



# Current Engagement in Advance Care Planning in Japan and Its Associated Factors

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## Abstract

Using the Ministry of Health, Labour and Welfare national data on perspectives toward medical care at the end of life, this study examined the current status of engagement in advance care planning (ACP) activities among physicians and nurses in Japan and associated factors. Only 28.7% of physicians and 27.6% of nurses answered that they were engaging their patients/clients in ACP. Multinomial regression analysis revealed that more frequent involvement in caring for dying patients was associated with ACP engagement for both physicians and nurses. Increased years of clinical practice experience and working in a hospital were associated with decreased likelihood of nurses' ACP engagement. Completion of training designed to promote patient self-determination at the end of life was associated with both physicians' and nurses' ACP engagement. It is recommended that health care professionals be encouraged to complete such training to promote patients' autonomy through ACP.

## Keywords

advance care planning, health care professionals, nationwide survey, attitude, Japan

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When approaching the end of life, people are often physically or cognitively unable to make medical decisions or speak for themselves (Silveira et al., 2010). One study reported that approximately 43% of dying older persons needed to make some treatment decisions (Silveira et al., 2010). However, 70% of them no longer had that capacity (Silveira et al., 2010). Advance care planning (ACP) is the process of planning for future medical care in case one becomes incapable of making medical decisions due to illnesses or injuries (Emanuel et al., 2000). This process involves various types of communication, such as having discussions with family members or health care providers and documenting advance directives (ADs; Holley, 2012). By making one's wishes for medical care known, others (especially surrogate decision makers) can make decisions that abide by one's preferences and values. Thus, ACP is also considered to be a means to respect a person's autonomy (L. Snyder, 2012).

In Western countries, the patients' right to self-determination has been strongly valued and laws that are associated with this right are often in place (Ohno, 2013). In the United States, for example, the Patient Self-Determination Act (PSDA) was established in 1990 to promote ACP. The PSDA requires Medicare and/or

Medicaid certified health care institutions to ask their clients whether they have an AD (one form of ACP) and inform them of their right to obtain it, with written information, at the time of enrollment (Baker, 2002). Research has found an increased prevalence of ADs after the enactment of PSDA (Hunsaker & Mann, 2013). Research has also shown that engaging in ACP communications not only promotes a person's autonomy but also lessens family members' emotional burden when making difficult decisions for their dying loved one (Braun et al., 2008) and reduces unwanted or futile medical treatment (Mack et al., 2010).

Although awareness of the importance of thinking ahead about treatment preferences at the end of life is gradually increasing, ACP is less practiced in Japan compared with Western countries, such as the United States, Sweden, and the United Kingdom (Ohno, 2013).

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Japan has no legislation specifically encouraging ACPs (Miyata et al., 2006). According to a previous study among members of the general public in Japan, between ages 40 and 65, the proportion of those who agreed that it is desirable to express one's end-of-life treatment preferences orally was 73.7% and in writing was 60% (Miyata et al., 2006). However, the proportion of respondents who actually have done so was 20.3% orally and 2.6% in writing. Another survey study conducted by Nakazawa et al. (2014) has reported that 62.6% of palliative care physicians from palliative care units valued patient completion of an ACP, but only 30.3% actually recommended patients do so. The study also pointed out that Japanese palliative care physicians tend to prefer family-centered over patient-centered decision making in end-of-life care and identified lower confidence in their own abilities to carry out patients' wishes specified in an ACP in a catastrophic situation.

The Ministry of Health, Labour and Welfare (MHLW, 2007) in Japan developed "Guidelines for the Decision-Making Process of the End-of-Life Medical Care" in 2007 to promote patients' self-determination at the end of life. Academic medical associations, including the Japanese Society of Intensive Care Medicine, the Japanese Association for Acute Medicine, and the Japanese Circulation Society, also developed their guidelines for end-of-life medical treatment. Along with these guidelines, end-of-life care training targeting medical professionals has been developed as well. Such training's effectiveness in increasing health care professionals' knowledge and ACP engagement has been repeatedly found in other countries (Berns et al., 2017; Detering et al., 2014). A recent study in Japan also identified the positive relation between end-of-life care education and ACP practice among nurses (Yokoya et al., 2018).

