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ESTABLISHMENT OF SMALL-SCALE MULTIFUNCTIONAL IN-HOME NURSING CARE AND FACILITY LOCATIONS: THE CASE OF NAGASAKI CITY

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Abstract This study investigated the process by which small-scale multifunctional in-home nursing care has been established in Nagasaki City to elucidate problems of the public recruitment system of business operators related to establishment of community-based services. Results show that the system has been difficult to establish as a city project until recently because few business operators in Nagasaki City applied to open recruitment for the small-scale multifunctional in-home nursing care. Many operators that had entered it withdrew. Low motivation of business operators to participate in projects limits the capabilities of municipal planning of the community-based service supply system. To enhance municipal planning effectiveness, it is important for local governments to offer unique incentives to encourage more operators to enter the market for community-based services and to stabilize their businesses at their own discretion.

Key words: community-based service, small-scale multifunctional in-home nursing care, public recruitment system, municipal insured long-term care service plan, Nagasaki City

1. Introduction

Since April 2000, when Public Nursing Care Insurance started, quasi-market mechanisms have been incorporated into nursing care services for elderly people in Japan. A huge nursing-care service market has resulted, encouraging private business operators to enter it to boost the supplied amount of nursing care services. Nevertheless, most business operators disproportionately entered regions in which it was easy for them to develop their businesses, thereby exacerbating regional differences of services that were supplied (Miyazawa 2003; Hatakeyama 2004). This imbalance is one cause of the 2006 establishment of community-based services, which is left to the discretion of the respective local governments. Local governments set numerical targets for municipal insured long-term care service plan based on the estimated service needs of each small area, called a daily living area, for recruiting and selecting business operators.

Small-scale multifunctional in-home nursing care, a community-based service, offers care services for elderly people who require nursing care and who live in their own homes, by a combination of in-home services, outpatient day long-term service, and short term stays. Because today's Japanese population is rapidly aging in urban areas, constructing community care systems for elderly people who require nursing care is a pressing issue. The small-scale multifunctional in-home nursing care is expected to serve as a key emphasis of public policy.

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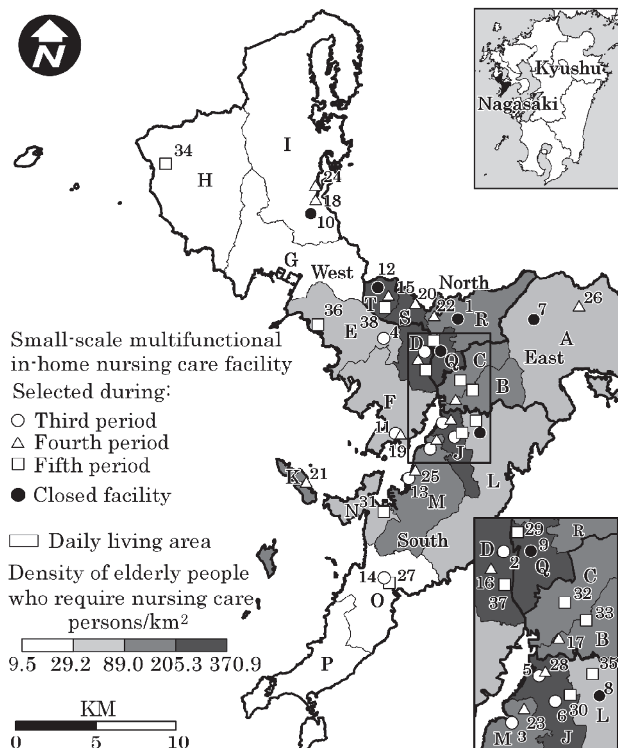

Fig. 1 Study area.

Nevertheless, the number of business facilities for small-scale multifunctional in-home nursing care is 3,885 throughout Japan as of 2012, which is insufficient. Although payments for promoting the business and subsidies for constructing the facilities were increased in 2009, the entry of business operators to the small-scale multifunctional in-home nursing care has been low as a whole. That is true for the following reasons: (1) the small-scale multifunctional in-home nursing care is new and unfamiliar, making it difficult to collect users; (2) users are mainly those who need mild nursing care, for whom nursing-care benefits are kept down; (3) staffing for the flexible provision of the three services is difficult and therefore less profitable, and probably insufficient to maintain the business (Nagata and Matsumoto 2010). Furthermore, new entrants' sluggishness suggests that the business facilities might be located disproportionally in a local government's area. In turn, it suggests that the public recruitment system of business operators to offer the service might not perform well.

