Health care providers' knowledge, confidence, difficulties, and practices after completing a communication skills training program for advance care planning discussion in Japan

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Background: Advance care planning (ACP) is an important factor that affects the quality of end-of-life. However, health care providers are not able to sufficiently support patients' ACP due to their lack of knowledge and psychological burden. This study investigated how the knowledge, attitudes, and practices of health care providers who completed a communication skills training (CST) program for ACP discussion changed before and after the course.

Methods: Health care providers who participated in the Education for Implementing End of Life Discussion (E-FIELD) CST training program in Japan were surveyed at three time points: before, immediately after, and 6 months after training. The number of participants who completed all three surveys was 306. Knowledge, confidence, communication difficulties, number of discussions and completions of ACP were measured using a questionnaire.

Results: Participants' knowledge and confidence increased right after training compared with before training. The number of ACP discussions and completions increased significantly 6 months after training compared with before training and difficulties tended to decrease. Physicians maintained their confidence, which increased immediately after training until 6 months after training and their number of ACP discussions and completions also increased significantly 6 months after training compared with before training.

Conclusions: The CST program for ACP, E-FIELD, has the potential to increase the knowledge, confidence, and number of ACP discussions and completions used by physicians, nurses, and social workers, and also lower their difficulties.

Keywords: Advance care planning (ACP); end-of-life care; communication skills training (CST); health communication; physician-patient relations

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Introduction

Advance care planning (ACP) is a decision-making process for end-of-life care that involves identifying goals and preferences for future treatment and care, discussing these goals and preferences with family and health care providers, and documenting and reviewing them as needed (1).

ACP has been shown to have many benefits for individuals, their families, and health care providers. The benefits to the individual include an increased sense of self-control over their treatment, consideration and respect for their wishes about the treatment, place of care and end-of-life care, and increased dialogue with family and health care providers (2-8). The benefits to the family include their reduced decision-making burden and the reduced stress, anxiety, and depression experienced after their family member's death (9). For health care providers, ACP has been reported to have the effect of reducing their moral distress and struggle with whether the medical care provided was the best for the patient (10). Despite these reported effects, most countries have reported a low percentage of health care providers who have completed the ACP (11-14).

In Japan, the Ministry of Health, Labor and Welfare has conducted a series of surveys on attitudes toward end-of-life care every 5 years since 1987. In 2007, it published the *Guidelines for Decision-Making about End-of-Life Care* (15). In addition, in 2018, these guidelines were revised to add the importance of ACP and the need to determine a surrogate decision-maker. In a 2016 survey of attitudes, however, although about 60% of Japanese reported having considered end-of-life care only 2.7% had discussed it in detail with their families or health care providers (16). In the same survey, less than 30% of physicians and nurses reported practicing ACP.

One of the most important and difficult issues in the end-of-life discussion is when to start talking about it (17). Many people have strong psychological barriers to talking about the end of life (18). Many Japanese people do not feel comfortable talking about the end of life and many want to spend the end of their lives without being aware of death (19,20). Similarly, health care providers recognize the need and responsibility for discussing end-of-life issues with their patients, but are not comfortable with the subject or try to avoid it (3,21-23). There is also a lack of knowledge about ACP among health care providers (24). As a result of delayed decision-making for these reasons, discussions are held only to decide whether or not to provide life-sustaining treatment when death is imminent (25). And the position of the family in Japan makes this issue even more difficult.

Both health care providers and patients recognize the family as a party, and health care providers need to communicate with both patients and families (26). Therefore, in order to promote ACP, it is important for healthcare providers to first develop communication skills to support patients' ACP and reduce the psychological barrier to initiating ACP discussions. Several training programs for health care providers have been developed and their effectiveness has been reported (27,28). However, there are almost no reports of programs that focus specifically on communication skills training (CST) for healthcare providers on ACP. It has been reported that CST is effective in increasing the confidence of health care providers in difficult communication tasks, such as when telling bad news (29-31). These training may also contribute to the ability of health care providers to promote ACP.

