

Doctors' Opinion Papers in Long-term Care Need Certification in Japan: Comparison between Clinic and Advanced Treatment Hospital Settings

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Abstract

The Doctor's Opinion Paper (DOP) in long-term care insurance addresses the patient's chronic conditions of daily life. It is expected to be written by a doctor who knows the patient well. However, DOPs are sometimes written by doctors at advanced treatment hospitals (ATHs) who might not know the patient well. Japanese government is promoting functional differentiation of medical care. We discuss appropriateness that specialists of ATH who have to provide a higher medical care take on a role to write DOP which addresses the patient's chronic conditions of daily life. The purpose of this study is to compare DOPs completed by clinic doctors with those completed by ATH doctors, in order to examine who should write a DOP. Data: The DOPs which were used at the Care Need Certification Committee meeting held in March 2012 in Tokyo. Subjects: 403 DOPs for patients aged 65 or older. Results indicated that DOPs written by doctors in ATHs included less information than DOPs written by doctors in clinics. We need to discuss who would be appropriate doctors to write DOPs and how to educate older adults to choose the right health care facility and their doctors for their health condition.

Keywords: Doctor's opinion paper, certification of need for long-term care, long-term care insurance, advanced treatment hospital, clinic, family doctor, Japan

1. Introduction

Japan started a universal health insurance system in 1961. Under the universal health insurance system, everyone is ensured access to medical care and the same coverage (Ikegami & Cambell, 1999). In the United Kingdom and the Nordic countries, gate-keeping is a major feature of the health care system: a family doctor is assigned for everyone and it can be difficult to access advanced medical care directly (Tsukahara et al., 2006). However, there is no such system with general physicians as "gatekeepers" in the Japanese healthcare system (Toyabe & Akazawa, 2006). Patients seeking primary care can freely choose health care providers in a variety of settings, including clinics, general hospitals and even specialized hospitals or university hospitals (Toyabe, 2008).

Japanese tend to prefer large hospitals, so called "large-hospital-oriented" (Sebata et al., 2005; Anzai, 1987), because of their prestige and high quality of care (Toyabe & Akazawa, 2006). The main purpose of large hospitals, in particular advanced treatment hospitals (ATHs) such as university hospitals, is to provide advanced treatment. However, people sometimes go to ATHs for primary care. Therefore, ATHs provide a wide range of care, not only tertiary care but also primary or secondary care and chronic care. This is very inefficient in terms of function differentiation which the Japanese government is promoting in order to improve the efficiency of hospital management.

In addition to the universal health insurance system, Japan instituted a universal, comprehensive public long-term care insurance system in 2000. To use long-term care services, individuals must be certified as eligible users. Levels of certified support are 1 and 2, and levels of certified care are 1,2,3,4 and 5, with 5 being the most severe. Individuals who qualify for certified support can use preventive benefits services. Those who qualify for certified care can use care benefits services. Figure1 shows the flow of care need certification and levels of certified care (support).

