritional management is necessary?	Yes	60	84.5
	No	3	4.2
	Do not know	6	8.5
	N/A	2	2.8
Do you take residents opinions into consideration during nutritional management decisions?	Yes	37	52.1
	Difficult to answer	27	38.0
	No	5	7.0
	N/A	2	2.8
Do you set nutritional targets?	Yes	23	32.4
	No	36	50.7
	Unknown	8	11.3
	N/A	4	5.6
Who plans the menu?	Staff	27	38.0
	Dietitian	11	15.5
	Residents	7	9.9
	Resident and Staff	6	8.5
	Others	17	23.9
	N/A	3	4.2

3.6 Care for residents with swallowing and eating difficulties

Special care for the residents with swallowing/eating difficulty regarding meal service

Sixty-four facilities (90.1%) responded “Yes,” indicating that they provided specialized care for residents with swallowing and eating difficulties. Three (4.2%) facilities did not provide specialized care, and 4 provided no response. Most of GHs serving residents with dementia provided special care for residents with swallowing/eating difficulties. The response “there is no resident with swallowing/eating difficulties” were included in “No.”

Special mealtime arrangements for residents with swallowing/eating difficulties

Sixty-three (88.7%) facilities indicated they “Do” arrange the food to serve, 8 (11.3%) facilities “Do not.” Details of these special arrangements were given via free description, and included modified consistencies such as porridge, soft foods, minced, and blended. Forty (56.3%) facilities reported using thickener for dysphagia diets, 30 (43.7%) reported they did not use thickener. Ten facilities used staff to assist residents with eating, 60 facilities did not use staff assists during meals. Three (4.2%) facilities reported consulting with medical professionals and 67 (94.4%) facilities did not. We found that very few GHs serving residents with dementia consulted medical professionals concerning residents with swallowing/eating disorders.

Elderly individuals with swallowing difficulties may exhibit reduced food intake, potentially resulting in reduced nutritional status and dehydration and potential aspiration pneumonia. Consequently, these individuals require increased care to eat safely. Elderly individuals with weakened swallow function often have difficulty swallowing/eating, thus nursing care staff should pay special attention to them when they are eating[9)10)].

We found that each GH serving residents with dementia made various efforts to provide food with a high level of awareness regarding the importance of food since enjoyment of eating is a key factor for maintaining good health, not only physically but also mentally.

To prevent deterioration of residents’ nutritional statuses, GHs reportedly made a variety of efforts, including providing supplemental foods, measuring residents’ body sizes, and providing high-protein and high-calorie meals and snacks. Thirty-five facilities reported “Do” for “providing nutritive supplement food to those who can’t intake food sufficiently” whereas 36 reported “Do not.” Approximately 50% of respondents provided supplemental food including “Enteral nutrition,” “Side dishes,” and “Snacks.”

Regarding to putting a lot of thought into providing food, 31% of GHs serving residents with dementia reportedly took steps such as “Provide meat and fish,” “Prepare 30 items per day,” “Serve rice not by bowl but rice-ball,” “Create a good eating atmosphere” “Take residents preference into consideration,” “Well-balanced menu” et cetera. These GHs exhibited flexibly meeting residents’ tastes during mealtimes. (Table 6)

Table 6 Special care for residents with swallowing difficulties

		Number of Responses (n = 71)	(%)
Do you take special care for residents with swallowing/eating difficulty regarding food supply?	Yes	64	90.1
	No	3	4.2
	N/A	4	5.6
Do you do have special arrangements for residents with swallowing/eating difficulties when providing food?	Yes	63	88.7
	No	8	11.3
Do you use thickener for dysphagia diets?	Yes	40	56.3
	No	31	43.7
Does the staff assist residents to eat?	Yes	10	14.1
	No	60	84.5
	N/A	1	1.4
Do you consult with medical professionals?	Yes	3	4.2
	No	67	94.4
	N/A	1	1.4
Do you provide nutritional supplements?	Yes	35	49.3
	No	36	50.7
Do you put a lot of thought into providing food?	Yes	24	33.8
	No	47	66.2

3.7 Providing event food

Regarding the question “Do you provide event food?,” 69 GHs serving residents with dementia (97.2%) answered “Yes.” As Table 7-1 shows, 59.2% of respondent provided festive food 6 times or more per year. However, compared GHs serving the

non-demented elderly[11], the frequency of event food provision was lower. We assume that providing festive food poses a heavy burden on the care staff, since the GHs serving residents with dementia did not employ dietitians and had fewer cooking staffs. (Table 7-1, 7-2)

Table 7-1 Frequency of event food

	Times/year	Number of Responses (n = 71)	(%)
Frequency of event food	1-5	17	23.9
	6-10	22	31.0
	11 and more	20	28.2
	Other	12	16.9

As the Table 7-2 shows, approximately 80% of GHs serving individuals with dementia provided event food on "New Year's day," "Girl's festival," "Respect-for the Aged Day," and "Christmas party." Event food is a good opportunity for residents to enjoy a special occasion and experience the change of seasons, in other words it enriches daily life. Fewer GHs provided event food for "Setsubun," "Doyou-no-ushino-hi" and "New year's eve," which are common occasions for event foot in ordinary families. Event foods containing sticky rice cake (Mochi), were also offered less-frequently in intensive nursing homes since these cakes can be hard to swallow. Typical event food containing sticky rice cakes includes: Oshiruko (soupy sweet bean paste with baked rice cakes) at "Kagami-biraki," Botamochi (rice dumpling covered with sweet red bean paste) at vernal equinox day, Ohagi (rice dumpling covered with sweet red bean paste) at Autum equinox day, and Tsukimi-danngo (rice dumpling) at "Tsukimi."