Therefore, we developed Education for Implementing End of life Discussion (E-FIELD), a CST program to help health care providers face patients' ACP with confidence (32). This program also includes interprofessional CST to promote interprofessional work, which is one of the key elements in supporting patients' ACP. The E-FIELD program is the only training program of ACP discussion for healthcare providers in Japan and it is conducted on a nationwide scale.

The purpose of this study was to investigate how health care providers who attended the E-FIELD program changed before and after the course in terms of their ACP knowledge, confidence, communication difficulty, and practices.

We present the following article in accordance with the STROBE reporting checklist (available at https://dx.doi.org/10.21037/apm-21-642).

Methods

This was a longitudinal study of physicians, nurses, and social workers (SWs) who attended the E-FIELD before and after the intervention. The surveys were conducted between October 2017 and February 2018 in 12 locations across Japan where the E-FIELD took place.

Intervention

E-FIELD is a CST program that provides health care workers with competency to support their patients' ACP in hospital facilities. The program was developed by a working group consisting of four palliative care physicians, two nurse scientists, one SW, one ethicist, one legal scholar,

Table 1 Details of E-FIELD

Lecture

  1. Legal knowledge about medical decision making

  2. Basic knowledge of ethics in clinical practice

  3. How to conduct a case study involving ethical issues

  4. Procedures for consensus building

  5. Purpose of care and rationale for consensus building

  6. How to act in case of sudden changes

  7. Passing on ACP to community medicine

Role play/small group discussion

  1. Start discussing end-of-life issues

  2. Select a surrogate decision-maker

  3. Ask about concerns, questions, and what is important to the patient

  4. Ask about treatment preferences and support the best choices

  5. Discuss the level of discretion of the surrogate decision-maker

  6. Discussing with the surrogate decision-maker the patient's decision to initiate, withhold, or terminate treatment

  7. Value communication between health care providers

  8. How to conduct an ethics conference

  9. Participants' own reflections

E-FIELD, Education for Implementing End of Life Discussion; ACP, advance care planning.

and one medical communication scholar. The contents of the program are shown in *Table 1*. These contents were selected through discussions within the working group based on a review of previous studies and the *Guidelines for Decision-Making about End-of-Life Care* developed by the Ministry of Health, Labour and Welfare (1-15,33). Some of the members of this group were also the developers of the guidelines.

The program was 2 days long with a participant-centered approach. And it was open to physicians, nurses, and SWs with at least three years of experience in treating, caring for, and counseling terminally ill patients. The program consisted of an ice-breaker, 4-hour text-based lecture using an original textbook common to all professions, 4 hours of small group discussions on a case requiring decision support, 4 hours of role-plays in ACP-specific scenarios, and discussions on these role-plays. The

discussion covered typical topics such as decisions on start or interrupt life-sustaining treatment, as well as cases of family-driven decision making, which is a cultural issue in Japan. In addition, cases in which the best decisions differed depending on the profession were also discussed. Role-plays were conducted in scenarios specific to ACP, such as introduction to ACP, selection of a surrogate decision-maker, and decision-making regarding life-sustaining treatment. In this program, the family was treated as a second party, considering the cultural characteristics of Japan. Therefore, in the role-plays, family members were placed in addition to the patient role. Discussions and role-plays were also conducted in settings that required adjustment of the patient-family relationship.

Discussions and role-playing were conducted in groups of four, each consisting of multiple professions, and one facilitator was assigned to each group. And they were conducted both in communication situations with patients and with other professions. Facilitators were palliative physicians, palliative care nurses, and medical ethicists with at least 3 years of clinical experience who participated in a 10-hour training workshop to facilitate communication skills.