In this study, particularly addressing Nagasaki City, with average achievement about promoting the small-scale multifunctional in-home nursing care, we clarified the process of promoting them and considered problems of the public recruitment of business operators.

2. Study Area

Nagasaki City (Fig. 1) is the prefectural capital of Nagasaki Prefecture. As of 2013, the population was

Table 1 Small-scale multifunctional in-home care facilities in Nagasaki City

No.	Type of organization	Selected / Start of business (Closing)	Uses / Capacity	Other services offered by the same operator. *Services offer on same premises* (number of service facility)
1	PC	2006 / 2006 (2008)	- / 25	*HVC*
2	MC+	2006 / 2007	21 / 24	*ODD, GH, ICS* HVC, HVR, OR(2), SAR, LHF, SMF(2), GH, Care house, PNH(3), GMHC, CCSC, Clinic(2)
37	SWC	2014 / 2015	- / -	
3	MC+ SWC	2006 / 2007	18 / 18	*HVC, OD(2), SAD, FLE, GH, PNH, ICS, CN, After-school care for children*, HVC, HVN, HVR(2), OD(2), ODD, OR(2), SAD, GH, ICS, GMHC(4), Hospital, Clinic(4)
4	SWC	2006 / 2007	16 / 24	HVC, HVB, Regular visiting/on demand home-visit long-term care, HVN, OD(11), ODD, SAD(2), FLE, Community-based FLE, GH(2), PNH(2), ICS(3), CCSC, CN
5	MC+	2006 / 2007	25 / 25	*HVR, OR, SAD, SAR, SMF, GH, ICS, Clinic*, HVC(2), HVN, OD(2), ODD, FLE, GH, GMHC, PNH, CCSC
28	SWC	2012 / 2013	- / -	
6	MC	2006 / 2007	18 / 25	HVC(2), HVN, OD, OR, SAR, SMF, GH, ICS(3), GMHC, CCSC, Hospital(2)
7	PC	2006 / 2007 (2008)	- / 25	*OD* HVC, OD(3), ODD, GH, PNH, CN
8		2006 / 2007 (2008)	- / 25	*OD*
9	MC	2006 / 2007 (2007)	- / 25	Clinic
10	SWC	2006 / 2008 (2008)	- / 25	FLE, CCSC
11	SWC	2007 / 2007	19 / 25	*GH, OD, ODD, SAD, Community-based FLE, ICS, CN*, OD
19		2009 / 2011	22 / 25	
12	PC	2007 / 2008 (2010)	- / 24	HVC, OD, GH, ICS
13	PC	2007 / 2008	21 / 25	*GH* HVC(3), OD(2), ODD, GH(17), PNH(2), ICS(3), Rental housing exclusively for the elderly
31		2013 / 2014	- / 25	
14	PC	2008 / 2009	21 / 21	ODD, GH
27		2011 / 2012	19 / 25	
32		2013 / 2014	- / -	
15	PC	2009 / 2010	20 / 24	*HVC, HVN, OD, ICS, Rental housing exclusively for the elderly*
16	PC	2009 / 2010	13 / 21	*GH*
17	MA	2009 / 2010	9 / 20	*HVC, HVN, OD, GMHC, ICS, Clinic, Health and welfare center*
18	SWC	2009 / 2011	10 / 25	*SAD, FLE*, HVC, OD, OR, SAD, LHF, GH, ICS
20	PC	2010 / 2011	3 / 22	*OD, GH, ICS, Clinic(3)*
21	NPO	2010 / 2011	23 / 25	
22	PC	2011 / 2012	24 / 24	*HVC, ICS*
23	PC	2011 / 2012	17 / 25	
24	PC	2011 / 2012	20 / 25	HVN, OD, GH, ICS
25	PC	2011 / 2013	19 / 24	*HVC, OD*, OD, PNH, ICS, CN
26	PC	2011 / 2012	25 / 25	*HVN, SAD, PNH*
29	PC	2012 / 2013	25 / 25	
30	PC	2012 / 2013	24 / 21	*PNH*, HVC, OD(3), ODD, Small-scale multifunctional in-home care, GH, ICS(2)
33	PC	2013 / 2014	- / 25	*OD, PNH*, HVC(2), OD(3)
34	SWC	2013 / 2014	- / -	*OD, SAD, ICS, FLE*
35	MC	2013 / 2014	- / -	OR, SAR(2), GH, ICS, LHF(2)
36	SWC	2014 / 2015	- / -	HVC, OD, MFE, Support facilities for persons with disabilities(5)
38	PC	2014 / 2015	- / -	