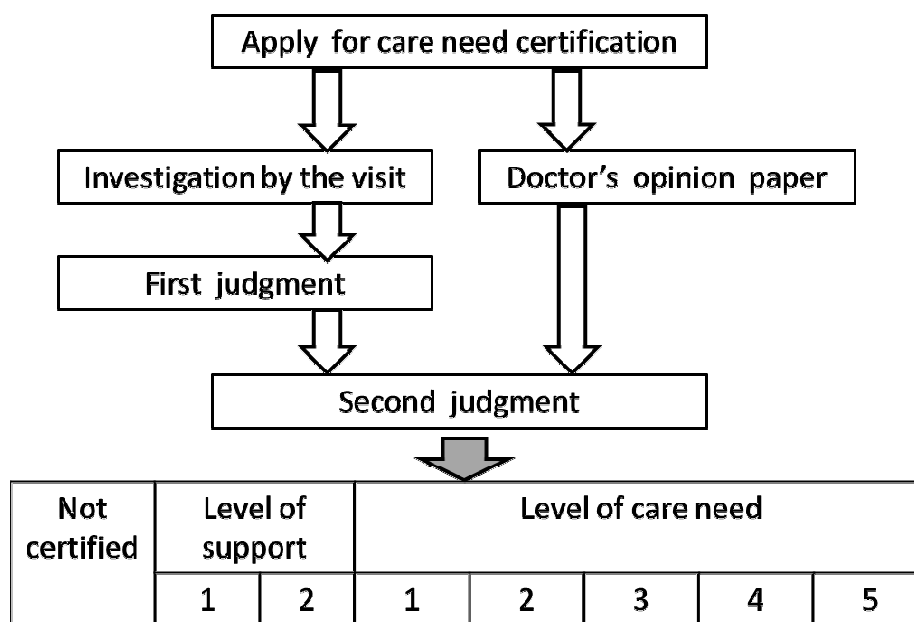


Figure 1. Flow of care (support) need certification and levels of certified care (support)

People aged 65 or older who want to use long-term care services need to ask a doctor to write a doctor's opinion paper (DOP) for care need certification that is defined by the Long-Term Care Insurance Act (Long-Term Care Insurance Act Article 27-3). Certification of long-term care need is carried out in two stages, the first judgment and second judgment. The first judgment utilizes a computer program to determine the level of certified care (support) with the number of items of certification apply. The DOP is used as the second judgment, taking into account the medical point of view to the first judgment, and the first judgment is modified if necessary. The DOP is intended to be used to understand not only the older adult's illness and medical needs, but also the chronic conditions of daily life including ADL, IADL, and social needs. It is expected to be written by a doctor who knows the patient well. Although doctors at clinics or small hospitals are expected to complete the DOPs, they are often written by doctors at ATHs which provide high levels of medical care. Approximately 14% of DOPs were written by ATH doctors while 54% of DOPs were written by clinic doctors in one study in urban setting (Moriyama et al., in press). This approach is inefficient because writing DOPs is not the primary role of ATH doctors. Previous studies suggest older adults tend to go to a tertiary hospital, despite their dissatisfaction with long waiting times (Sugisawa et al., 2000; Tsukahara, 2004; Tsukahara et al., 2006).

Previous studies found that some DOPs were completed by doctors who were not familiar with patients' conditions and the DOPs did not include sufficient details (Ooe, 2005; Akita, 2002; Matsuyama & Miyaoka, 2000). Another study indicated that doctors who do not know the patients well often complete the DOPs because there are no rules limiting which specialists can write DOPs (Akita, 2002). Thus, a possible solution is to limit the eligibility of doctors who can complete a DOP to those who have been treating the patient for chronic medical conditions. Although most of the aforementioned studies did not have access to specific data regarding patients' conditions contained in the DOPs, the studies have been instrumental in raising awareness of issues that need further examination.

The purpose of this study is to compare DOPs completed by clinic doctors with those completed by ATH doctors, in order to examine who should write a DOP.

2. Methodology

2.1 Setting and study population

The present study was approved by the ethical committee of the University of Tsukuba (#698, October 19, 2012).

DOPs at the Care Need Certification Committee meeting held in March 2012 in Bunkyo-ward, Tokyo.

Out of 598 DOPs from aged 65 or older who were not inpatient or institutionalized, we used 403 DOPs from clinics or ATHs for analysis.

Bunkyo-ward is one of the 23 wards in Tokyo. The population of Bunkyo-ward is about 200,000, with 40,000 aged 65 or older. The certification rate is about 18%. Bunkyo-ward has 4 ATH hospitals and 7 hospitals, and 229 clinics.

2.2 Classification of medical institutions

The study team did not have access to any identifiable information of clinics or hospitals. DOPs were released to the study team after the staff of Bunkyo-ward coded identifiable information.

2.3 Analysis variables

We included the following variables based on information in the DOPs: gender (male or female), age (continuous), level of the certified care (support) need by first judgment (the support level 1 or 2, the care level 1,2,3,4 or 5) as characteristics of the older adults. We used seeing more than one physician (yes or no), number of diagnoses (continuous), stability of condition of older adult (stable, unstable, unclear), process of injuries and diseases (written in a DOP or not written in a DOP), information regarding prescriptions (written in a DOP or not written in a DOP), height and weight (written in a DOP or not written in a DOP), number of physical conditions which were checked out of 8 items (e.g., paralysis, muscle weakness, pressure ulcer), number of current conditions or future prediction out of 14 items (e.g., incontinence, falls, wandering, weakness of swallowing function), number of necessary medical management services which were checked out of 11 items (e.g., visiting care, visiting nursing, visiting rehabilitation, facility care), special instructions (written in a DOP or not written in a DOP), desire to get older adult's information of care (support) certification (yes, no, unknown), writing style (handwriting or computer entry), and the difference of first and second judgment (tend to light, the same, tend to heavy).

