

Development and Evaluation of a Training Program for Organ Procurement Coordinators Using Standardized Patient Methodology

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Abstract

Objectives: The low rate of consent by next of kin of donor-eligible patients is a major limiting factor in organ transplant. Educating health care professionals about their role may lead to measurable improvements in the process. Our aim was to describe the developmental steps of a communication skills training program for health care professionals using standardized patients and to evaluate the results.

Materials and Methods: We developed a rubric and 5 cases for standardized family interviews. The 20 participants interviewed standardized families at the beginning and at the end of the training course, with interviews followed by debriefing sessions. Participants also provided feedback before and after the course. The performance of each participant was assessed by his or her peers using the rubric. We calculated the generalizability coefficient to measure the reliability of the rubric and used the Wilcoxon signed rank test to compare achievement among participants. Statistical analyses were performed with SPSS software (SPSS: An IBM Company, version 17.0, IBM Corporation, Armonk, NY, USA).

Results: All participants received higher scores in their second interview, including novice participants who expressed great discomfort during their first interview. The participants rated the scenarios and the standardized patients as very representative of real-life situations, with feedback forms showing that the

interviews, the video recording sessions, and the debriefing sessions contributed to their learning.

Conclusions: Our program was designed to meet the current expectations and implications in the field of donor consent from next of kin. Results showed that our training program developed using standardized patient methodology was effective in obtaining the communication skills needed for family interviews during the consent process. The rubric developed during the study was a valid and reliable assessment tool that could be used in further educational activities. The participants showed significant improvements in communication skills.

Key words: *Communication skills, Family interview, Organ procurement coordinator, Standardized patient*

Introduction

Organ transplant is the best option for end-stage organ diseases, offering a better quality of life. However, the low rate of consent from next of kin (NOK) of donor-eligible patients is a major limiting factor in the process. Although the demand for organ transplant has increased 70% during the past decade, consent rates are still 20% to 60%.^{1,2} The modifiable factors associated with the consent process are information discussed during the request, perceived quality of care of the donor, understanding brain death, specific timing of the request, setting in which the request is made, and the approach and skill of the professional in making the request.³ The consent process for organ and tissue donation is multifaceted and highly technical, not only for NOK but also for health care professionals.

It is widely acknowledged that doctors and nurses find it difficult to deal with death and dying. Conveying bad news, having to explain brain death, and approaching the NOK for permission to retrieve organs for donation all place considerable demands

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on these individuals. Lack of training in communication skills has been identified as an important barrier during the consent process. Experience and training can enhance confidence in approaching the NOK and can improve their manner in making donation requests.^{1,4}

Educating health care professionals about the criteria for organ and tissue donation and underlining their role in making the request may lead to measurable improvements in the process. Initiatives designed for this purpose should include a combination of educational methods tailored to the working circumstances of the health care participants, which would allow maximal transfer to the health care professional's work routine.⁵ Experiential teaching methods could be used to reinforce principles of good practice in the organ procurement process, allowing training participants the opportunity to apply these principles within simulated environments.

Two programs have been developed in Europe to address the educational needs of health care professionals involved in organ consent: the European Donor Hospital Education Programme (EDHEP) and the Transplant Procurement Management Courses. The European Donor Hospital Education Programme, initiated by the Eurotransplant International Foundation in 1991, is a highly interactive, 1-day workshop consisting of different working formats, including role playing with simulated relatives. The European Donor Hospital Education Programme has been implemented in over 30 countries and has been translated into 17 languages.^{1,4,6} The Transplant Procurement Management Course, also developed in 1991, has offered Spanish participants various levels of courses based on a learning-through-experience model of meeting local educational needs.⁷

Despite the comparative success of these training programs, the continued worldwide shortage of donor organs has led many countries to develop national systems for organ procurement and allocation. These systems comprise various combinations of legislation, organizations, training programs, publicity campaigns, and the appointment of a special workforce trained for this purpose.⁸ A member of this trained group of workers is the organ procurement coordinator (OPC), whose primary role is requesting organ donation from families of potential donors. The OPCs are trained to ensure that the legal NOK is provided the option of organ and tissue

donation in a sensitive and caring manner and that the emotional and cultural needs of the NOK are met.⁹

In Turkey, the OPCs are graduates of health sciences schools (medicine, nursing, and social work) who have successfully completed a 40-hour face-to-face certification program. The Turkish Ministry of Health organizes the courses in collaboration with the Association of Organ Procurement Coordinators (AOPC), with the course hosted by a medical school or a training hospital and 20 to 40 participants invited to each course. The course consists of lectures, discussions, and role playing.

After a program evaluation in 2008, our group decided to implement new course sessions for OPCs to improve communication skills during the organ request process. The aim of this study is to describe the developmental steps and to evaluate the results of these sessions.