Although ACP is less practiced in Japan compared with Western nations, Japanese people have become increasingly interested in expressing their end-of-life treatment preferences over the years, and health care professionals also have become more aware of the importance of ACP (Miyata et al., 2006; Nakazawa et al., 2014; Yokoya et al., 2018). Although physicians and nurses have different duty and responsibilities, both professionals play important roles in patients' end-of-life decision making. Therefore, it is of a great public interest to learn about their current ACP engagement status and their attitudes toward ACP. About every 5 years, the MHLW (2018) conducts a survey on perspectives toward medical care at the end of life among general public as well as health care professionals. The most recent survey included the concept of ACP and its definition for the first time in Japan. Therefore, using the MHLW survey data, this study assessed the current status of ACP engagement among health care professionals in Japan and factors that influence their ACP practice. The specific purposes of this study were to (a) examine the current ACP engagement among physicians and

nurses and to analyze whether there are differences between these two groups and (b) investigate factors that are promoting or hindering ACP engagement.

## Method

### Data

This study was reviewed and approved by the University of Tsukuba Institutional Review Board and analyzed the national survey data on perspectives toward medical care at the end of life collected by the MHLW (2018) in December 2017 and January 2018. The current study used a sample of physicians and nurses from randomly selected facilities across Japan, including 1,500 hospitals, 1,500 clinics, 500 home-visit nursing offices, 500 nursing homes, and 500 health care facilities for older adults with long-term care needs. Potential participants of doctors were recruited only from hospitals and clinics, and nurses were recruited from each type of facility. A facility manager in a hospital was asked to distribute a survey questionnaire to two doctors and two nurses, and a facility manager in a clinic was asked to do so to one doctor and one nurse. In other facilities (home-visit nursing offices, nursing homes, and health care facilities for older adults with long-term care needs), each facility manager distributed a questionnaire to one nurse. Therefore, 4,500 physicians and 6,000 nurses received a questionnaire, and their response rates were 23.1% and 30.9%, respectively. The key feature of the most recent survey was the inclusion of the concept of ACP and its definition. ACP was described as follows:

ACP is a process in which the discussion between a patient, family and health care providers about future medical and long-term care happens voluntarily. Based on the patient's consent, the decision made in a discussion is recorded, reviewed periodically, and shared among people who are involved in the patient's care. ACP discussion includes the patient's concerns over and views toward his or her medical care, the patient's values and goals, the patient's understanding of the current medical condition and prognosis, the patient's intention and preferences for medical and long-term care, and a care service provision condition.

### Measures

The dependent variable, ACP engagement (discussion), was a nominal variable with the following three categories: those who engage their patients/clients in ACP in their practice, those who are considering engaging patients/clients in ACP in the future, and those who currently do not engage patients/clients in ACP nor plan to do so (reference group). This variable was derived from survey respondents' responses to the following statements: (a) Do you engage your patients/clients who are at the end of life in ACP? (b) For those who answered "no" to the previous question, are you considering engaging your patients/clients in ACP in the future? A person

who answered “yes” to the first question was considered to be engaging patients/clients in ACP. A person who answered “no” to the first question but answered “yes” to the second question was deemed to be considering engaging patients/clients in ACP in the future. A person who answered “no” to both questions was considered to not engage patients/clients in ACP now or in the future.

The following four variables were included as independent variables: completion of training designed for supporting patients’ self-determination at the end of life, years of clinical practice, involvement in care for patients who are approaching death, and facility type. Completion of training was a dichotomous measure, coded 1 for those who have completed any of the trainings that were designed to promote patients’ self-determination at the end of life, such as training for respecting the patient’s self-determination provided by MHLW, training on palliative care for doctors treating cancer patients provided by the Japanese Society for Palliative Medicine, and training developed within each institution. Years of clinical practice was an ordinal measure with 11 categories: the smallest category was “1 to 5 years” followed by categories of 5-year intervals up to “46 to 50 years” and the largest category was “more than 50 years.” Involvement in care for patients approaching death was also an ordinal measure assessed by the frequency of patient death with the following four categories: patients rarely die, about one death per year, one death per 6 months, and at least one death per month. Higher values were associated with more frequent involvement in treating dying patients. Facility types where survey respondents affiliated with originally included hospitals, clinics, visiting nurse stations, nursing homes, geriatric health services facilities, and other. As the majority of respondents were affiliated with a hospital, the variable was dichotomized such that hospital was coded as 1, and the other facility types were coded as 0.