2.4 Statistical Analysis

First, the association between a type of institution (clinic doctor or ATH doctor) and other variables were assessed separately using bivariate analyses. Chi-square test or Mann-Whitney test was used to determine if the type of institution was associated with the dichotomous variables. The Student's t-test were used for comparing the continuous variable.

Second, multiple logistic regression models were used to calculate odds ratio (OR) with 95% confidence interval (CI) to examine the associations of contents of DOP and whether written by clinic doctor or ATH doctor to each binary dependent variable. We used 4 dependent variables including special instructions which were free description (written in a DOP or not written in a DOP), information regarding prescriptions (written in a DOP or not written in a DOP), height and weight (written in a DOP or not written in a DOP), difference between first judgment and second (heavy, light or same). Multiple linear regression models were used to calculate partial regression coefficient with 95% CI to examine the association of clinic doctors or ATH doctors to each continuous variable. We used 4 variables as dependent variables, the number of diagnoses, the number of physical conditions which were checked out of 8 items, the number of current conditions or future prediction out of 14 items, and the number of necessary medical management services which were checked out of 11 items. We used whether clinic doctor or ATH doctor wrote DOPs as an independent variable. We used 5 variables as covariate to adjust, gender, age, the level of the certified care (support) need by first judgment, application brand (first time or more), writing style (hand writing or computer entry). P value of less than 0.05 was considered statistically significant. The statistical package SPSS Version 21 was used to perform the analysis.

3. Results

3.1 Basic characteristics of older adults and DOPs and bivariate analysis

Table1 summarizes the basic characteristics of older adults and of DOPs, and the comparison between clinic and ATH using the bivariate analysis. First, we show the basic characteristics of older adults, of the 403 subjects, 321 subjects (79.7%) chose clinic, 82 subjects (20.3%) chose ATH. Mean age of clinic subjects (84.4 ± 6.48) was significantly higher than ATH (80.6 ± 6.41) ($p < 0.001$). Present study did not show significant difference in gender (Male: clinic was 27.4%, ATH was 36.6%). Subjects who were certified care need first time in ATH (71, 22.1%) were significantly higher compared with clinic (29, 35.4%) ($p = 0.013$). The levels of the certified care (support) need by first judgment were not significantly different.

Next, we show the comparison between clinics and ATHs in characteristics of DOPs (Table1). The characteristics of DOPs in ATHs compared to clinics which were statistically significant and lower were the number of diagnoses, information regarding prescriptions, height and weight, number of physical conditions, number of current conditions or future prediction, special instructions, desire to get older patient's information of care (support) certification as a final approval, writing style; however, the number of necessary medical management services was higher. The difference of first judgment and second was statistically significant.

Table 1. Basic characteristics of adults and DOPs, bivariate analysis by clinic doctor or ATH doctor