Materials and Methods

Study participants

Our study included 20 participants with different backgrounds and levels of experience in organ procurement. Participants were informed about the study, which had already been implemented in the course program. Participants provided verbal consent to include their assessments and feedback forms in an anonymous way for statistical purposes. Participants also provided written consent to provide 6-month follow-up evaluations through e-mails about the effect of the course on their professional development.

Rubric development

Our first step in developing an assessment tool was to identify from a review of the literature important issues that arise during interviews with families or NOK. The AOPC provided expectations received from coordinators while interviewing families. Using these data, we defined the behaviors, tasks, and responsibilities of an OPC during an interview with NOK, and 3 levels of competency (unacceptable, acceptable, and successful). We preferred developing an analytic rubric because the criteria were mostly comprehensive behaviors that could be described in a phrase, sentence, or even a paragraph for each level of competency. Thus, the raters had a better idea of what was to be evaluated (Table 1). We sent the rubric to a group of experts from AOPC and asked

Table 1. Phrases Describing the 3 Levels of Competency for 2 Samples of the Criteria of the Rubric

Criteria	Unacceptable (0 points)	Acceptable (1 point)	Successful (2 points)
Explaining brain death	Not asking the family whether they know or not about brain death, not defining brain death, not explaining the decision process for brain death, and not explaining how it worked in this case.	Asking the family whether they know or not about brain death, but not death, but not not explaining the decision process for brain death, and not explaining how it worked in this case.	Defining brain death once more after asking the family whether they know or not about brain death, explaining the decision process for brain death, and explaining how it worked in this case.
Explaining the appropriate organs for procurement	Not explaining the appropriate organs for procurement in general.	Explaining the appropriate organs for procurement in general.	Explaining the appropriate organs for procurement in general and underlining that it is the family's decision on which organ to donate. %)

the experts to provide structured comments. Our group, medical educationists with expertise in teaching and evaluating communication skills, next refined the tool. Finally, we sent the rubric to course instructors for feedback. The finalized rubric included 16 criteria (Table 2).

Case development

Developing the case is the initial step in standardized patient methodology. We asked the members of AOPC for their experiences during interviews. Actual cases and some scenarios used in previous role play sessions were included during development. Five cases were developed, with each containing a primary and a secondary challenging issue (Table 3). We sent the cases back to the AOPC members for feedback.

Table 2. Criteria Evaluated in the Rubric

<ul style="list-style-type: none"> • Welcoming the family and introducing self • Giving clear information about the donor • Explaining brain death • Respecting the family's feelings • Requesting consent • Respecting the family's perspective • Explaining the importance of organ transplant • Clarifying the concerns regarding disfigurement • Explaining the delay to burial process • Explaining for no additional cost • Explaining the appropriate organs for procurement • Explaining the legal and religious issues • Nonverbal skills • Verbal skills • Ending the interview • Decision of the family
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After confirmation, standardized patients were chosen and trained to portray the cases.

Precourse questionnaire

We delivered a written questionnaire to the participants during the second session of the course to identify whether participants previously had been involved in a real family interview, to rate their level of competency with each issue during the standardized patient encounters in the first session, and to identify those issues that they need most improvement at the end of the course.

Program design

Participants were divided into 3 groups at the beginning of the course and were invited to standardized family interviews in the first session. Cases were appointed to participants according to the groups so that each participant could review all of the cases during the group debriefing sessions. All interviews were recorded. After participants completed the lecture and discussion sessions of the course on clinical, ethical, administrative, and legal contents, they participated in a debriefing session in the afternoon of the fourth day. They watched the video recordings, discussed the challenging issues in each case, and discussed the performance of each participant. Participants also reflected on their performance during the interview, with other

Table 3. List of Scenarios, Description of Next of Kin, and Challenges of Each Case

Donor	Next of Kin	Primary Challenge	Secondary Challenge
30-y-old woman, shot in the eye by her husband in front of their small children	Mother and father	Not wishing any surgery to the body	Not allowing autopsy
42-y-old man, suicide with a gun, left 2 children behind	Wife and wife's brother, invited after a while	Disfigurement	Asking for some financial support for the children
6-y-old boy, traumatic intracranial hemorrhage	Mother and father	Emotionally exhausted family	Asking to know who will be the receptor
23-y-old man, car accident	Mother and father	Unable to accept the death, "heart is beating"	Asking who will decide who will receive the organ, concerns about wealthy individual being first choice
44-y-old woman, alone, after a period of time Two sisters intensive care unit	Two sisters	Concerns about religion	Concerns about the receptor's religion and personality

participants and the educator providing feedback. During the debriefing session, all participants completed the rubric for each participant for the precourse performances. During the morning of the fifth and final day, all participants had their second standardized family interviews, which was a different case from the first one. Interviews were again recorded and discussed during the debriefing session in the afternoon of the fifth day. The debriefing process and rubric evaluation for the postcourse performance were held in the same way as for the precourse.

