

*Original Article***Esophageal speech training system and needs for esophageal speech training in a laryngectomy patient association in Japan**Naomi Watanabe, RN, PhD,<sup>1</sup> Yayoi Kamakura, RN, PhD,<sup>2</sup> Junko Fukada, RN, PhD<sup>1</sup><sup>1</sup>School of Nursing & Health, Aichi Prefectural University, Nagoya, Aichi, Japan<sup>2</sup>Japanese Red Cross Toyota College of Nursing, Toyota, Aichi, Japan**ABSTRACT**

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**Objectives:** To study the esophageal speech training system and needs for esophageal speech training in one laryngectomy patient association in Japan.

**Methods:** The esophageal speech training system of Association X for laryngectomy patients was observed through participation. Needs for esophageal speech training were analyzed qualitatively and inductively by semi-structured interviews with 7 esophageal speech (ES) trainers, 11 ES learners, and 8 family members of the association conducted according to an interview guide.

**Results:** Association X was organized, and its teaching system was established, by the Japan Federation of Laryngectomy Patient Associations (Nikkoren), and 12 ES trainers were appointed for esophageal speech and electrolarynx speech training. The training was based on the “Speech Practice Manual” published by the association, but the teaching methods and training contents and methods were left to the discretion of the individual ES trainers. The survey by Association X showed that there were needs for “Improvement of the methods and contents of esophageal speech training” and “Organizational reform of the association.” The former category included “Improvements for evidence-based training that ensures vocalization” and “Improving training methods and assigning roles for advanced ES learners”; the latter category included “Development of a system for trainers to continue receiving training from better qualified trainers” and “Reforming the association to allow learners and

families to voice their opinions about training.” Each category consisted of three subcategories.

**Conclusions:** In Association X, substitute vocalizations were taught by 12 ES trainers. “Improvement of the methods and contents of esophageal speech training” and “Organizational reform of the association” were expressed as needs for Association X concerning esophageal speech training.

**Key words:** esophageal speech, esophageal speech training, laryngectomy patient association, patient organization

**Introduction**

After total laryngectomy or total pharyngo-laryngo-esophagectomy, the patient loses the vocal cords due to removal of the larynx, and a permanent tracheal stoma is created as a breathing route. The loss of the vocal cords results in a postoperative loss of vocalization function by vocal cord vibration.

The loss of vocal communication has a significant impact on the continuation of social and occupational life. Reports indicate that 40–57% of patients suffer from severe depression after laryngectomy [1], and effects on the quality of life (QOL) have also been reported in Japan [2, 3]. Therefore, in order for patients to rebuild their lives and maintain their QOL after laryngectomy, it is necessary for them to acquire substitute speech as a new means of communication at an early stage.

Alternative methods of communication include writing, gestures, electrolarynx speech, tracheoesophageal shunt speech, and esophageal speech. In recent years, shunt speech has become widespread especially in Europe and the United States, where more than 90% of patients after laryngectomy are reported to choose it [4]. On the other hand, in Asian countries, the rate of patients who choose tracheoesophageal shunt speech is reported to be about 10% in Japan and less than 10% in South Korea [4].

Among substitute vocalization methods, written speech was reported to account for 5–16.2%, gestures for 1–12.6%, tracheoesophageal shunting speech for

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0.2–5%, electrolarynx speech for 9–21.4% [5,6], and esophageal speech for 42.7–78% [5, 6] in Japan in the early 2000s. According to a survey in 2017, tracheoesophageal shunting speech accounted for 1.3%, electrolarynx speech for 14.7%, esophageal speech for 51.4%, and a combination of esophageal speech and electrolarynx speech for 21.8% [7], and many patients in Japan have recently learned esophageal speech.