variable		total (n=403)	clinic (n=321)	ATH (n=82)	p-value
characteristics of elderly					
gender	male	118 29.3%	88 27.4%	30 36.6%	0.103
	female	285 70.7%	233 72.6%	52 63.4%	
age [†]	mean	83.63 ±6.64	84.4 ±6.48	80.6 ±6.41	<0.001 *
application brand	first time	100 24.8%	71 22.1%	29 35.4%	0.013 *
	second time or more	303 75.2%	250 77.9%	53 64.6%	
levels of the certified care (support) need by first judgment [‡]	not certified	18 4.5%	15 4.7%	3 3.7%	0.481
	level of support need 1	61 15.1%	49 15.3%	12 14.6%	
	level of support need 2	59 14.6%	46 14.3%	13 15.9%	
	level of care need 1	99 24.6%	81 25.2%	18 22.0%	
	level of care need 2	55 13.6%	45 14.0%	10 12.2%	
	level of care need 3	36 8.9%	28 8.7%	8 9.8%	
	level of care need 4	38 9.4%	31 9.7%	7 8.5%	
	level of care need 5	37 9.2%	26 8.1%	11 13.4%	
characteristics of DOPs					
more than one physician	yes	200 50.9%	165 52.9%	35 43.2%	0.121
the number of diagnoses [‡]	median	3 (1-13)	3 (1-13)	2 (1-7)	<0.001 *
stability of condition	stable	234 58.6%	184 58.0%	50 61.0%	0.854
	unstable	137 34.3%	111 35.0%	26 31.7%	
	unclear	28 7.0%	22 6.9%	6 7.3%	
variable		total (n=403)	clinic (n=321)	ATH (n=82)	p-value
process of injuries and diseases	written	396 98.3%	315 98.1%	81 98.8%	0.688
information regarding prescriptions	written	233 57.8%	204 63.6%	29 35.4%	<0.001 *
height and weight	written	302 74.9%	270 84.1%	32 39.0%	<0.001 *
the number of physical conditions (8 items) [†]	mean	3.70 ±0.88	4.03 ±1.61	2.40 ±1.75	<0.001 *
the number of current conditions or future prediction (14 items) [†]	mean	4.29 ±2.60	4.49 ±2.65	3.50 ±2.26	0.001 *
the number of necessary medical management services (11 items) [‡]	median	2 (0-10)	2 (0-9)	2 (0-10)	0.020 *
special instructions	written	286 71.0%	251 78.2%	35 42.7%	<0.001 *
desire to get older adult's information of care (support) certification	yes	155 54.0%	142 58.7%	13 28.9%	<0.001 *
	no	49 17.1%	20 8.3%	29 64.4%	
	unknown	83 28.9%	80 33.1%	3 6.7%	
writing style	handwriting	259 64.4%	182 56.7%	77 95.1%	<0.001 *
	computer entry	143 35.6%	139 43.3%	4 4.9%	
the difference of first judgment and second	tend to light	14 3.5%	7 2.2%	7 8.5%	0.020 *
	the same	285 70.7%	230 71.7%	55 67.1%	
	tend to heavy	104 25.8%	84 26.2%	20 24.4%	

Note: *, p-value<0.05, no sign; χ^2 test, †; Student's t test, ‡; Mann-Whitney test
 DOP; doctor's opinion paper, ATH; advanced treatment hospital

3.2 The first injuries and diseases that are the direct cause of functional decline

Table 2 shows that first injuries and diseases are a direct cause of functional decline. Alzheimer's disease was reported most often (55, 13.6%) as the first disease that is the direct cause of functional decline. In clinics, Alzheimer's disease (45, 14.0%) and other dementias (38, 11.8%) were frequent, however in ATHs, cancer and fractures were reported as often as Alzheimer's disease (8, 9.8%).

Table2. The first injuries and diseases which are the direct causes of functional decline

	total (n=403)		clinic (n=321)		ATH (n=82)	
Alzheimer	55	13.6%	45	14.0%	8	9.8%
Other dementia	43	10.7%	38	11.8%	5	6.1%
Brain infarctoin	29	7.2%	27	8.4%	2	2.4%
Cancer	29	7.2%	21	6.5%	8	9.8%
Hypertension	28	6.9%	25	7.8%	3	3.7%
Anthropathia	27	6.7%	21	6.5%	6	7.3%
spine disorder	23	5.7%	20	6.2%	3	3.7%
Fracture	18	4.5%	10	3.1%	8	9.8%

Note: a shaded area is most frequent injury or disease

3.3 Multiple logistic regression analysis and multiple linear regression analysis

Table 3 shows that the association between clinic doctors or ATH doctors and the independent variables. The adjusted OR from multiple logistic regression models or partial regression coefficient from multiple linear

regression models was shown in Table 3. Special instruction by ATH was significantly less than clinic: OR=0.320 (95% CI, 0.183-0.558), as was information regarding prescriptions: OR=0.363 (95% CI, 0.208-0.634), height and weight: OR=0.115 (95% CI, 0.063-0.211), number of diagnoses: partial regression coefficient=-0.877 (95% CI,-1.325 - -0.430), number of physical conditions: partial regression coefficient=-1.639 (95% CI,-2.070 - -1.208), number of current conditions or future prediction: partial regression coefficient=-0.811 (95% CI,-1.451 - -0.172). On the other hand, the number of necessary medical management services in ATHs was significantly more than in clinics: partial regression coefficient=0.653 (95% CI, 0.215-1.092).