Data collection

The inclusion criteria for this study were physicians, nurses, and SWs with at least three years of experience in treating, caring for, and counseling terminally ill patients who were participating in this training for the first time. Of the total number of participants in the training, all who met the criteria were included in the study. The surveys were conducted using self-administered questionnaires. The participants completed the questionnaires at the training site before and immediately after attending the program. They also completed a mailed questionnaire 6 months after attending the program. The survey took about 10 minutes to complete and no rewards were offered to participants. All participants were given an overview of the study by the researcher. If they wanted to participate, they then signed a consent form and completed the questionnaire. Six hundred and ninety-eight participants completed the survey before training, and 685 participants completed the survey immediately after training. Thirteen participants who missed a part of the training program or left early were excluded from the analysis. The training attrition rate was 1.8%. After 6 months of training, 306 participants completed the survey. The follow-up rate was 44.7% (*Figure 1*). There was no significant difference in the proportion of
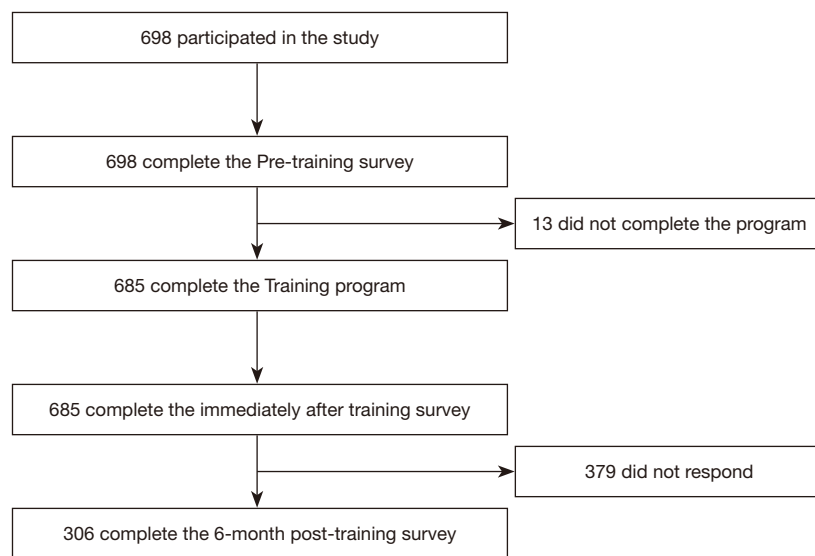
Figure 1 Study flow chart.

occupations of those who completed the 6-month training survey and those who left.

Measurement

Sociodemographic characteristics
The participants provided baseline responses for gender, age, workplace size, job title, years of clinical experience, and the number of patients in their charge who died in the past year.

Knowledge
We developed true/false questions about the knowledge necessary to support patients' ACP that is provided in the training program and checked their mastery of the knowledge. This questionnaire consisted of 23 questions, including four questions on guidelines for ACP, six questions on initiation and interruption of life-sustaining treatment, and 13 questions on the process of ACP. These questions were asked at three time points: before training, immediately after training, and 6 months after training.

Confidence
The participants' level of self-confidence in supporting ACP was examined using a 7-point Likert scale (i.e., 0= not confident at all to 7= very confident).

Difficulty in communicating with terminally ill patients
The communication module of the Nurses' Difficulty with

Cancer Care (NDCC) scale was used for the evaluation (34). The NDCC scale was developed based on a previous study that investigated nurses' difficulties in communicating with terminally ill patients (35,36). The scale consists of 13 items, including "*it is difficult to respond to patients immediately after they are given 'bad news' about their condition or prognosis*" and "*I cannot take enough time to talk with patients*". Each question is rated using a 6-point Likert scale (i.e., 0= not at all agree, 1= agree, to 6= very much agree). This scale was surveyed at two time points: before training and 6 months after training.

ACP discussion and completion
The recommended ACP support was identified with reference to the results of the international Delphi survey by European Association for Palliative Care and the Quality Indicator development study on ACP (1,33). Specifically, 20 items were selected, including "explaining the advantages and disadvantages of end-of-life care that may be an option" and "encouraging patients to choose a surrogate decision-maker". The implementation status of these items was evaluated using a 5-point Likert scale (i.e., 0= never to 5= always). The number of respondents who answered "mostly" or "always" was calculated.