### Analytic Strategy

Analyses began with descriptive statistics that were conducted to summarize the respondents’ characteristics. Then, a chi-square analysis was used to examine the first research question, whether there was a difference between physicians and nurses in their ACP engagement. The analysis compared those who engaged patients/clients in ACP and those who did not engage and examined whether there was a difference between physicians and nurses. The second analysis included only those who were not engaging patients/clients in ACP and compared those who were considering engaging patients/clients in ACP in the future and those who were not considering doing so to see whether there is a difference in attitudes between physicians and nurses.

The second research question, investigating factors that were promoting or hindering ACP engagement, was

tested through two separate multinomial logistic regression models, one for physicians and one for nurses. The interactions of completion of training and each of the other independent variables (years of clinical practice, involvement in treating patients approaching death, and facility type) were created and included in multinomial logistic regression models to see the impact of training. Listwise deletion (only using cases that have a complete set of data) was used after confirming the unpatterned nature of missing observations. All statistical analyses were performed using the statistical software package STATA 15.

### Results

The final sample in this study included 916 physicians and 1,577 nurses who did not have any missing values in study variables. Table 1 summarizes the respondent characteristics. Two hundred sixty-three physicians (28.7%) and 435 nurses (27.6%) answered that they were engaging patients/clients in ACP. Furthermore, 213 physicians (23.3%) and 250 nurses (15.9%) answered that they were considering engaging their patients/clients in ACP in the future. The majority of both physicians and nurses did not have any training experience designed to promote patients’ self-determination at the end of life: only 214 physicians (23.4%) and 335 nurses (21.2%) had completed such training. The average value assigned to the years of clinical practice experience was 6.11 ( $SD = 2.23$ ) for physicians and 5.44 ( $SD = 1.95$ ) for nurses. Considering the value 5 was assigned to “21 to 25 years” and the value 6 was assigned to “26 to 30 years,” the average years in practice among physicians was slightly higher than the category of “26 to 30 years,” and practice among nurses was approximately in the middle of “21 to 25 years” and “26 to 30 years.” Regarding the involvement in care for dying patients, 378 physicians (41.3%) and 489 nurses (31.0%) answered that they were experiencing at least one patient’s death per month. Finally, the majority of physicians ( $n = 612$ ; 66.8%) and almost half of the nurses ( $n = 755$ ; 47.9%) worked in a hospital setting.

### ACP Engagement Between Physicians and Nurses

Table 2 shows whether physicians and nurses were engaging their patients/clients in ACP. There was no significant difference between physicians and nurses future ( $\chi^2 = 0.366$ ,  $df = 1$ ,  $p = .545$ ). Next, the analysis only included those who were not engaging patients/clients in ACP to see whether there was a difference between physicians and nurses in terms of their consideration of ACP engagement in the future. The results are summarized in Table 3 indicating that physicians were more likely than nurses to be considering engaging patients/clients in ACP in the future ( $\chi^2 = 24.977$ ,  $df = 1$ ,  $p < .001$ ).

**Table 1.** Respondent Characteristics.

Characteristics	Physician (N = 916)		Nurse (N = 1,577)	
	n (%)	M (SD)	n (%)	M (SD)
ACP engagement				
Engaging in ACP	263 (28.7)	—	435 (27.6)	—
Currently not engaging in ACP but considering	213 (23.3)	—	250 (15.9)	—
Currently not engaging in ACP nor considering	440 (48.0)	—	892 (56.5)	—
Completion of training				
Having completed	214 (23.4)	—	335 (21.2)	—
Not yet completed	702 (76.6)	—	1,242 (78.8)	—
Years in clinical practice <sup>a</sup>	—	6.11 (2.23)	—	5.44 (1.95)
Caring for dying patient				
Rarely	20 (22.1)	—	265 (16.8)	—
One death/year	117 (12.8)	—	249 (15.8)	—
One death/6 months	218 (23.8)	—	574 (36.4)	—
At least one death/month	378 (41.3)	—	489 (31.0)	—
Facility type				
Hospital	612 (66.8)	—	755 (47.9)	—
Other than hospital	304 (33.2)	—	822 (52.1)	—

Note. ACP = advance care planning.

<sup>a</sup>This is an ordinal measure: 1 to 5 years = 1; 6 to 10 years = 2; 11 to 15 years = 3; 16 to 20 years = 4; 21 to 25 years = 5; 26 to 30 years = 6; 31 to 35 years = 7; 36 to 40 years = 8; 41 to 45 years = 9; 46 to 50 years = 10; more than 50 years = 11.