Feedback on standardized patient encounters

A feedback form was provided at the end of the second debriefing session that asked participants to rate the standardized patient methodology using a 5-point Likert scale.

Validity and reliability of the rubric

We sent the rubric to a group of experts from AOPC and asked them to evaluate the preliminary criteria with respect to content and construct validity. The generalizability coefficient was used to evaluate the reliability and the construct validity of the rubric. Generalizability theory extends classic theory by estimating the magnitude of multiple sources of measurement errors. Eighteen participants were assessed by 6 raters. For the equivalent of interrater reliability, the facet of generalization is the rater. We estimated variance components by using analysis of variance. We calculated the generalizability coefficient using the formula for nested design.

Evaluation of the participants' achievements

We calculated the mean precourse and postcourse evaluation scores from the 6 peer raters for each participant and used the Wilcoxon signed rank test for the statistical analysis of their achievement.

Postcourse questionnaire

E-mails were sent to each participants (all participant signed the consent forms) 6 months after the course to gather information about the effect of the course on their practice.

Results

Precourse questionnaire

Participants had a wide range of experience regarding interviewing NOK (47% had no experience, 29% had

interviewed a few, and 24% had interviewed several). During the first interview, the experienced participants rated themselves as more competent than the novice participants, who felt very uncomfortable (Table 4).

Table 4. Narrative Statements From the Precourse Questionnaire

- "I have never interviewed a family, nor watched someone else doing it. I felt myself completely insufficient."
- "I have already had 16 family interviews, but I have been able to get the consent only in 4 cases. I must have been doing something wrong."
- "I have not had an interview yet; I have not had any training on this issue. I felt incompetent; I was really bad. I need training. I need to control my feelings."
- "I want to learn what I have been missing."
- "I want to see the various experiences, define my own deficiencies, and improve myself in these areas."
- "I have had family interviews so far. I can explain the process, give technical information to the families, but I have difficulty to answer the religious questions."

Validity and reliability of the rubric

According to experts from the AOPC, the rubric had content and construct validity. We evaluated the rubric as reliable and valid after calculating the generalizability coefficient ($\sigma_1^2 = .801$).

Evaluation of participants' achievements

The performance of the participants was evaluated based on the mean score from the 6 raters. All participants received higher scores for their second performance. The increases in the subsequent scores for all participants were statistically significant (Wilcoxon signed rank test; z score = 3.724; $P < .05$).

Feedback on standardized patient encounters

The statements offered in the feedback form and the perceptions of the participants on standardized patient methodology using the 5-point Likert scale are shown in Table 5.

Table 5. Statements From Feedback Forms With 5-Point Likert Scale and Median Participant Evaluation Values

Statement	Median (n= 19 participants)
Standardized patients and scenarios were realistic	5
Physical conditions of the rooms were sufficient	5
The interview period was long	4
The provided information and the discussions before the interview were sufficient	4
The interview contributed to my learning	5
The availability of the videos of the interviews contributed to my learning	5
The feedback provided after watching the videos in groups was very helpful	5

Postcourse questionnaire

Thirteen of 20 participants answered the questionnaire via e-mail at the 6-month course evaluation follow-

up. Participants noted from 2 to 8 family interviews during this period, with increased consent rates at their institutions.

All of the participants expressed that the course had a positive effect on their daily practice, especially regarding skills acquired during the standardized family interviews (Table 6). Most participants suggested adding more experiential learning opportunities to the entire course program and especially more standardized family interviews.

Table 6. Narrative Statements From the Postcourse Questionnaire

- "The course let me see my own deficiencies and improve myself, especially on these issues."
- "After the course, I feel myself more confident when entering the room for an interview."
- "While interviewing with the families, I always remember where to sit and how to control my voice tone."
- "I have learned to get prepared before entering the room: who is the dominating character, what experiences they had in the hospital, the setting of the room, etc."
- "I have been trying not to repeat the other participants' and my faults that we had seen in the video recordings. The rubric helps me to remember the criteria for my self-control."
- "I became more conscious in family interviews. The standardized patient interviews provided standards for my practice."
- "Watching the videos helped us better understand what we we're doing in the family interviews and what we should do."