Ethical considerations

The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). All study

Table 2 Participants characteristics

Variables	Nurse (n=160)		SW (n=33)		Physician (n=113)	
	N	%	N	%	N	%
Sex						
Male	7	4.4	8	24.2	88	77.9
Female	153	95.6	25	75.8	25	22.1
Age (years), mean ± SD	43.8±8.0		38.7±7.8		48.4±9.0	
Years of clinical experience, mean ± SD	20.0±8.0		11.2±7.0		22.3±9.3	
Number of patients in charge who died in the past year, mean ± SD	40.2±49.6		26.9±17.5		28.5±31.4	
Workplace						
Hospitals with more than 500 beds	50	31.3	7	21.2	37	32.7
Hospitals or clinics with less than 500 beds	95	59.4	26	78.8	76	67.3
Others	15	9.4	0	0	0	0

SD, standard deviation; SW, social worker.

participants provided their written informed consent and the study design was approved by the University of Tokyo Medical School Ethics Committee and Institutional Review Board (No. 11270).

Statistical analysis

Data from those who completed all three questionnaire surveys were included in the analysis. To describe the participants' sociodemographic characteristics, we described frequencies and percentages for the categorical variables and means and standard deviations for the continuous variables. For knowledge and self-efficacy, we first described the scores at three time points: before training, immediately after training, and 6 months after training. Next, repeated-measures analyses of covariance with years of clinical experience and the number of patients in charge who died in 1 year as covariates were conducted at the three time points to examine the differences by occupation.

For difficulty in communicating with terminally ill patients and ACP support for patients, we first described the scores at two time points: before training and 6 months after training, respectively. Next, to examine the differences by job type, we conducted a repeated-measures analysis of covariance with years of clinical experience and the number of patients in charge who died in 1 year as covariates. For all scores, we also performed a repeated-measures analysis of covariance by job type, with years of clinical experience

and the number of patients in charge who died in 1 year as covariates.

Data with missing values were removed, and only complete data were analyzed. All statistical tests were considered statistically significant with a P value <0.05. We used SPSS software (v. 26.0; IBM SPSS, Armonk, NY, USA) for statistical analysis.

Results

Gender, age, years of clinical experience, number of visits per year, and type of facility affiliation were significantly different among the job categories (*Table 2*). Gender and job type were significantly correlated, with nurses and SWs tending to be more often women and physicians more often men (r=0.72, P<0.001). Age and years of clinical experience were also correlated significantly, with older age tending to be associated with more years of clinical experience (r=0.87, P<0.001).

Knowledge scores tended to increase from before training to immediately after training, both overall and in each occupational group (*Table 3*). In addition, there was a statistically significant increase for health care providers overall and for nurses and SWs. Six months after training, the knowledge was significantly higher for overall health care providers and SWs compared with before training. Overall, the knowledge tended to decrease immediately after training to 6 months after training. There was a

Table 3 Comparison of knowledge and confidence across occupations

Factors	Group	Before training		After training		After 6 months		Difference (before – after)			Difference (before – after 6 months)			Group
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	P*	Mean	SD	P*	P*
Knowledge	All (n=306)	16.49	3.95	18.78	3.15	17.87	3.42	1.82	3.96	<0.001	1.38	3.25	0.061	0.004
	Nurses (n=160)	15.39	4.02	17.43	3.40	17.41	3.41	2.04	3.65	<0.001	1.38	3.09	0.271	
	SWs (n=33)	15.27	3.82	17.93	3.13	18.06	2.40	2.66	3.48	<0.001	1.76	2.36	0.011	
	Physicians (n=113)	17.20	3.81	18.37	4.01	18.45	3.63	1.18	4.46	0.292	1.27	3.68	0.497	
Confidence	All (n=306)	3.57	1.27	4.52	0.94	4.44	1.19	0.95	1.11	<0.001	0.88	1.19	<0.001	<0.001
	Nurses (n=160)	3.43	1.22	4.30	0.93	4.19	1.20	0.88	1.08	<0.001	0.79	1.19	0.058	
	SWs (n=33)	2.91	1.18	4.37	0.75	4.13	1.43	1.46	1.25	<0.001	1.25	1.39	0.054	
	Physicians (n=113)	3.96	1.25	4.87	0.92	4.87	0.98	1.28	3.34	0.009	0.01	0.94	0.003	