**Table 2.** Whether Engaging in ACP.

Engagement in ACP	Physicians (N = 916)	Nurses (N = 1,577)	$\chi^2$	df
	n (%)	n (%)		
Engaging in ACP	263 (28.7)	435 (27.6)	0.366	1
Not engaging in ACP	653 (71.3)	1,142 (72.4)		

Note. ACP = advance care planning.

**Table 3.** Whether Considering Engaging in ACP in the Future.

Consideration of ACP	Physicians (N = 653)	Nurses (N = 1,142)	$\chi^2$	df
	n (%)	n (%)		
Considering	213 (32.6)	250 (21.9)	24.977***	1
Not considering	440 (67.4)	892 (78.1)		

Note. ACP = advance care planning.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### Factors Associated With ACP Engagement

Table 4 summarizes the results from two multinomial logistic regression models: one for physicians and one for nurses. The category of “not engaging in ACP nor considering it” was used for the baseline comparison group. The only significant interaction between completion of training and years of clinical practice was kept, and other nonsignificant interactions were removed from the models. The results indicated that physicians who have completed training were approximately 4.0 times more likely to answer that they were engaging patients/clients in ACP than that they were not engaging in ACP nor considering it (odds ratio [OR] = 4.03,  $p < .05$ ). For

both physicians and nurses, more frequent levels of involvement in caring for dying patients were associated with the higher likelihood of engaging in ACP with patients/clients (physicians: OR = 1.88,  $p < .001$ ; nurses: OR = 1.90,  $p < .001$ ) or considering doing so (physicians: OR = 1.23,  $p < .05$ ; nurses: OR = 1.20,  $p < .05$ ). In contrast, nurses who had more years of clinical practice experience (OR = .89,  $p < .01$ ) and who work in a hospital setting (OR = .60,  $p < .001$ ) were less likely to answer that they were engaging in ACP than to answer that they were not engaging in ACP nor considering it. However, the interaction of completion of training and years of clinical practice was significant for nurses (OR = 1.22,  $p < .05$ ). This means that although the main

**Table 4.** Factors Associated With ACP Engagement.

Variables	Physicians (N = 916)		Nurses (N = 1,577)	
	Engaging in ACP (n = 263)	Considering ACP (n = 213)	Engaging in ACP (n = 435)	Considering ACP (n = 250)
	vs Not engaging nor considering (n = 440)		vs Not engaging nor considering (n = 892)	
	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]	Odds ratio [95% CI]
Training completed	4.03* [1.27, 12.84]	1.62 [0.46, 5.76]	1.67 [0.70, 3.99]	1.43 [0.47, 4.37]
Years of clinical practice	1.02 [0.93, 1.12]	0.97 [0.89, 1.06]	0.89** [0.82, 0.96]	0.97 [0.90, 1.05]
Training × Years of clinical practice	1.04 [0.86, 1.24]	1.07 [0.88, 1.30]	1.22* [1.04, 1.42]	1.07 [0.88, 1.29]
Caring for dying patient	1.88*** [1.54, 2.30]	1.23* [1.03, 1.47]	1.90*** [1.65, 2.19]	1.20* [1.04, 1.38]
Work in hospital	1.01 [0.64, 1.61]	1.47 [0.94, 2.29]	0.60*** [0.46, 0.79]	1.10 [0.82, 1.48]

Note. ACP = advance care planning.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

effect of training completion was not significant for the group of nurses, completion of training had buffering effects on the negative association between their years of clinical practice and the likelihood of ACP engagement.

## Discussion

Using the MHLW national survey data on perspectives toward medical care at the end of life, this study examined the current ACP engagement among physicians and nurses in Japan and investigated factors associated with their engagement. The results indicated that there was no difference between physicians and nurses in terms of whether they were engaging in ACP with patients/clients or not. However, among those who answered that they were currently not engaging in ACP, physicians were more likely to be considering engaging patients/clients in ACP in the future than nurses. This might reflect on increasing awareness of the importance of ACP among the general public (Miyata et al., 2006) and among physicians (Nakazawa et al., 2014) informed by accumulating evidence of the positive effects of ACP (e.g., Braun et al., 2008; Mack et al., 2010). In addition, previous studies found that both patients and physicians were repeatedly reported to prefer physician-centered interactions or to value patient–physician interdependent decision making in Japan than their counterparts in the United States (Alden et al., 2015; Ito et al., 2010; Sekimoto et al., 2004). These might be the reasons for physicians' willingness to incorporate ACP in their practice in the future than nurses in Japan. Although nurses were less likely to be considering ACP in the future practice than physicians, their involvement in ACP will be important. For example, to overcome the barrier of physicians' limited time, a study conducted by Detering et al. (2010) intentionally used nurses and allied health workers as ACP facilitators. Another study found that patients are more likely to complete ACP documentation when nonphysician health care providers, such as nurses

and social workers, are involved in ACP discussions (Clark et al., 2017). Although these studies were conducted outside Japan, they still have implications for ACP practice in Japan.