Esophageal speech is a method in which air is taken into the esophagus through the mouth, and when the air is expelled by controlling abdominal pressure, the esophagus vibrates to produce sound (vocal sound), which is then articulated with the lips and tongue. The advantage of this method is that the sound is close to natural voice and can be produced anywhere and at any time without the use of a device. On the other hand, the acquisition of esophageal speech requires continuous daily repetitive practice for a long period of time [6, 7]. Many people cannot master the technique even after more than a year of practice [6], and the uncertainty of the effects of practice as well as the discomfort felt by patients regarding the practice methods are reported to cause stress [8].

One reason for this is that in Japan, the teaching of esophageal speech has been left to patient associations. In associations for laryngectomy patients, members who have acquired esophageal speech have acted as instructors (ES trainers) for other members to acquire electrolarynx speech, esophageal speech, and tracheoesophageal shunting speech. Regarding esophageal speech, in particular, it has been considered that only laryngectomy patients can teach esophageal speech because of the past success in acquisition of esophageal speech in patient associations, which has resulted in little involvement of medical personnel. Recently, however, there have been several reports about facilities where doctors, nurses, and speech-language pathologists form teams to give consultations about substitute speech and engage in the teaching of substitute speech even after discharge [4], as well as reports on cooperation between healthcare workers and local governments to improve the QOL of laryngectomy patients or to motivate patient associations [9]. However, such medical facilities and local efforts are still limited, and their nationwide spread is anticipated.

The purpose of this study was to characterize the esophageal speech training system and the need for esophageal speech training in an association for laryngectomy patients in Japan. This will contribute to speech rehabilitation of laryngectomy patients by clarifying the need for medical involvement in esophageal speech training and more effective ways of collaboration between laryngectomy patient associations and healthcare workers.

## Methods

### 1. Research Design

Participatory observation and qualitative inductive research.

### 2. Participatory Observation Method

One of the authors attended a total of 11 vocalization classes of X Patient Association (hereafter “Association X”) belonging to the Japanese Federation of Laryngectomy Patient Associations (*Nihon koutekisyadantai rengoukai*; hereafter “Nikkoren”), each lasting 80–120 minutes, between March and September 2018, and observed and recorded the management methods, teaching circumstances, and learners’ training conditions in these classes.

Nikkoren is the central organization of associations for laryngectomy patients in Japan. Association X is one of the 53 patient associations belonging to Nikkoren and is a medium-sized association in the Chubu Japan Block. Figure 1 shows the position of Association X in Nikkoren [10]. Association X was established in 1966 and conducts vocalization classes at two locations in the prefecture, offering training in esophageal speech and electrolarynx speech.