PC: profit-making corporation, MC: medical corporation, MA: medical association, SWC: social welfare corporation, NPO: non-profit organization, HVC: home-visit long-term care, HVN: home-visit nursing care, HVR: home-visit rehabilitation, OD: outpatient day long-term care, ODD: outpatient long-term care for dementia patients, OR: outpatient rehabilitation, SAD: short-term admission for daily life long-term care, SAR: short-term admission for recuperation, ICS: in-home care support services, FLE: facility covered by public aid providing long-term care to the elderly, LHF: long-term care health facility, SMF: sanatorium type medical care facilities for the elderly requiring care, GH: small group home, PNH: pay nursing home for the elderly, MFE: moderate-fee home for the elderly, GMHC: guidance for management of in-home medical long-term care, CCSC: community comprehensive support center, CN: child nursery, - : No data

Source: Published information system on Nagasaki nursing care services.

439,318. The rate of aged people among the population was 26.9%. The number of people who require nursing care and support on Nursing Care Insurance was 28,252. The downtown area is located in a narrow flat area along the river and coastal reclaimed land. Around it are residential areas called “sloped urban areas,” that have been developed on the hillsides because of urban sprawl. They have severe problems in terms of transportation and disaster prevention (Samejima 2004). In addition, the prevalence of elderly residents of “sloped urban areas” has been increasing since the 1980s. For that reason, elderly people who require nursing care and who have trouble living at home have been increasing. Nagasaki City has increased admission-typed nursing-care facilities such as special elderly nursing homes and group homes to accept elderly people who require nursing care. Now, however, Nagasaki City has postponed development of the project. Instead, it is intensifying the system of small-scale multifunctional in-home nursing care for intensification of community care for elderly people.

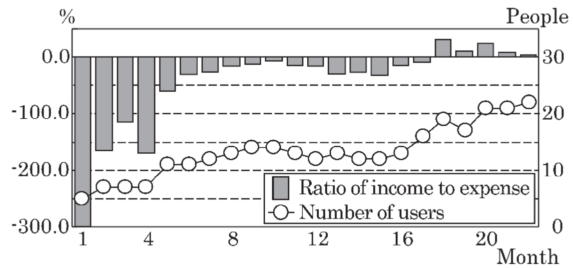

Fig. 2 Trends in registered users and ratio of income to expense at Facility 11.
Source: Material provided by the operator of Facility 11.

3. Service Supply of Small-scale Multifunctional In-home Nursing Care

Facilities for small-scale multifunctional in-home nursing care in Nagasaki City are to be 32 in April 2015, when the sixth period of municipal insured long-term care service plan will start (Table 1). In this section, taking facility number 11, which the author investigated in 2009, we will introduce the actual conditions of service provision of small-scale multifunctional in-home nursing care (Miyazawa 2010). The facility was set up in November 2007. It can accommodate up to 25 users; it now has 19 users. The operator is a local social welfare corporation that provides other services as diversified business operations. In addition, the second small-scale multifunctional in-home nursing care facility (Number 19) opened in 2011.

Figure 2 shows the ratio of income to expense and the number of users changed from the facility’s opening until revenue was earned. The ratio of income to expense at the beginning of the open was less than -100%. It did not become positive until the 18th month came, when the number of the users exceeded 17. The average nursing care level of the users had been between 2 and 2.5 from the opening to the fifth month, during which time the ratio of income to expenses was considerably low; thereafter it was 2.5–2.9. Moreover, since 2009, when payments started to increase, the income increased by 150,000 yen per month. However, it was offset by labor costs because they increased the number of staff members to respond to the increased number of users.