Multinomial regression analyses revealed the negative effect of nurses' increased years of clinical experience on their ACP engagement. A nurse with longer years of clinical experience is often in a management position, which gives him or her fewer opportunities to be involved in patient care as a primary nurse, whereas a doctor with longer years of clinical experience becomes in charge of patient care and has more opportunities to engage in ACP. This might be the reason for the negative association between nurses' increased years of clinical experience and their ACP engagement. This relationship, however, is buffered by the completion of training. Although the main effect of training was not significant for nurses, the interaction of training completion and years of clinical experience was positively associated with their ACP engagement, which counteracts the negative effects of nurses' increased years of clinical experience on their ACP engagement. On the contrary, the main effect of training was significant for physicians; those with training completed were more likely to say that they were engaging patients/clients in ACP. This is consistent with previous findings in the United States (Berns et al., 2017; Detering et al., 2014). However, the current study is cross-sectional and is therefore unable to establish a causal relationship between the completion of training and ACP engagement. The completion of training may have a positive impact on ACP engagement while it is also possible that those who need to engage their patients/clients in ACP receive the training. Future research that can examine the effects of the training on ACP engagement to draw a causal conclusion will be beneficial to the field.

Another factor that had a significant impact on ACP engagement for both physicians and nurses was involvement in care for dying patients. As consistent with the

previous research findings (S. Snyder et al., 2012), those who were more frequently involved in caring for patients approaching death were more likely to answer that they were engaging patients/clients in ACP or considering doing so in the future. It might be that physicians and nurses frequently caring for dying patients are more aware of the importance of ACP engagement through frequent encounters with situations where a patient can no longer make medical decisions for oneself as compared with those with fewer opportunities to work with terminally ill patients. In such cases, family members or health care providers often have to make difficult decisions for the dying patient. Such clinical experiences would increase the awareness of the importance of ACP and lead to ACP engagement with patients.

Whether or not respondents worked in a hospital setting was significantly associated with physicians' ACP engagement but was negatively associated with the nurses'. Previous research has reported that nurses involved in terminal care in a hospital setting often face various challenges that hinder conversations about desired medical treatment with patients and their family members (Tonoshiro, 2009). Such challenges included their heavy workload, lack of space for private conversations with patients and their families, and difficulties in sharing sufficient information about patients and having constructive discussions with physicians due to work schedule. The findings from the current study might also reflect on these unique challenges facing nurses in a hospital. Establishing an environment where an interdisciplinary team can practice ACP together in a hospital setting is warranted.

### Limitations

There are a few limitations that should be noted. First, each participant filled out two surveys: one which identifies their own demographic information and personal end-of-life care preferences and the other survey responding to questions pertaining to their employment status as a health care professional, such as ACP engagement with patients and various other work-related questions. Due to the implemented survey procedure, these two surveys were not able to be matched. Therefore, unfortunately, the study could not include respondents' demographic information, which can be potentially influential factors for ACP engagement. Second, the survey response rates were relatively low. This might be due to the timing; the survey was sent to potential respondents during the busy holiday season at the end of the calendar year. Finally, the study was cross-sectional, which cannot provide definite information about cause-and-effect relationships.

### Implications and Conclusions

This is the first nationwide survey in Japan to examine the state of ACP engagement among health care professionals. ACP is relevant to all adults at any age or medical

condition; therefore, it is important for health care professionals to be able to engage their patients in ACP. Although the results cannot establish a causal relationship, the study findings indicate the positive association between the training designed for patient self-determination at the end of life and health care professionals' ACP engagement. Because patient autonomy is respected through the process of ACP, it is recommended that the training specifically incorporates the language of ACP and provides an opportunity to all health care professionals to acquire knowledge about ACP and skills to carry out ACP conversations with patients/clients.

### Authors' Note

This study was approved by the University of Tsukuba Institutional Review Board (#1254).

### Declaration of Conflicting Interests

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