### 3. Qualitative inductive research methods

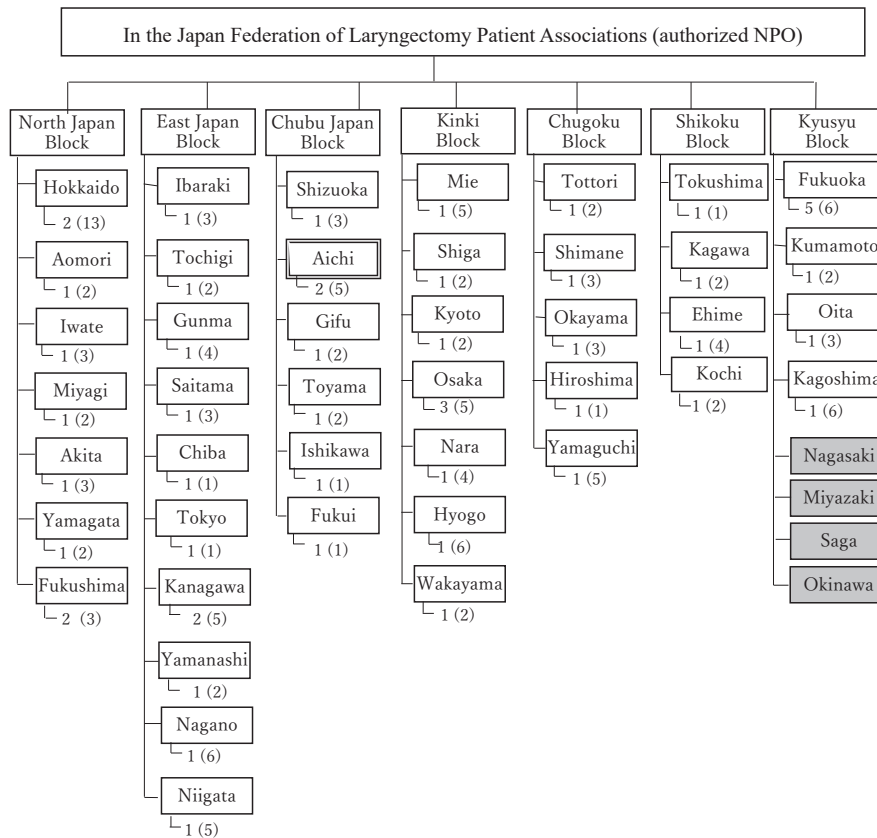
#### 3.1 Research Subjects

The target group consisted of esophageal speech trainers (hereafter “ES trainers”) and esophageal speech learners (hereafter “ES learners”) and families accompanying the members. The number of members of the association was 86 (in FY2021). Twelve of the members were certified ES trainers, 8 of whom were in charge of esophageal speech and 4 were in charge of electrolarynx speech. There were 14 ES learners, and attendance by family members was optional. Seven (87.5%) ES trainers in charge of teaching esophageal speech, 11 (78.6%) ES learners, and 8 family members who gave consent participated in the study (Table 1).

“ES trainer” is a qualification unique to the patient association. It is given to laryngectomized individuals (after total laryngectomy or total pharyngo-laryngo-esophagectomy) who have esophageal speech volume and clarity close to those of normal persons and who have undergone the training course organized by Nikkoren. ES trainers can teach not only esophageal speech but also electrolarynx speech and shunt speech.

#### 3.2 Procedure

Semi-structured interviews were conducted with the subjects between August and October 2019 about their needs for esophageal speech training based on an interview guide, which consisted of thoughts and desires of ES learners and family members and those of ES trainers regarding the esophageal speech training provided by the association. The interviews were conducted in a place where the subject’s voice could



**Figure 1.** Numbers of patient associations and vocalization classes in the Japan Federation of Laryngectomy Patient Associations (authorized NPO) and each block.

Note 1) The number under the name of each prefecture is the number of patient associations, and the number in parentheses is the number of vocalization classes.

Note 2) There are patient associations in 43 of the 47 prefectures. The prefectures without patient associations are shaded in gray.

Note 3) The prefecture in which Association X is located is indicated with Aichi.

not be heard by others and their privacy could be protected. Each of the ES trainers and family members was interviewed once for an average of 13.7±6.2 and 23.0±5.8 minutes, respectively. The ES learners were interviewed for an average of 10.5±3.9 minutes, with the researcher asking questions orally and the learners responding in writing. The interview time of the learners was made short, considering their burden of speaking and writing.

**4. Analysis**

**4.1 Participatory observation in Association X**

The results of participatory observation regarding the esophageal speech training system of the association were summarized by confirming the correctness of the contents with the president of the association.

**4.2 Qualitative inductive research**

A verbatim transcript was prepared from the qualitative data obtained from the subjects; sentences

related to wishes, requests, expectations, and needs for the training of Association X were excerpted; and codes were extracted. The codes were categorized and subcategorized based on their similarity. In addition, the relationships among the categories were examined, and the overall picture of the needs concerning esophageal speech training was evaluated.

To ensure the validity and correctness of data interpretation, the subjects were asked to confirm the coded contents for peer checking. All processes of analysis were supervised by a researcher in nursing familiar with qualitative research.