Discussion

We developed a communication skills training program using standardized patient methodology for health care professionals who are in charge of the request process for organ donation. Our aim was to have participants with improved communication skills at the completion of training who felt more competent and confident in asking NOK for consent. We intended to overcome the dilemma of the high refusal rates from NOK. The latest studies on the organ procurement process have concluded that organ shortage continues to be a public health care crisis, and an inability to obtain consent from NOK remains a major factor limiting of organ donation.¹⁰⁻¹⁴

High level, complex training of health care professionals is a means to overcome this problem, and a number of programs introduced in North America and Europe over the past several years has sought to stimulate organ donation. Implementation of these programs has increased recovery rates; however, after a period of initial enthusiasm, a plateau or even slow recession subsequently occurs.^{10-12,14}

As shown in previous analyses from various countries, the need for advanced educational opportunities and demands for training in

communication skills using appropriate instructional methodologies continue for this group of health care workers.^{10-12,14-18} In line with the literature, our program is designed to meet the current expectations and implications in the field.

During program development, we determined the topics and interventional focuses by reviewing the literature and the experiences of our national experts regarding cultural diversity. Behavior and attitude during the NOK interview in explaining brain death, showing empathy while requesting consent, respecting the point of view of NOK, explaining the importance of organ donation, and replying to concerns from NOK (eg, regarding disfigurement, burial process, additional cost, appropriate organs, legal and religious implications) were addressed during program development. Our training program focused on communication skills, with theoretical content related to these issues provided during other sessions of the course program. Each topic chosen for our program has been mentioned in several studies as a problem to be overcome or has been a reason for family refusal.^{1,10,13,16} We used these topics from the literature to develop our assessment tool and our scenarios for standardized family interviews. In their evaluation of the rubric designed for assessment of family interviews, the experts from the AOPC and the educators of our course found content and construct validity in the rubric.

We developed 5 scenarios for standardized family interviews, each focusing on a primary and a secondary challenging issue. Standardized patient methodology was the best technique for helping participants to practice in an immersive and safe environment and for achieving improved communication skills. The use of standardized patients in case discussions, in role playing sessions and in practices have been shown to be preferred and effective instructional method in several studies.^{4,6,11,12,19-22} In studies conducted in US medical and nursing schools designed to increase the awareness of organ donation in undergraduate students, researchers used standardized patient methodology; however, the aim, content, and outcomes were completely different.¹⁹⁻²² The articles about EDHEP in the Netherlands, the United Kingdom, and Germany have described the use of simulated relatives during videotaped role playing. One-half of the participants were able to practice role

playing, whereas the other one-half observed these interactions with predefined observation forms.^{1,4,6} Our unique training program using standardized patient methodology provided a real life-type environment and content for all of the participants to practice and to obtain feedback and for the educators to evaluate the interview performance of all participants before and after training.

According to the data from precourse feedback forms, some of our participants had the advantage of having family interviews before the course and were able to define their gaps. They provided feedback on standardized patient encounters after the second interview indicating that the scenarios and standardized patient performances were highly realistic. These participants agreed completely that the standardized patient methodology contributed to their learning. However, self-evaluation by participants regarding their confidence and competence at the end of the course should be supported with more objective evaluations, such as the assessment of their improvement or the integration of their performance into practice.

The participants' pre- and posttraining interview performances were assessed by their peers using the rubric developed in our study. First, we evaluated the interrater reliability of this assessment tool. We calculated the generalizability coefficient as 0.801, which is acceptable. The mean scores of the participants from the 6 raters showed that participants had improved interview performances ($P < .05$). As a follow-up, we asked the participants whether the program affected their daily practice after a 6-month period. Participant response was positive regarding learned communication skills in family interviews.

A prospective study was conducted in the United Kingdom to determine the effect of EDHEP on communication skills, since EDHEP was designed as a workshop to improve donation awareness and did not include an objective evaluation process. The study included a 3-step evaluation process in an untreated control group design (pretest, posttest, and 6-mo follow-up). The participants did not receive any feedback on their interview performance during the process. The videotaped encounters for all steps were rated by 3 research assistants using the EDHEP communication skills assessment instrument. The generalizability coefficient for reliability was 0.81, and the participants rated the scenarios and standardized patient performances as realistic and

acceptable. The authors concluded that attendance at EDHEP did lead to a significant improvement in some but not all communication skills.²³ Although these results were almost the same as our findings, we concluded that our training program was more effective than the original EDHEP for a number of reasons: the original EDHEP did not include full participation of all participants, had only 1 session for standardized patient interviews, and had no evaluation process.

In conclusion, the training sessions we developed using standardized patient methodology was an effective program in improving communication skills needed for family interviews during the consent process. The program was rated highly by the participants. The rubric developed during the study was a valid and reliable assessment tool that could be used in further educational activities. The participants showed significant improvements in communication skills. Further investigations should be conducted to generalize the results for larger groups, as this study had the major limitation of being the pilot study on a small group.

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