Table3. The association between the kind of institute and independent variables

Multiple logistic regression		Odds Ratio	95% CI		
special instructions : written (ref.not written) (n=402)	types of doctor:ATH (ref.Clinic)	0.320	0.183	0.558 *	
	older adult's gender: female (ref.male)	0.733	0.426	1.259	
	older adult's age	1.001	0.964	1.040	
	levels of the certified care (support) need by first judgment	0.924	0.817	1.045	
	application brand:second time or more(ref.first time)	1.102	0.636	1.911	
	writing style:handwriting (ref.computer entry)	0.241	0.129	0.448 *	
	information regarding prescriptions : written (ref.not written) (n=402)	types of doctor:ATH (ref.Clinic)	0.363	0.208	0.634 *
		older adult's gender: female (ref.male)	0.886	0.553	1.419
older adult's age		0.979	0.946	1.012	
levels of the certified care (support) need by first judgment		0.984	0.882	1.098	
application brand:second time or more(ref.first time)		0.990	0.598	1.639	
writing style:handwriting (ref.computer entry)		0.454	0.284	0.728 *	
height and weight : written (ref.not written) (n=402)		types of doctor:ATH (ref.Clinic)	0.115	0.063	0.211 *
		older adult's gender: female (ref.male)	1.249	0.720	2.166
	older adult's age	1.003	0.964	1.043	
	levels of the certified care (support) need by first judgment	0.947	0.832	1.077	
	application brand:second time or more(ref.first time)	0.923	0.504	1.690	
	writing style:handwriting (ref.computer entry)	1.096	0.610	1.968	
	difference of first judgment and second : heavy (ref.light and same) (n=402)	types of doctor:ATH (ref.Clinic)	1.146	0.590	2.228
		older adult's gender: female (ref.male)	0.464	0.269	0.800 *
older adult's age		1.002	0.962	1.043	
levels of the certified care (support) need by first judgment		0.585	0.500	0.684 *	
application brand:second time or more(ref.first time)		3.089	1.640	5.817 *	
writing style:handwriting (ref.computer entry)		0.771	0.447	1.329	
Multiple linear regression		partial regression coefficient	95% CI		
the number of diagnoses (n=402)		types of doctor:ATH (ref.Clinic)	-0.877	-1.325	-0.430 *
	older adult's gender: female (ref.male)	0.154	-0.219	0.527	
	older adult's age	0.022	-0.005	0.048	
	levels of the certified care (support) need by first judgment	0.028	-0.059	0.115	
	application brand:second time or more(ref.first time)	0.368	-0.036	0.772	
	writing style:handwriting (ref.computer entry)	-0.618	-0.987	-0.249 *	
	the number of physical condition (8 items) (n=402)	types of doctor:ATH (ref.Clinic)	-1.639	-2.070	-1.208 *
		older adult's gender: female (ref.male)	0.161	-0.198	0.521
older adult's age		0.012	-0.014	0.037	
levels of the certified care (support) need by first judgment		0.112	0.028	0.196 *	
application brand:second time or more(ref.first time)		0.190	-0.199	0.580	
writing style:handwriting (ref.computer entry)		0.125	-0.230	0.481	
the number of current condition or future prediction (14 items) (n=402)		types of doctor:ATH (ref.Clinic)	-0.811	-1.451	-0.172 *
		older adult's gender: female (ref.male)	-0.137	-0.670	0.396
	older adult's age	0.049	0.011	0.086 *	
	levels of the certified care (support) need by first judgment	0.372	0.248	0.497 *	
	application brand:second time or more(ref.first time)	0.506	-0.072	1.083	
	writing style:handwriting (ref.computer entry)	-0.214	-0.742	0.313	
	the number of necessary medical management services (11 items) (n=402)	types of doctor:ATH (ref.Clinic)	0.653	0.215	1.092 *
		older adult's gender: female (ref.male)	-0.021	-0.386	0.345
older adult's age		0.014	-0.012	0.039	
levels of the certified care (support) need by first judgment		0.271	0.186	0.357 *	
application brand:second time or more(ref.first time)		0.114	-0.282	0.510	
writing style:handwriting (ref.computer entry)		-0.513	-0.875	-0.151 *	