**5. Ethical procedures**

This qualitative inductive study including participatory observation was approved by the Research Ethics Review Board of Aichi Prefectural University (29 aikendaigakujou dai 6-29 gou). Consent was obtained from the subjects after they were informed orally and in writing of matters including the purpose and methods of the study, that participation was voluntary, that they would not be

**Table 1.** Attributes of the Subjects.

1) ES trainers						
NO	Age	sex	Surgical procedure	Experience as an instructor	Number of learners instructed	Number of those who acquired esophageal speech
T1	70	Male	Total laryngectomy	5 years 11 months	18	8
T2	60	Male	Total laryngectomy	1 month	0	0
T3	60	Male	Total laryngectomy	10 months	9	9
T4	80	Male	Total laryngectomy	More than 10 years	30	25
T5	70	Male	Total laryngectomy	1 month	0	0
T6	70	Male	Total laryngectomy	1 year 7 months	15	12
T7	70	Female	Total laryngectomy	9 years 3 months	5	2
2) ES Learners						
NO	Age	sex	Surgical procedure	Time after surgery	Time after admission	Class
L1	60	Male	Total laryngectomy	7 months	5 months	Beginner
L2	70	Male	Total laryngectomy	3 years 6 months	2 years 3 months	Elementary
L3	70	Male	TPLE <sup>a)</sup>	4 years 10 months	4 years 7 months	
L4	80	Male	TPLE <sup>a)</sup>	3 years 7 months	3 years 5 months	
L5	70	Male	Total laryngectomy	2 years 5 months	1 year 11 months	
L6	50	Female	Total laryngectomy	4 years 11 months	4 year 6 months	Intermediate
L7	70	Male	TPLE <sup>a)</sup>	4 years 6 months	4 year 3 months	
L8	60	Male	Total laryngectomy	4 years 8 months	4 year 6 months	
L9	70	Male	Total laryngectomy	4 years 0 months	3 year 7 months	
L10	70	Male	Total laryngectomy	1 year 1 month	5 months	
L11	60	Male	Total laryngectomy	2 years 10 months	1 year 3 months	
3) Family <sup>b)</sup>						
NO	Age	Relationship	Occupation	Duration of escorting		Frequency of escorting
F1(L)	60	Wife	Part-time (employee)	2 years 5 months		Every time
F2(T)	70	Wife	Part-time (employee)	2 years 4 months		Every time
F3(T)	60	Wife	Part-time (employee)	Approximately 6 years		Every time
F4(T)	70	Wife	Housewife	4 years 7 months		Every time
F5(L)	80	Wife	Housewife	7 months		Every time
F6(T)	70	Wife	Housewife	5 years		Every time
F7(L)	70	Wife	Part-time (employee)	Approximately 1 year		Every time
F8(L)	80	Wife	Housewife	4 years 4 months		Every time

Note 1)<sup>a)</sup> TPLE: Total pharyngo-laryngo-esophagectomy

Note 2)<sup>b)</sup> (L): ES learner's family, (T): ES trainer's family

disadvantaged if they did not participate, and that their anonymity would be ensured.

## Results

### 1. Association X's esophageal speech training system in practice

Based on participatory observation, the esophageal speech training system of Association X was as

follows.

Nikkoren organized Association X and has developed its vocalization training system. Association X holds vocalization classes at two sites in the prefecture. Classes were held once a week and twice a month at the two sites, respectively, and each class lasted about two hours.

Association X has 12 ES trainers, provides beginner, elementary, intermediate, and advanced electrolarynx

classes, and one ES trainer is assigned to two or three ES learners in each class.

The “Vocalization Practice Manual” published by Association X is mainly used in training. This manual is a revision of the “Esophageal Speech Training Manual” published in 1958 and contains information on esophageal speech and vocalization training using electrolarynx speech. The esophageal speech training consists of 10 steps, ranging from vocalization of vocal sounds to singing exercises, and the manual describes the vocalization method and vocalized sounds. The use of this manual, the contents and methods of training, and the pace at which training proceeds are left to the discretion of each ES trainer.

