Teaching Communication Skills to Hospice Teams: Comparing the Effectiveness of a Communication Skills Laboratory With In-Person, Second Life, and Phone Role-Playing

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Abstract

Introduction: Communication skills are critical in hospice care but challenging to teach. Therefore, a hospice agency developed a communication skills laboratory for nurses and social workers. Methods: Learners role-played 3 common hospice scenarios. The role-play modalities were in-person, Second Life, and telephone. Learners were scored on 4 communication aspects. Results: Learners in all modalities rated the laboratory as very effective. However, learners in the Second Life and phone modality showed greater improvements from scene 1 to 3 than those in the in-person modality. There were no significant differences in improvement between the Second Life and phone modalities. Conclusion: Results support the effectiveness of this communication skills laboratory while using different teaching modalities and show phone and Second Life role-plays were more effective than an in-person role-play.

Keywords

communication skills, hospice, communication in hospice, Second Life, teaching modalities, role-plays, medical education

Introduction

A common challenge within hospice care is improving quality of care.¹ A significant aspect of quality care is effective communication, especially in the realm of end-of-life care. Effective delivery of hospice or end-of-life care honors the medical decisions of patients, meets the spiritual and emotional needs of both patients and caregivers, and provides assistance in navigating medical and nonmedical resources to meet patient and caregiver needs. These essential components of hospice care cannot be met without effective communication.² In a study conducted by Heaven and Maguire,³ researchers found that hospice patients tend to share their concerns regarding physical symptoms with nurses and limit sharing their emotional issues. Furthermore, nurses were selective in acknowledging and registering patient concerns. Too often, poor interviewing skills by health care providers may lead to not enough information obtained from their patients in regard to disease and emotional issues. ⁴ Effective communication is not only the art of expressing one’s self through verbal and nonverbal cues but rather is a multifaceted skill that includes active listening and the exploration of matters through the use of effective inquiry, among other aspects. Ineffective communication between health providers and patients may lead to patient and caregiver dissatisfaction, anxiety, and stress.²

Previous research has shown that effective communication between health care providers and patients leads to enhanced satisfaction by patients and families.⁵⁻⁷

In 2010, Hospice of the Valley (HOV), the largest free-standing hospice in the country with a census of over 3,000 patients, began a new method of tracking quality of care issues and/or complaints from patients and caregivers. Previously, complaints came to multiple sources, including senior administrators, medical directors, team leaders, frontline staff, quality department staff, real-time phone calls from patient advocates, and through our mailed postcare surveys conducted by an independent company (Press-Ganey).⁸ We realized we needed a system that would log all complaints in the same place so they could be categorized and assessed. Therefore, a computerized quality database was created, which tracked concerns

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from all sources mentioned earlier. Each complaint was logged into a database and then escalated to the supervisor of the person or the team involved. The supervisor explored the complaint, spoke to the patient/family and staff/team involved, and entered a summary of outcome and any suggestions for systemic change.

These complaints were tracked over the next 12 months and categorized as patterns emerged. Categories included clinical skills (eg, management of pain, dyspnea, nausea), general quality of care, palliative care unit setting complaints (eg, noise, cleanliness), quality of vendor, meeting expectations, follow-up by staff, and communication. To our surprise, the largest category of complaint was not pain and symptom management. Instead, over half of these complaints were regarding communication issues. These complaints were varied but often could be summarized as, “The staff insisted on following their management plans and did not listen to our desires. They felt they knew better.”

We wondered how this could be addressed. From reviewing the literature, we had reached the conclusion that didactic teaching methods for communication skills were not as effective as nondidactic methods.9-13 Since clinical staff were already participating in a yearly mandatory skills laboratory for pulmonary equipment, wounds, lines and drains, and other medical issues, we decided to pilot an interactive communication skills laboratory (CSL). Therefore, in 2011 we brought together 16 nurses per afternoon and had them role-play 2 scenes (15 minutes each), each with 1 to 2 actors and a mentor who gave them feedback after the role-play. The laboratory was met by the nurses in advance with anxiety (“I was almost frozen with fear and very worried about failing with so many people watching”) and after participation with enthusiasm (“This was so much better than I expected. I learned a lot”). However, it was extremely time and labor intensive to have all learners, actors, and mentors travel from various locations to the office and to organize 2 complex in-person role-play scenarios. Previous research had shown that medical schools were experimenting with using virtual environments as sites for role-playing, and we had begun to trial these virtual role-plays with local medical students who were young, tech savvy, and welcomed computer usage.9,11,14-17 Nurses were therefore asked whether they thought they might be able to role-play on the phone or via computer. The nurses, generally an older cohort, felt that it would not be effective, primarily because they needed the in-person interaction, watching for nonverbal cues and being up close and personal.