*, repeated-measures analyses of covariance with years of clinical experience and the number of patients in charge who died in the past year as covariates. SD, standard deviation; SWs, social workers.

statistically significant difference in knowledge between occupational groups, especially between physicians and nurses (P=0.003).

In terms of the percentage of correct answers by item, the percentage of correct answers tended to be higher for most questions immediately after training and 6 months after training than before training. In particular, the percentage of correct answers to questions about the content of the guidelines increased significantly. However, the percentage of correct answers to the question on whether gastric banding and ventilators can be interrupted increased immediately after training compared with before training, but decreased to the same level or lower 6 months after training.

Confidence scores increased significantly from before training to immediately after training overall and in all occupational groups (*Table 3*). Six months after training, confidence was significantly higher in the overall and physician groups compared with before training.

Overall, there was a significant decrease in difficulty 6 months after training compared with before training (*Table 4*). There was no difference in difficulty among the occupational groups.

The number of ACP discussions and completions increased significantly from before training to 6 months after training for the health care providers overall and for physicians (*Table 4*). There was a difference in the number of ACP discussions and completions among the occupational groups, with SWs having significantly more ACP discussions and completions than physicians and nurses (P=0.046 and 0.011 respectively).

Discussion

In this study, we conducted a CST program for health care providers to support their patients' ACP and evaluated the participants' knowledge, confidence, difficulty, and discussions and completions of ACP at three time points: before training, after training, and 6 months after training. As a result, all participants' knowledge and confidence increased immediately after training compared with before training. The number of ACP discussions and completions increased significantly 6 months after training compared with before training while their difficulties tended to decrease. SWs maintained their increased knowledge from the ACP training until 6 months later. Physicians maintained their confidence, which increased immediately after training until 6 months after training and their number of ACP discussions

Table 4 Comparison of difficulties and practices across occupations

Factors	Group	Before training		After 6 months		Difference (before – after 6 months)*			Group
		Mean	SD	Mean	SD	Mean	SD	P	P
Difficulties	All (n=306)	50.52	11.51	47.81	11.58	2.71	9.05	0.039	0.206
	Nurses (n=160)	51.02	12.09	47.54	11.71	3.48	8.76	0.082	
	SWs (n=33)	51.85	10.36	51.21	11.07	0.64	8.10	0.926	
	Physicians (n=113)	49.43	10.98	47.20	11.47	2.23	9.65	0.195	
Practices	All (n=306)	49.16	13.73	50.59	12.43	−1.33	11.52	0.006	0.010
	Nurses (n=160)	48.56	14.23	49.39	13.71	−0.83	11.13	0.644	
	SWs (n=33)	52.22	11.17	54.45	11.23	−2.23	8.10	0.076	
	Physicians (n=113)	49.37	13.61	51.13	10.60	−1.76	12.88	0.004	

*, repeated-measures analyses of covariance with years of clinical experience and the number of patients in charge who died in the past year as covariates. SD, standard deviation; SWs, social workers.

and completions also increased significantly 6 months after training compared with before training.