## 2. Needs of association members for esophageal speech training

Fifty codes, 13 subcategories, and 6 categories were generated concerning the needs of association members. The six categories were further categorized into two themes, i.e., “Improvement of methods and contents of esophageal speech training” and “Organizational reform of the association,” as shown in Table 2.

[ ] indicates a category, « » indicates a subcategory, and < > indicates a code representing a subcategory.

### 2.1 “Improvement of methods and contents of esophageal speech training” consisted of three categories.

#### (1) [Improvements for evidence-based training that ensures vocalization]

The ES learners wanted «improvements for evidence-based training» such as <scientific training (L10)> and <training that ensures vocalization (L6)>. In addition, they wanted «guidance according to the surgical procedure» such as <more individualized training for those who have undergone esophageal reconstruction (L4)>. They also felt the need for «improving the teaching methods for learners who are not making progress» such as <I worry about the future of members who are not making much progress in vocalization (S10)>.

#### (2) [Improving training methods and assigning roles for advanced learners]

Family members and ES trainers felt the need for «improvements in the training methods for advanced learners». Family members commented <it may be good to practice saying the name over the phone (F3(T))> and ES trainers commented <it would be good for the trainer to occasionally incorporate free discussions (T3)>. In addition, families wanted «roles to be given to advanced learners» and commented <after joining the advanced class, there have been no lessons, and he feels “left alone again today” (F1(L))>.

#### (3) [Improving the training contents for permitting individual goal setting and offering contemporary enjoyment]

«Improvements in the training contents with goal setting appropriate for the learners’ daily lives» depending on the age and social background of each patient were wanted by family members as in the comment <different training is considered necessary for different persons, because the needs differ between those who work and those who just want to talk at home (F3(T))>, and by ES trainers as in the comment <I do not stick to esophageal speech. Especially for the elderly, I would recommend the electrolarynx or giving guidance so the patient and family can communicate with each other first through substitute speech (T7)>. Furthermore, concerning the contents of the current manual, families wanted «revision for more up-to-date, enjoyable, and diverse training contents», commenting <when my husband was taught, he felt that the training contents were outdated and monotonous (F2(T))>.

### 2.2 “Organizational reform of the association” consisted of three subcategories.

#### (1) [Development of a system for trainers to continue receiving training from better qualified ES trainers]

There were needs for «standardization of the qualification level of trainers», with ES trainers themselves wishing <standardization of trainers’ teaching skills for the continuation of the association (T8)> and families of ES trainers commenting <I wonder if it is a good idea for a person to become an instructor (ES trainer) just because he has become able to speak a little (F4(T))>. Furthermore, there were needs for «a system for ES trainers to continue training», with the family of an ES trainer commenting, <I wish there were a system for training of trainers themselves (F4(T))>.

#### (2) [Reforming the association to allow ES learners and families to voice their opinions about training]

ES learners felt «the necessity of a site where learners can express their honest opinions about training methods» and commented, <even if there is noise ... (omission) ... it would be nice if opinions could be expressed frankly (L5)>. Furthermore, family members expressed their needs for «a site where family members can express their honest opinions about the teaching methods». For example, there was the opinion <Since long ago, the attending family members have stayed outside during practice, so they don’t know what kind of practice is done. I want them to be present (F2 (T))>.

#### (3) [Continuation of functions such as information exchange and family care as well as acquisition of esophageal speech]

ES trainers, ES learners, and family members expressed their «hope for long-time continuation of