Despite their reservations, we decided to test the hypothesis that phone or a computer-based virtual world role-plays would be as effective as the in-person role-plays but would require significantly less use of staff time and resources.17 Therefore, the purpose of this study was to compare the effectiveness of the 3 methods of role-playing: in-person, Second Life, and phone for communication skills training.11,17-19

**Methods**

This was a randomized experimental study and was approved by the HOV Institutional Review Board. The Hospice of the Valley team leaders were asked to refer nurses and social workers to the laboratory. Self-referrals were also accepted. Referred nurses and social workers were then randomized into 1 of the 3 role-play modalities: in-person, phone, or Second Life. During each role-play session, nurses and social workers were asked to role-play 3 different scenarios, presented in varying order, modeled after common complaints specific to their discipline gathered from the quality database. Each learner experienced only 1 modality. After each scene, the learner was provided with feedback and guidance by the mentor. Learning was assessed by the mentors using a rubric (refer to the section on scoring grid). The results of the first scene were used as a baseline to measure change from scene 1 to scene 3. Satisfaction data from participants were gathered through post-CSL surveys.

**Mentorship**

The mentors in the in-person role-play only served as the mentor and had separate actors to assist with the role-playing. In the phone and virtual role-plays, mentors played 2 roles of patient and mentor, shifting roles during the role-play itself. The mentors (N = 10: nurses = 5 and social workers = 5) were hospice staff educators (for whom this laboratory was part of their job) and were chosen for their previously exhibited mentoring skills. They were trained in three 3-hour sessions with a single facilitator doing all sessions. The facilitator was a paid management consultant who had worked intermittently with hospice teams and was skilled in delineating goals, keeping the group to a schedule, giving supportive and clear feedback, and teaching others to do the same.

To minimize scoring subjectivity, mentors were trained on how to mentor, how to score role-plays consistently, and in the complex task of being both actor and mentor for the phone and Second Life avatar methods. Mentors learned to shift from acting to mentoring when they observed the learner making significant errors (eg, repeatedly trying to educate a patient with words, rather than eliciting and then listening carefully to the patient’s thoughts and feelings) or when the learner was floundering and requesting help. Each mentor was assigned an equal number of learners.

Although there are advantages and disadvantages in having the mentor also be the actor versus having a separate actor, in the phone and Second Life modalities, practicality rather than research guided this choice. Because it was not necessary to locate, train, schedule, and coordinate a separate actor, the program was far more efficient and labor saving. Scheduling could be done directly by the mentor, rather than requiring administrative support. Interestingly, the mentors actually preferred this method, because it allowed them to guide scenarios as they unfolded, stopping the learner, providing feedback, and proposing different approaches.

**The Scenes**

Common complaints gathered from the quality database were used to create 3 scenes for nurses and 3 scenes for social
workers (Figure 1). Of the scenes, 2 were different for the 2 disciplines, while 1 was the same. Scene sequence was randomized and all 3 scenes were role-played within the same modality (in-person, Second Life, phone). For each scene, a written template was provided which included the scene setting, some background information on scene, directions for the learner, directions for the mentor, directions for the actors, if applicable, and a scoring grid for the mentor.

**The Modalities**

**In-Person.** The live role-plays took place in a room with several role-play stations separated by dividers. During each role-play the learner, the mentor, and 1 or 2 actors (depending on the scene) were present.

**Second Life.** Second Life technology is a virtual scene on the computer with avatars (life-like models of human figures created to look like patients or medical staff). The mentor could control the patient avatars (standing, sitting, laughing, and crying), and the learner could control the staff avatars, although few did. The Second Life role-plays were arranged so that the mentor and learner could each participate from their offices, which were often miles away from one another. Each computer had Second Life and Skype (for audio) installed. The virtual world had been designed by a Second Life consultant to resemble one of our palliative care units (funding for this software and consultant was made possible through a previous grant for education of medical students). The avatars were set up to simulate each scene. At times, the mentor would stop the scene and give feedback and then return to her role as actor, at her discretion.

**Phone.** The phone role-plays were similar to the Second Life role-plays, except they were completed entirely on the phone. The mentor and learner could again be in any location (eg, home, office) and thus could be scheduled directly by the mentor. Otherwise, the method was the same.