The correct answer ratio for the knowledge test increased to about 75% after training. Especially for SWs, their increased score was significant and their knowledge was maintained for a long time. According to Knowles' adult learning theory, adults are motivated to learn to obtain answers and solve problems (37). The learning experience is most effective when education is delivered in a way that meets the learner's needs. Although all study participants were engaged in ACP-related work, SWs had performed more ACP support than did any other occupational group before training. SWs may have had many issues and questions about ACP and support methods through providing ACP support to many patients and felt the need to resolve them more strongly. In addition, knowledge gained through demonstrations and discussions is more likely to be retained in memory than knowledge gained by watching or listening to a lecture (38). Furthermore, knowledge gained through practical experience is much more likely to be retained (38). This training included a lot of small group discussions and role playing. The SWs experienced more ACP discussions and completions after training, which may have led to their retention of knowledge.

The percentage of correct answers to questions about the guidelines increased significantly after training compared with before training in all occupations. On the other hand, the percentage of correct answers to questions about situations in which it is difficult to make decisions, such as handling the wishes of family members when the patient lacks decision-making capacity or interrupting life-sustaining treatment, remained low after training. These items also required a change in perception of the assumptions that are conventionally adopted in clinical practice, such as that ventilators should be started on the assumption that they will not be interrupted. According to Mezirow's transformative learning theory, learning is the process of creating new or modified interpretations of the meaning of one's experiences (39). Rational discussion (discourse) with others is essential for this process. Learning that involves greater cognitive transformation requires a process of reintegrating new perceptions into one's life by repeating the process of transforming one's perceptions of assumptions through the acquisition of knowledge and skills, building competence and confidence through experience, and then discussing them with others. Therefore, the participants will be able to further raise their stage of transformative learning if they have the opportunity to continuously update their knowledge and engage in discussions (40).

Confidence was higher among physicians before training than in other occupational groups and was also significantly higher after training. A survey of nurses has shown that higher knowledge of ACP and higher confidence are associated with the number of ACP discussions and completions and comprehensive end-of-life care (41). The knowledge of physicians in this study was higher than other occupational groups both before and after training, and their knowledge immediately after training was significantly correlated with confidence 6 months after training (r=0.32, P<0.001). Similarly, confidence immediately after

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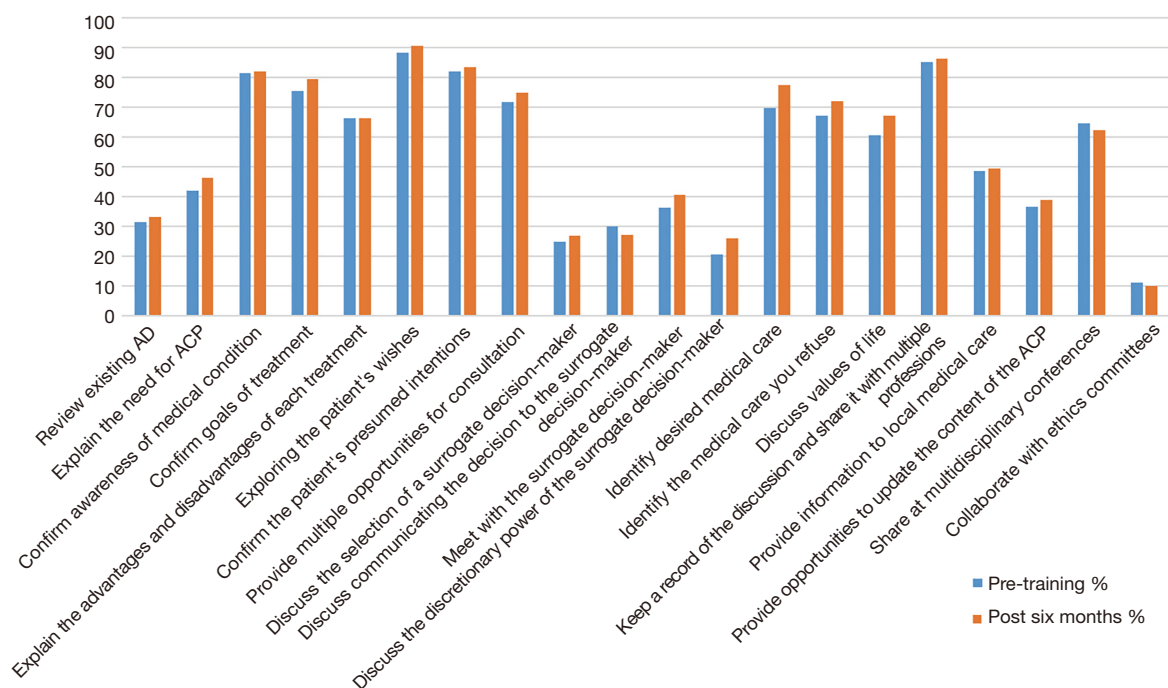Okada et al. Evaluation of the ACP CST program in Japan