**Table 2.** Needs for esophageal speech training in X Association.

Themes	Categories	Subcategories	Codes
Improvements of methods and contents of esophageal speech training	Improvements for evidence-based training that ensures vocalization	Improvements for evidence-based training	Scientific training (L10).
			I wanted to be taught how I can swallow air (L2).
			Training that ensures vocalization (L6)
			I want to be taught an easier way to vocalize (L1).
			I want to be taught a way to vocalize better, even a little (L10).
			More specific guidance would be good (L6).
		I want to be taught in an enjoyable and easy-to-understand way (L1).	
		Guidance according to the surgical procedure	As an onlooker, I wonder if teaching is difficult because vocalization varies with the content of surgery (L10).
			More individualized training for those who have undergone esophageal reconstruction (L4)
		Improving the teaching methods for ES learners who are not making progress	I think it is important to advise those who have been in the intermediate level for a long time to try different vocalization methods (L10).
			I worry about the future of members who are not making much progress in vocalization (L10)
		Improving training methods and assigning roles for advanced ES learners	Improvements in the training methods for advanced ES learners
	It would be good for the trainer to occasionally incorporate free discussions (T3)		
	If I know how the story develops as in the textbook, I can guess what is being said, but sometimes I wonder if that is enough (F3(T)).		
	Roles to be given to advanced ES learners		After joining the advanced class, there have been no lessons, and the he feels “left alone roles to be given to advanced learners e again today” (F1(L))
			I think that advanced students do not need guidance because they have established their own practice methods (L10).
			Since my husband speaks well enough, I don’t think he has any reason to come here, but he seems to wish to be of some help (so I hope they use him effectively) (F1(L)).
			Maybe they don’t want change because many of them are elderly, but I would like to see a system where people in an advanced level can teach here and there on a free basis (F1(L)).
Improving the training contents for permitting individual goal setting and offering contemporary enjoyment	Improvements in the training contents with goal setting appropriate for the learners’ daily lives		I have been instructed to speak slowly, but I think it is not good to do at work (F1(L)).
			It would be good if they teach me how to give quick responses (F1(L)).
			I do not stick to esophageal speech. Especially for the elderly, I would recommend the electrolarynx or give guidance so the patient and family can communicate with each other first through substitute speech (T7)
		Different trainings are considered necessary for different persons, because the needs differ between those who work and those who just want to talk at home (F3(T))	
	Revision for more up-to-date, enjoyable, and diverse training contents	When my husband was taught, he felt that the training contents were outdated and monotonous (F2(T))	
		He once said he would rather have a more enjoyable textbook with more diverse contents (F3(T)).	
		It would be good if the contents of the textbook be updated in line with the times and be revised serially in the future (F3(T)).	

**Table 2.** Needs for esophageal speech training in X Association (continued).

Themes	Categories	Subcategories	Codes
Organizational reform of the association	Development a system for trainers to continue receiving training from better qualified ES trainers	Standardization of the qualification level of ES trainers	Standardization of trainers' teaching skills for the continuation of the association (T8)
			Standardization of the instructors' competence (T7).
			I wonder if it is a good idea for a person to become an instructor (ES trainer) just because he/she has become able to speak a little (F4(T))
			I suppose being a "trainer (ES trainers)" and having many companions would be pleasant (F6(T)).
		I am teaching with the hope that everyone who joins the association will get a good voice (T5).	
		A system for ES trainers to continue training	I heard that, in patient associations in Tokyo, there are ranks of instructors, and instructors are also taught by instructors of higher ranks. It would be nice if there were such a system (F4(T)).
			I wish there were a system for training of trainers themselves (F4(T))
			He became a trainer because he can vocalize, but I am worried as he has not been trained as a trainer (F4(T)).
	He cannot retire since there is no one to replace him as a trainer (F4(T)).		
	Reforming the association to allow learners and families to voice their opinions about training	The necessity of a site where learners can express their honest opinions about training methods	If there is noise in one's voice, one can just keep practicing and correct it over time. It would be nice to be able to frankly express such opinions (L5).
			I understand the importance of the basics of vocalization, but sometimes I feel it would be better for the instructors to listen to our wishes and give us more flexible guidance (L10).
			Since we are a group of adults (old people) in their 50s to 80s, I don't think it is possible for all of us to enjoy practice or anything like that. It appears in the lessons (L10).
			It would be nice if there was consideration for the bad aspects of practicing in a group, such as being easily influenced by others (L3).
		A site where family members can express their honest opinions about the teaching methods	My husband suggested improving the teaching methods, but it was difficult to make changes, so I wish they were more flexible (F1(L)).
			I am sure there are people who want to be taught (by my husband) (F1(L)).
			My husband notices that a member of the association can't talk because the person can't burp well, but he seems unable to point this out to the person (F1(L)).
From the old days, the attending family members have stayed outside during practice, so they don't know what kind of practice is done. I want them to be present (F2(T))			
Continuation of functions such as information exchange and family care as well as acquisition of esophageal speech	Hope for long-time continuation of the patient association for acquisition of speech	We will work with the head office to continue (T8).	
		Continuation of the association for a long time (L7).	
		I wish this association to continue (L8).	
		I hope that this association continues on good terms (L10)	
	I think this association is important to me, because I can't vocalize at home (F5(L)).		
	Functions of the patient association such as information exchange and family care should last	The purpose of coming to the meeting now is not to acquire speech, but to see companions and feel at ease. I want this association to be such a place (F8(L)).	
		I can relieve stress by telling it to other families, so I want the association to become a group that can also take care of the patients' families, (F2(L))	
		I think it is good because the association provides psychological care about the disease and relapse to the family as well as the patient (F7(L)).	