All scenes were role-played for 10 minutes, followed by 10 minutes of feedback and mentoring. The learner then transitioned to another scene, completing all 3 scenes in 60 minutes. All mentors took the last 5 minutes to give overall feedback, review teaching points, and suggest 1 or 2 areas for learner development. The mentor then immediately scored the learner. Learners were not told their scores, because during the pilot we found it upset some learners if they were not highly scored, detracting from the effectiveness of the experience. The learner was then instructed by their mentor to immediately complete a feedback survey on the CSL experience.

**The Scoring Grid**

The scoring grid was developed using a Likert-type scale, with each item scored from 1 (poor) to 4 (excellent). Participants were scored on 4 aspects of the role-play, so the maximum score on each scene was 16:

1. Did the learner begin by finding out what the patient/family knew?
2. Did the learner listen at least 50% of the time?
3. Did the learner explain in a language that could be understood, with no jargon?
4. Overall, how did the learner do in this particular scenario?

The grid was initially developed for medical students based on 3 principles of communication for physicians, which were also applicable in the current setting.

**The Learners**

At the beginning of the study, HOV had approximately 770 nurses and 140 social workers on staff. Team leaders were each asked to
refer 4 nurses and 2 social workers to the CSL. Each referral was asked to attend (in-person or by videotape) a 1-hour presentation on basic communication skills using videotaped scenes that were analyzed by the audience prior to the study, and each was also asked to sign a consent to be randomized into the different conditions, participate in the CSL, complete a postsurvey, and be included in the study. Only those learners who consented to have their data used for research are included in this publication.

Learners were then randomized using a random number table into 1 of 3 groups: in-person, phone, and Second Life role-play. Each of the 10 mentors worked in all 3 modalities, mentoring approximately 10% of the learners involved in the study. No distinction was made between the profession of the mentor (nurse or social worker) and the profession of the learner (nurse or social worker), that is, nurses mentored both nurses and social workers, and social workers mentored both nurses and social workers.

Immediately after the role-plays, the learners completed surveys about their experiences, and these results were analyzed and correlated with performance.

**Statistical Analysis**

Repeated-measures analysis of variance were performed to measure scene-to-scene changes within each modality. Independent *t*-tests were performed to compare nurses and social workers on their rating of the laboratory as well as their performance on the role-plays. Pearson correlations coefficients were performed to measure the relationship between learner performance and rating of the CSL. General linear model analysis of covariance with least significant difference post hoc analysis was performed to measure changes between modalities from scene 1 to scene 3, with scene 1 being the covariate and scene 3 the outcome. Statistical analysis was performed using SPSS software version 20.0. Significance was set at an alpha level of *P* < .05.

**Results**

A total of 279 social workers and nurses were referred to the study by team leaders. In all, 245 completed the sessions and 229 consented to have their data used for publication and are included (Figure 2). By discipline, there were 161 nurses and 68 social workers. The nurses averaged 20 years of experience (20.14 ± 12.13 years) and the social workers averaged 13 years of experience (13.24 ± 8.63 years).

Of the 229 who completed the sessions, 220 rated the overall effectiveness of the program. Eighty-five percent rated the program’s effectiveness as *excellent* or *very good* on a scale from 1 to 5, with 5 being the highest. Only 0.90% rated it as *poor*.
Learners were also asked how well they felt the role-play experience had prepared them to discuss end-of-life decisions with patients and their families and how well it had prepared them to deal with difficult patients. In this case, the scale was from 1 to 4, with 4 being very well. The same number (222) completed these 2 survey questions, with 94% rating the laboratory as preparing them very well or moderately well to discuss end-of-life decisions with patients and families and 93% rating it as preparing them very well or moderately well to deal with difficult patients.

This comment from 1 learner was common, “The different scenes are real in the field. My communication with the patient or family during the exercise helped me listen to myself and how I was interacting in each scene.”

There were no statistically significant differences between disciplines on the ratings of the laboratory. However, when asked to rate the overall effectiveness of the program, nurses rated it more effective at a borderline level of significance \( P = .05; \) Table 1. No statistically significant differences in the ratings of the program were observed among modalities except for in-person versus phone for end-of-life discussion preparedness. In-person learners rated the laboratory significantly lower in preparing them to discuss end-of-life decisions \( P < .05; \) Table 2.