Next, Fig. 3 shows the service offered in the facility by time-geography description, particularly addressing transference users and staff members in terms of provided service. The horizontal axis shows the time distance from the facility and the left vertical axis, time. The symbols show the location of a user’s home and the transportation time when the staff members visit there. The different shapes show services of different kinds. The lines drawn from the facility to users’ homes show the shift of transportation and visit time and number of staff members visiting there. The numbers by the right vertical axis show the number of staff members at work each time. We examine the case on September 28 in 2009 (Monday) as an

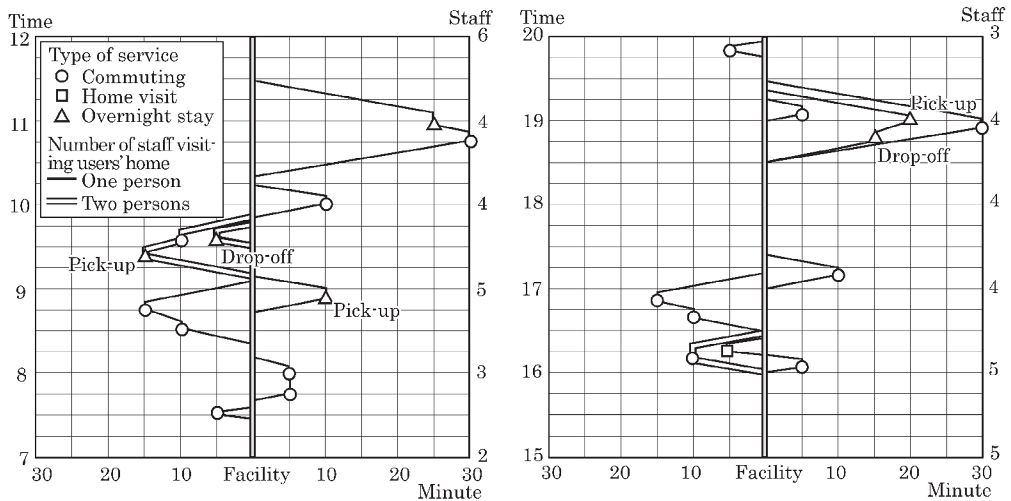

Fig. 3 Temporal / spatial features of service supply at Facility 11: September 28, 2009 (Mon.).
Source: Material provided by the operator of Facility 11.

example. Commuting users were 8, staying users were 7 (of whom 4 were also day service users), and one was a home visit service user.

The figure illustrates the following. Transportation starts at 7:20 and continues to 11:30 in the morning. Evening transportation is conducted during two time periods from 16:00 to 17:30 and at around 19:00. The users living in the distance are picked up after 9, when more staff members are available. Then they are taken home after the neighbor users, when more staff members are available again. The transportation for users requiring care by more than one staff member is conducted in late time zone in the morning and early time zone in the evening, which also relates to availability of staff members. On that day, however, they had to pick up two users requiring support by plural staff members from 9:00 to 10:00 in the morning. Furthermore, although they had to split up into two groups in evening transportation for users living in the distance, they also had to take neighbor users to their home in the same time zones. Therefore, their staff members' schedule was extremely tight. In such cases, transportation is helped by nursing staff members, a care manager, and other staff members for other services.

4. Establishment Process of Small-scale Multifunctional In-home Nursing Care

The establishment process of small-scale multifunctional in-home nursing care in Nagasaki City is presented in Table 2, which shows the number of recruited business operators, the number of applying operators, and the number of selected operators by implementation periods of municipal insured long-term care service plan and by the daily living area. During the third implementation period (fiscal 2006 through fiscal 2008), recruitment was once a year. The applicants during the period for 30 locations were 18. Although Nagasaki City recruited business operators for all daily living areas, they only gained applicants for 12 areas. It was the only area to which more business operators applied than the fixed number of recruitment. As a consequence of screening by Nagasaki City, 15 operators were selected. However, one closed down after selection, so it did not open. Characteristically during the period, six operators closed

Table 2 Establishment of small-scale multifunctional in-home nursing care facilities in Nagasaki City