Note) in codes; L (Learner): ES learner, T (Trainer): ES trainer, F(Family): Family

the patient association for acquisition of speech», commenting <I hope that this association continues to thrive (L10)>. Family members further expressed their hope that «the functions of the patient association such as information exchange and family care should last», commenting <I can relieve stress by talking about it with other families, so I want the association to become a group that can also take care of the patients' families (F2(L))>.

### Discussion

The loss of voice is an inevitable consequence of laryngectomy, and the impact on daily life is immense. Until now, nurses have provided assistance to laryngectomy patients mainly in the form of psychological care. However, what patients want is to quickly acquire esophageal speech and restore their daily lives and to receive rehabilitation for this purpose as soon as possible.

Laryngectomy patient associations have been established not only in Japan but also in other countries including the United States, Africa, India, Singapore, China, the Philippines, and Hong Kong. The primary function of many of such associations is psychological peer support by people with the same disease, and weekly to monthly meetings are held at restaurants to report on recent events and provide various consultations [11]. Vocal training is provided by SLPs working in hospitals or in private practice [12]. Thus, overseas, the roles are clearly divided between the medical staff handling vocal training and patient associations providing peer support.

Association X, which was evaluated in this study, is a medium-sized patient association belonging to the Chubu Japan Block of Nikkoren, and has long played the dual roles of providing esophageal speech training and peer support solely by laryngectomized members, with no involvement of medical personnel in its operation or in guidance of substitute vocalization. The survey in Association X showed that there were needs for “Improvement of the methods and contents of esophageal speech training” and “Organizational reform of the association,” including peer support.

Concerning the need for “Improvement of the methods and contents of esophageal speech training,” three categories, i.e., [Improvements for evidence-based training that ensures vocalization] [Improving training methods and assigning roles for advanced learners] and [Improving the training contents for permitting individual goal setting and offering contemporary enjoyment] were indicated. Esophageal speech requires the acquisition of new body movements, such as taking air into the oral cavity, covering the pharyngeal cavity with the back of the tongue to prevent air from escaping into the nasal cavity and swallowing it, and using abdominal muscles to expel the swallowed air before it enters the stomach.

ES trainers have been imparting tips on how to use the body that they themselves have acquired, but there has been a need for standardization of the training methods and contents.

To fulfill these needs, in 2015, Nikkoren created an instructors' curriculum and standard training materials for leaders of patient associations throughout Japan, which has helped to raise the training quality in patient associations nationwide [13]. Those who have been trained according to the curriculum are qualified as “ES trainers,” an original title given by the patient association, and 611 people had been certified by 2021 [14]. At Association X, 12 ES trainers are giving lessons. However, these teaching materials are used in classes to qualify ES trainers, and the lessons are considered to depend on each trainer's personal experience and knowledge. The results of this study also suggest that the training is not standardized in Association X either, and that the training is based on the trainers' personal experience of acquiring esophageal speech. Therefore, it is necessary to consolidate ES trainers' tips on esophageal speech that have been acquired within the association, for the medical personnel to show evidence, and to standardize and systematize the training methodology.