No significant differences were found in performance at baseline (scene 1) between nurses and social workers \( (9.91 \pm 2.92 \text{ and } 10.41 \pm 3.00, \text{ respectively}; \ P > .05), \) despite nurses in this study being significantly more experienced than social workers \( (20.14 \pm 12.13 \text{ and } 13.24 \pm 8.63 \text{ years, respectively}; \ P < .001). \) Therefore, from here on the disciplines will be analyzed together.

Overall, significant improvements were observed from scene to scene (scene 1 to scene 2, scene 2 to scene 3, and scene 1 to scene 3) within each modality, except from scene 2 to scene 3 in the in-person modality. (Note that the number of each scene designates its order during the hour; since scenes were randomized, each number could represent any of the 3 scenarios.) Not surprisingly, the largest improvement across modalities were observed from scene 1 to scene 3, all of which were statistically significant (Table 3).

When comparing improvements from scene 1 to scene 3 by modality (Table 4), significant differences were found between in-person and Second Life in favor of Second Life and between in-person and phone in favor of phone, but no significant differences were found between phone and Second Life. This indicates that, contrary to the nurses’ expectations, the phone and Second Life modalities resulted in greater improvement during the training than the in-person modality while phone and Second Life were equally effective.

We also looked at whether those who rated the program poorly were also those who performed poorly. A significant positive correlation was noted between learner rating of program’s effectiveness and score on scene 3 (Figure 3), not controlling for modality. Contrast these 2 comments, 1 from a high rater and 1 from a low rater. A high rater stated, “I feel it was very effective, can’t think of anything to improve it.” A low rater stated, “no matter what setting, I am not comfortable with role playing, sometimes I thought I was over-thinking what I would do.”

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### Table 1. Learner’s Rating of Program by Discipline

<table>
<thead>
<tr>
<th>Survey question</th>
<th>Modality comparison</th>
<th>Nurses</th>
<th>Social workers</th>
<th>( P ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please rate overall effectiveness of program. (scale 1-5)</td>
<td>In-person vs Second Life</td>
<td>4.18 ± 1.00 vs 4.47 ± 0.66</td>
<td>4.07 ± 1.00 vs 4.35 ± 0.83</td>
<td>.10</td>
</tr>
<tr>
<td>How well do you feel this experience prepared you to discuss end-of-life</td>
<td>Second Life vs phone</td>
<td>4.67 ± 0.66 vs 4.39 ± 0.72</td>
<td>4.50 ± 0.72 vs 4.21 ± 0.90</td>
<td>.70</td>
</tr>
<tr>
<td>decisions with patients/families? (scale 1-4)</td>
<td>Phone vs in-person</td>
<td>4.39 ± 0.72 vs 4.18 ± 1.00</td>
<td>4.20 ± 0.82 vs 3.91 ± 1.12</td>
<td>.33</td>
</tr>
<tr>
<td>How well do you feel this experience prepared you to deal with difficult</td>
<td>In-person vs Second Life</td>
<td>3.56 ± 0.72 vs 3.36 ± 0.90</td>
<td>3.40 ± 0.80 vs 3.20 ± 1.00</td>
<td>.10</td>
</tr>
<tr>
<td>patients? (scale 1-4)</td>
<td>Second Life vs phone</td>
<td>3.60 ± 0.75 vs 3.55 ± 0.90</td>
<td>3.45 ± 0.85 vs 3.31 ± 1.00</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Phone vs in-person</td>
<td>3.60 ± 1.00 vs 3.36 ± 0.90</td>
<td>3.50 ± 0.75 vs 3.30 ± 0.80</td>
<td>.03</td>
</tr>
</tbody>
</table>

Abbreviations: CSL, communication skill laboratory; SD, standard deviation.

* Scores are represented as mean \( ± \) SD.

### Table 2. Learner’s Rating of Program by Modality

<table>
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<th>Survey question</th>
<th>Modality comparison</th>
<th>Rating means</th>
<th>( P ) value</th>
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</thead>
<tbody>
<tr>
<td>Please rate overall effectiveness of program. (scale 1-5)</td>
<td>In-person vs Second Life</td>
<td>4.10 ± 1.00 vs 4.47 ± 0.66</td>
<td>.13</td>
</tr>
<tr>
<td>How well do you feel this experience prepared you to discuss end-of-life</td>
<td>Second Life vs phone</td>
<td>4.60 ± 0.66 vs 4.39 ± 0.72</td>
<td>.75</td>
</tr>
<tr>
<td>decisions with patients/families? (scale 1-4)</td>
<td>Phone vs in-person</td>
<td>4.39 ± 0.72 vs 4.18 ± 1.00</td>
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*Scores are represented as mean \( ± \) SD.
Insight into the impact of the program is provided by participant feedback, examples given as follows:

I enjoyed the opportunity to have time to think through what I wanted to say and to stop and ask questions during the conversation... The mentor was very good at her acting part, which made the experience better for me.