Note: *; statistically significant

4. Discussion

The present study showed that DOPs written by doctors in ATHs included less information than those in clinics, regarding body weight and height, number of diagnoses or checked items, and free comments even when adjusted with the basic characteristics of the older adults. However, the number of necessary medical management services in DOPs written by ATH doctors was higher. That is likely because ATH patients had more diseases even if the diseases were unrelated to the diagnosis which is the direct cause of functional decline. The differences in DOPs written by doctors in ATHs compared to those written by doctors in clinics could be due to a variety of reasons. For example, doctors in ATHs may be busier or less aware of conditions of older adults than doctors in clinics, or doctors in ATHs might have less training about geriatric conditions.

The guide book for how to write doctors opinion paper (Silver Age Institute, 2011), indicates that detailed information about the care needs of older adults is required for DOPs in the long-term care insurance system. Our study, which found that DOPs written by doctors in clinics included significantly more information than DOPs written by doctors in ATHs, reinforces the guide book's recommendations and suggests doctors in clinics are better equipped to write DOPs.

In particular, doctors who practice home care actively work on home care, present medical management of older adults and options for treatment methods, instruct and guide care for caregivers, and address the anxiety and worry of caregivers (Aoyagi, 1997). As home care needs increase, these roles will become increasingly important. Also, because roles of ATH doctors include "Having the ability to provide a high degree of medical care, and having the ability to perform the evaluation and development of medical technology advanced" by Medical Care Acts, it is important to consider if it is appropriate to require them to take on an additional role as home doctors of long-term care. The guide book for how to write doctors opinion paper (Silver Age Institute, 2011) noted it is possible that doctors in clinics located near where older adults live actually see the daily life of older adults in detail. However, it is less likely for doctors in hospitals who provide advanced treatment. Therefore, doctors in ATHs which provide a high degree of medical care are less optimal to write DOPs compared to doctors of community-based clinics who are familiar with the daily life and condition of older adults.

Currently, all doctors in Japan can write DOPs regardless of specialties or type of institution and older adults and their families choose who writes the DOP. As noted earlier, older adults typically choose ATH doctors because Japanese tend to prefer large hospitals. However, the results of the present study suggest that DOPs from ATH doctors do not include much information. Therefore, discussions and guidelines are needed to address which doctors should write DOPs and what training is appropriate to prepare them to write comprehensive DOPs. It is also necessary to encourage appropriate referrals to local doctors from large hospitals and to educate older adults to choose the right health care facility for their health condition.

There are some limitations of this study. First, there are more ATHs in Bunkyo-ward, where we conducted our research than in other municipalities. There are 4 ATHs in Bunkyo and only 4 municipalities have more than one ATH in Japan. The primary reason that some patients chose an ATH was because of geographic proximity to an ATH. Because the data were from only one municipality in Tokyo, in particular one with 4 ATHs, it may be difficult to generalize the results to all over Japan.

Next, we don't have information to indicate why some items were checked and others were not in the DOPs. For example, it is not clear whether doctors who wrote the DOPs didn't grasp the condition, or if they recognized it but failed to describe it, or if it represents the characteristics of the older adult.

The present study showed that there were difference of amount of information in DOPs between by doctors in ATH and clinic. Future research will be needed to see whether the difference affect to the total quality of information and cause difference in the condition of older adults.

5. Conclusion

The aging population in Japan deserves excellent medical care and excellent long-term care. DOPs are critically important tools to strengthen collaborations between medical care and long-term care and should accurately and comprehensively reflect the needs of the older adults who require long-term care. The present study found that DOPs written by doctors in ATHs included less information compared to those written by clinic doctors. Thus, it is important to explore what roles doctors of ATHs can take in long-term care insurance. As we move forward, we need to reconsider the appropriate doctor to write DOPs, enhance education for residents, encourage appropriate referrals to local doctors from large hospitals, and educate older adults and their families to help them select appropriate medical institutions.

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