Figure 2 Changes in the percentage of ACP practices for each item before and after training (N=306). ACP, advance care planning.

training was significantly correlated with the number of ACP discussions and completions 6 months after training (r=0.26, P<0.001). This suggests that even in physicians' ACP support, gaining knowledge leads to confidence, and gaining confidence leads to better practice.

Health care providers feel psychologically burdened to talk with their patients about end-of-life care, which is one of the reasons why end-of-life discussions often are inadequate or do not take place with sufficient content or time (3,21-23). Also, being knowledgeable and confident about end-of-life care is associated with being comfortable communicating with patients and families at the end of life (42). Although the study participants were health care providers engaged in palliative care, their confidence in ACP support before training was low and more than half of them felt difficulties when their patients talked about death. In our study, despite an increase in the number of ACP discussions and completions, participants' difficulties in communicating with patients at the end of life tended to be lower overall, although this result did not reach significance. This may be because the participants repeatedly practiced demonstrations and role played various difficult communication scenarios during the training program, which increased their confidence in communication and lowered their difficulties.

The selection of a surrogate decision maker, sharing the decision making, and determining the level of discretion should be included in the ACP (1). Therefore, these course contents were also focused on in the ACP facilitator training program. However, less than half of the participants implemented the support related to surrogate decision makers both before and after training (*Figure 2*). In Asian countries, family members often make medical decisions on behalf of the patient regardless of the patient's own decision-making capacity (26). In many cases, patients also want to entrust decisions to their families (1,43). Therefore, both health care providers and patients may feel uncomfortable or that it is unnecessary to dare to appoint a family member as a "surrogate decision maker", sign the legal documents, or decide the degree of discretion. However, it has been reported that outside of Japan, the percentage of elderly people who have selected a surrogate decision maker was more than 60%. Thus, it would be difficult to apply foreign examples of support related to surrogate decision makers (44). This is an area that should be reexamined based on data from Japanese health care providers and patients to find a method of support that is culturally appropriate for Japanese people.

This study needs to be interpreted under several limitations. The study was conducted using a self-report questionnaire,

which may have introduced bias. The lack of a control group and the lack of randomized assignment may have led to confounding in areas other than the data obtained. The number of SW participants was small and meaningful differences may not have been detected. The participants were health care providers engaged in palliative care, which limits the extent to which the results can be generalized.

Conclusions

The CST program for ACP discussion, E-FIELD, has the potential to increase the knowledge, confidence, and number of discussions and completions of physicians, nurses, and SWs in supporting ACP for their patients, and reduce their difficulties. Physicians and nurses' knowledge and confidence tend to decline within 6 months after training; thus, continuous education is required. Especially for support of difficult decisions such as interruption of life-sustaining treatment, it may be necessary to periodically update knowledge, brush up communication skills, and provide opportunities for discussions. Support methods for appointing a proxy decision maker must be developed to fit Japanese culture.

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Footnote

Reporting Checklist: The authors have completed the STROBE reporting checklist. Available at https://dx.doi.org/10.21037/apm-21-642

Data Sharing Statement: Available at https://dx.doi.org/10.21037/apm-21-642

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Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://dx.doi.org/10.21037/apm-21-642). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). All study participants provided their written informed consent and the study design was approved by the University of Tokyo Medical School Ethics Committee and Institutional Review Board (No. 11270).

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