Daily living area		Third period (2006–2008)			Fourth period (2009–2011)					Fifth period (2012–2014)				Early Sixth period (2015)	
		R	A	S	FN (2009)	R	A	S		FN (2012)	R	A	S	FN	Deficiency
Eastern area	A	1	2	(1)	0				1	1	0	-	-	1	
	B	2	0	-	0	9	2	2	1	1	1	1	1	2	
	C	1	0	-	0				0	0	2	1	1	1	-1
Western area	D	3	2	1	1				1	2	1	3	(1)+1	3	
	E	1	1	1	1				0	1	1	1	1	2	
	F	1	1	1	1	5	4	4	1	2	0	-	-	2	
	G	1	0	-	0				0	0	0	-	-	0	
	H	1	0	-	0				0	0	1	1	1	1	
	I	1	1	(1)	0				2	2	0	-	-	2	
Southern area	J	4	2	2	2				0	2	2	3	2	4	
	K	1	0	-	0				1	1	0	-	-	1	
	L	2	1	(1)	0				0	0	2	1	1	1	-1
	M	3	3	2	2	11	4	4	2	4	0	-	-	4	
	N	1	0	-	0				0	0	1	1	1	1	
	O	1	1	1	1				1	2	0	-	-	2	
	P	1	0	-	0				0	0	1	0	-	0	-1
Northern area	Q	1	1	(1)	0				0	0	1	1	1	1	
	R	2	2	1+(1)	(1)	7	4	3+(1)	1	1	0	-	-	1	
	S	1	0	-	0				1	1	0	-	-	1	
	T	1	1	(1)	0				1+(1)	1	1	1	1	2	
Total		30	18	9+(6)	8+(1)	32	14	13+(1)		21	14	14	11+(1)	32	-3

R: recruitment, A: applicant, S: selected, FN: facility number. Values in parentheses show the number of facilities that closed down or canceled their application after they had been selected.
Source: Material provided by Welfare General Affairs Division, Citizen's Welfare Department of Nagasaki City.

down after opening. Five of those closed down within the third period. Consequently, in 2009, when the fourth plan started, only nine facilities for small-scale multifunctional in-home nursing care were run at seven daily living areas.

Table 1 presents characteristics of business facilities that were selected during the third period plan, suggesting that most facilities that have been operated to date are run by large-scale business operators. Half of those are medical corporations or business operators affiliated by such medical corporations as social welfare corporation. Each runs hospitals or clinics with beds. However, most of the facilities which closed down after establishment were run by small-scale operators.

During the implementation period of the fourth plan (fiscal 2009 through fiscal 2011), Nagasaki City accepted applications twice to four times per year for four districts, into which daily living areas are grouped in directions of north, south, east, and west, not because they aimed at correcting the regional disproportion, but because they aimed to encourage newcomers. Fourteen operators applied to 32 locations during the period, but the application was sluggish again, as it was in the third period. In no area did applicants exceed the fixed number. As a consequence of the city's screening, all applicants were selected. However, one application was canceled by the operator itself. The small-scale multifunctional in-home nursing care facilities had increased to 21 in 2012, when the fifth municipal insured long-term care service plan started. Regarded in terms of the daily living area, however, the areas at which facilities were run remained 13.

During the implementation period of the fifth plan (fiscal 2012 through fiscal 2014), they recruited

business operators for 20 daily living areas twice to four times every year. Fourteen locations had applicants; the applicants were 14. In two areas, applicants exceeded the fixed number of recruitment. Consequently of administrative screening, 12 operators were selected. One of them was canceled out by the operator itself. According to the results obtained until the second recruitment in fiscal 2014, small-scale multifunctional in-home nursing care facilities will have been run in 18 daily living areas, which are to increase to 32, as described above. Only three areas are short of facilities.

The facilities selected in the fourth and fifth plans have the following characteristics. First, most of them are run by profit-making business. Compared with those in the third period, smaller-scale operators increased. However, none of them closed down after establishment, unlike the third period. In addition, business operators with the second facility selected have emerged from the fourth period. For each, the first facility was selected in the third period. Most had large-scale businesses.

A more detailed view of the site conditions of the small-scale multifunctional in-home nursing care facilities established in Nagasaki City, which includes those which have already closed down, suggests the following. Except for two facilities, they are located in the built-up areas. Among them, 13 facilities are located near public housing complexes inhabited by many elderly people. In other words, they are located disproportionately in areas with great needs for nursing care. Daily living areas in which facilities are insufficient or not introduced at all are in peripheral areas of the city, which are only thinly inhabited by the elderly people who require nursing care (Fig. 1). The above is suggested to be the case because the business operators placed value on proximity to nursing needs when they started their facilities. Furthermore, Table 1 shows that small-scale multifunctional in-home nursing care facilities often incorporate other services. Group homes are established together with them because staff members concurrently work for both the facilities. Other services are established together with them because they attract more users. Characteristically among them, 16 facilities are established together with or near elderly housing such as pay nursing home and apartment for elderly people. That proximity enables operators ensures a sufficient number of users and reduces the distance for transportation and visiting care. Moreover, good location makes staff members more available.