Secondly, observation of the advanced class of Association X also indicated problems such as the fact that no guidance was given by ES trainers to advanced ES learners and that there was much free talk among the learners. Some vocalization classes provide individual instruction to new enrollees and beginners, and group lessons in intermediate and more advanced classes [13], while others have a “vocal friend club” for those who have completed the advanced course [14]. Thus, the placement of ES learners into classes, the contents of lessons in each class, and the guidance to advanced ES learners differed among vocalization classes. Therefore, it is necessary to develop training programs for advanced ES learners to improve their clarity and fluency of speech, and, if they wish to continue their occupational and social activities after laryngectomy, for medical personnel to intervene and help the ES learners set goals according to their individual circumstances, taking their surgical procedures and reconstruction methods into consideration.

Regarding the teaching materials to be used, Association X continues to use the esophageal speech manual prepared in 1965. Although the book has been revised, it still contains obsolete words from the immediate postwar period. Therefore, it is necessary to update the contents of the training that have been inherited in the association by standardizing, systematizing, and rearranging them.

On the other hand, concerning the need for “Organizational reform of the association,” three categories, i.e., [Development of a system for ES trainers to continue receiving training from better qualified trainers] [Reforming the association to allow ES learners and families to voice their opinions about



training] and [Continuation of functions such as information exchange and family care as well as acquisition of esophageal speech] were suggested. These needs were voiced not only by ES learners and their families but also by ES trainers themselves. As mentioned above, associations for laryngectomy patients in Japan are organized by Nikkoren, which has prepared a curriculum and standard teaching materials for prospective ES trainers. However, in Association X, esophageal speech training is conducted by each ES trainer in their own way with little standardization of the training method. Therefore, it appears likely that the process and tips of esophageal speech acquired by the ES trainers themselves through their personal experience will prevail over time if they have participated in only one training session at Nikkoren. This is why training of ES trainers must be continued. In addition, for long-term continuation of patient associations into the future, it is important to establish a group culture in which ES trainers, ES learners, and family members can all freely exchange opinions about the management of the association. This will lead to the third point, [continuation of functions such as information exchange and family care as well as acquisition of esophageal speech].

Although the above discussion about the need for esophageal speech training is limited to Association X, which is one of the 53 patient associations affiliated with Nikkoren, it demonstrates the problem with leaving the task of maintaining esophageal speech training to patient associations alone. To resolve this problem, roles need to be divided, e.g., medical personnel should collect data on training and esophageal speech from patient associations and engage in training based on scientific evidence, while patient associations should undertake activities centering on peer support. It is also important for both parties to cooperate with each other while fulfilling their respective roles. Such collaboration will facilitate the acquisition of esophageal speech by laryngectomized individuals.

### Conclusions

The following conclusions were drawn regarding the needs for the system and contents of esophageal speech training in a laryngectomy patient association in Japan.

1. Association X is one of the 53 patients associations in Japan organized by Nikkoren. Medical personnel are not involved in the teaching of substitute vocalizations, and training methods based on empirical knowledge have been conveyed by 12 ES trainers certified by Nikkoren.

2. “Improvement of methods and contents of esophageal speech training” and “Organizational reform of the association” were expressed as needs concerning the training method for esophageal speech in Association X. The former category included

“Improvements for evidence-based training that ensures vocalization,” “Improving training methods and assigning roles for advanced ES learners”, and “Improving the training contents for permitting individual goal setting and offering contemporary enjoyment”; the latter category included “Development of a system for trainers to continue receiving training from better qualified ES trainers,” “Reforming the association to allow ES learners and families to voice their opinions about training” and “Continuation of functions such as information exchange and family care as well as acquisition of esophageal speech.”

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