Table 7-2 Comparison of providing event food by type

	GH with dementia (n = 71)		Intensive care home for elderly (n = 50)	
Type of event		(%)		(%)
New year's day	64	90.1	50	100.0
Nana-kusa (Seven herb rice porridge day)	38	53.5	50	100.0
Kagami-biraki (Cutting a cake of pounded rice)	14	19.7	32	64.0
Setsubun (The day before the start of spring)	41	57.7	48	96.0
Ohina-sama (Girl's festival)	55	77.5	50	100.0
Vernal equinox day	9	12.7	31	62.0
Ohanami (Cherry blossom party)	41	57.7	35	70.0
Children's day	27	38.0	44	88.0
Tanabata (Star festival)	29	40.8	49	98.0
Doyou-no-ushi-nohi (Midsummer day of the ox)	34	47.9	50	100.0
Respect-for the aged day	53	74.6	49	98.0
Tsuki-mi (Moon viewing party)	11	15.5	35	70.0
Autumnal equinox day	9	12.7	27	54.0
Christmas party	58	81.7	50	100.0
New year's eve	46	64.8	50	100.0

Generally, GHs serving residents with dementia provided event food less frequently than intensive nursing care homes.

3.8 Satisfaction with food service procedure

Regarding the satisfaction levels for food provision, 16 facilities responded, "Very well," 26 facilities responded "Well," and 9 facilities responded, "Neither yes nor no" and "Not at all well." More than half of respondents were satisfied with their facility's current situation. (Table 8)

Table 8 Nutritional Management

		Number of Responses (n=71)	(%)
How are you satisfied with current state of providing food?	Very well	16	22.5
	Well	26	36.6
	Neither	18	25.4
	Not at all well	9	12.7

3.9 Physical measurement

Regarding frequency of resident body weight measurement, 1 facility responded "Every day," 5 responded "Once in a week," 60 responded "Once a month," and 2 responded "Once a year." Almost 80% of facilities conducted body weight measurement once a month. To accurately assess the nutritional status of residents, we believe that body weight measuring is a necessary and effective method[12]. (Table 9)

Table 9 Nutritional Management

	Time	Number of Responses (n = 71)	(%)
How often do you conduct body weight measurement?	Every day	1	1.4
	Once a week	5	7.0
	Once a month	60	84.5
	Once a year	2	2.8
	Other	4	5.6

4. Summery

Respondents indicated that "nutritional management is necessary" in 60 of 71 facilities (85.5%), though less than 10% of facilities had a dietitian. Furthermore, less than half of the facilities had procedures for obtaining advice concerning nutritional issues, such as a nutritional specialist or related system.

GHs serving residents with dementia employ no dietitian since GHs are designed as a "place for daily life". However, according to the previous study administrative managers concerned about mealtime care since nursing care level of residents became worse[7]. In addition, some managers reported that menu preparations with considering nutrient balance have added weight for care staff who have few specific nutritional knowledge[8].

Under these situations, dietitians who work in nursing care could potentially be employed in these facilities. In fact, some GHs serving residents with dementia have employed a dietitian for nursing care. Some graduates of our university who majored in food science and dietary science work as nursing care staff. They are not employed as nutritional specialists, although we expect that they can play a new type of role: nursing care staff with additional skills and specialized training. In other words, they would not only provide physical and mental nursing care, but also contribute to making decisions pertaining to the nutritional management including dietary planning. Many respondents indicated, by free description, that they would like to serve the food that residents prefer because GHs that serve residents with dementia are intended to be home-like places for daily life. These facilities strive to support the individuals with dementia to be able to live a comfortable ordinary daily life within a small-scale and home-like atmosphere. For these reasons, most of respondents indicated they intentionally planned the menu to provide a normal daily menu, without strict or nutritionally-managed food like that found with a typical hospital food service.

As the result, 80% of GHs serving residents with dementia allowed residents to prepare their meals in cooperation with care staff, others used delivery service.

Regarding event foods that provide seasonal enjoyment, GHs serving residents with dementia provided these foods less frequently than intensive care homes. This suggests that providing event food is excessively burdensome, often due to staff shortages.

Some respondents commented that they needed ways to regularly consult with dietitians about nutritional issues, and we found that some worried about nutritional management because they did not know how to deal with decreases in residents' ADLs, or when residents refused to eat. Some commented that specific food management is not necessary since they provided a daily life experience, similar to home. On the other hand, others indicated that they wanted to introduce dietary management measures to meet the demands of changing dementia symptoms, however it is hard to implement these changes given the current situation. We found that many care staff were eager to make meals more enjoyable, as the GHs that serve residents with dementia tend to be small-scaled corporative housing.

In the future, we believe that dietitians will be required to perform a visiting dietitian role. This could involve visiting the GH serving residents with dementia regularly to provide nutritional training and advice.

As the level of nursing care in GHs serving individuals with dementia seems to worsen, food and mental care will become indispensable. It is likely that nursing care staff and other kinds of specialists will be expected to be involved in the care of residents with dementia.

The appointments of dietitians at GHs serving residents with dementia will be similar to those of intensive nursing care homes. In the end, we expect there will be a need for a new system where care staffs are able to request dietary consultations anytime from specified organizations such as the "Nutritional Care Station" suggested by The Japan Dietitian Association13).

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