5. Problems of Community-based Service Establishment by Public Recruitment

As described above, the main reason for the sluggish entry of newcomers to small-scale multifunctional in-home nursing care is low profit and the difficulty in securing users. An investigational hearing conducted in several facilities suggest that the number of users as a break-even point is 15–20 and that it takes more than one year from opening to satisfy the number (Miyazawa 2010). Consequently, the conditions to stabilize the business are the following two: (1) to reduce the time for users to increase to 70% of the accommodations to the greatest extent possible, and (2) to reduce and compensate for deficits, for example by managing staffing. Considering such characteristics of small-scale multifunctional in-home nursing care, we will discuss problems of the establishment process and public recruitment in Nagasaki City, as described in the preceding section.

In Nagasaki City, the entry of new business operators was sluggish during the third and fourth periods of municipal insured long-term care service plan. Furthermore, not a few operators selected, especially during the third period, were closed down. During that period, small-scale multifunctional in-home nursing care was unfamiliar. No support system was established for its promotion. Therefore, every operator managed to gain users and to maintain their operations on their own. Among them, larger-scale and diverse operators

made their way through the initial duration with high costs and low returns. It is suggested that medical corporations above all should be beneficial for obtaining users because patients can be introduced to home care at their own small-scale multifunctional in-home nursing care facilities.

Since the implementation duration of the fourth plan, payments and subsidies for constructing facilities increased. Therefore, the burden of newcomer operators has been lessened in the initial duration of opening business. In addition, the publicity of the small-scale multifunctional in-home nursing care has been gained gradually. Therefore, even though the operator's application remained low, unlike during the third period, more small-scale and especially profit-making operators have started their businesses. No operators have been closing down their facilities after establishment. Additionally, some of the operators selected during the third period have applied for opening the second facility. During the implementation period of the fourth plan, conditions to help operators enter the business were developed. However, the facility locations suggested that the business operators assigned importance on the accessibility to care needs, meaning that the uneven distribution in the daily living areas had not been rectified yet.

It was through the establishment during the implementation period of the fifth plan that the uneven distribution was virtually rectified, at least among the daily living areas. Partly because of sluggish application, the results during the third and fourth implementation periods apparently depended on the operators' behavior. During the fifth implementation period, based on the performance up to that point, Nagasaki City chose to invite business operators in 20 daily living areas again. They recruited twice to four times each year only for the daily living areas requiring the establishment of new facilities. Thanks to such close recruitments, Nagasaki City managed to achieve a municipal insured long-term care service plan so that uneven distribution could be rectified.

For a local government to realize community-based service on the public recruitment system for establishment, it might have to get sufficient applicants for the fixed number of recruitment. Otherwise, the danger exists that the service would be distributed disproportionately in daily living areas and even ill-qualified operators would be selected. When the operators have low motivation to enter the market for community-based services, as shown in Nagasaki City, a long time will have to pass before a local government establishes a care system according to the plan and then resolves the problems.

6. Conclusion

Community-based service including small-scale multifunctional in-home nursing care is presumably realized by a local government according to the insured long-term care service plan. Therefore, many local governments adopt the public recruitment system for establishment. Consequently, this paper presents an examination of problems of public recruitment for community-based service to be realized by examining the process of establishing small-scale multifunctional in-home nursing care in Nagasaki City. The motivation of operators to enter the market for small-scale multifunctional in-home nursing care was low. Some operators closed down their facilities after opening in Nagasaki City. Therefore, the municipal project proved to be difficult to achieve during the third and fourth implementation period. During the fifth implementation period, the project has been realized as planned.

The supply of services based on market mechanisms is popular in elderly nursing care systems. Therefore, if the motivation of operators to participate in the project is low, then the planned supply system of community-based service has only limited effects (Hatakeyama 2012). To realize the project, it is presumably necessary to encourage more operators to participate in the project and thereby stabilize the

business. In community-based service, a local government can set their own standard for the selection of operators and payments within a certain limit at their own discretion. Such incentives are expected to be introduced actively by local governments. For the proper prevalence of community-based service, it is important not only to present the prospective needs for services in municipal insured long-term care service plans, but also to support autonomous decision-making for the local government to arrange their supply systems according to the actual circumstances prevailing in each region.

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