My mentor was wonderful and gave helpful feedback. The scenarios were very similar to situations I am in regularly at work. She did a great job sounding like patients I have worked with and having her feedback was very helpful.

This was a VERY good learning experience that I can really use in being a better hospice nurse. Mentors were excellent, nonjudgmental, really there to try and help you. Excellent in-service in communication!

Attending this meeting made me realize things that I do and say when I am with patients. I do not think that many of us reflect back at each meeting with family and patients and think if we did a great job with communication and LISTENING. This was a very helpful class!

I liked that I was able to practice without pressure of dealing with actual patients. Able to make mistakes and learn/discuss, performance not evaluated and punitive.

This experience really helped in improving communication skills. I had opportunity to draw upon my theoretical knowledge about communication, integrate this knowledge with what I have learned through my personal nursing experience and apply it in a “real-life-like” situation.

Although it was not the goal of the study, the mentors also said they enjoyed and benefitted from the process. Comments from mentors included, “What I have gained from these sessions reaches far beyond a communication skills laboratory and has helped me become a better mentor in my everyday role”, and “I have never before experienced anything like instruction and coaching... instilled throughout the mentoring sessions. [It] laid out a tangible blueprint for something I had been fumbling with...”

**Discussion**

Results of the study supported the effectiveness of the CSL in teaching communication skills to hospice nurses and social workers. The significant improvement from scene to scene was an evidence of learning. The most exciting result was that the remote methods (phone and Second Life), which are much easier to replicate, resulted in greater improvement than the in-person role-plays. The nurses and social workers were shocked by this result, but as we discussed it further, possible reasons became clear. Many commented that the in-person role-plays increased their level of anxiety and thus made it more difficult to perform and, more importantly, made it more difficult for them to learn. Learners felt that being alone during the laboratory lowered their anxiety level and helped them to focus on what they were doing and on the feedback from their mentor.

| Table 3. Scene Improvement Within Each Modality.\(^a\) |
|-----------------|-----------------|-----------------|-----------------|
| Modality        | Scene 1(S1)     | Scene 2(S2)     | Scene 3(S3)     |
| In-person       | 10.24 ± 2.87    | 11.25 ± 2.70    | 11.79 ± 2.62    |
| Second Life     | 10.11 ± 2.86    | 11.51 ± 2.42    | 12.69 ± 2.48    |
| Phone           | 9.85 ± 3.09     | 11.51 ± 2.60    | 12.59 ± 2.68    |
| All 3 modalities| 10.06 ± 2.95    | 11.43 ± 2.58    | 12.33 ± 2.61    |
| Raw score \(\Delta\) (S1-S2) | 1.01 ± 2.74 | 0.53 ± 2.52 | 1.55 ± 3.06 |
| Raw score \(\Delta\) (S2-S3) | 1.41 ± 2.47 | 1.18 ± 2.75 | 2.58 ± 3.06 |
| Raw score \(\Delta\) (S1-S3) | 2.55 ± 3.06 | 2.73 ± 2.56 | 2.72 ± 3.04 |

\(r = 0.18; P < .01\)

| Table 4. Scene 1 to Scene 3 Improvements Between Modalities.\(^a\) |
|-----------------|-----------------|-----------------|-----------------|
| Modality comparisons | Scene 1 to scene 3 improvements | P value |
| In-person vs Second Life | 1.55 ± 2.58 vs. 2.58 ± 2.56 | P < .05 |
| In-person vs phone | 1.55 ± 3.06 vs. 2.73 ± 2.91 | P < .05 |
| Second Life vs phone | 2.73 ± 2.91 vs. 2.58 ± 3.06 | P > .05 |

\(r = 0.18; P < .01\)
In addition, the in-person role-plays were the most difficult logistically. Staff had to drive from all over the county, actors had to be identified and trained, and a venue had to be prepared. The operation had to be carefully timed so that 4 role-plays could take place at the same time. The second most difficult laboratory logistically was the Second Life laboratory. Theoretically, it would have been the most effective, because it was remote and thus unthreatening, while the scenes on the computer would add some realism. However, the technology was extremely challenging, computers would freeze, the sound did not work properly (we eventually changed to Skype for the audio), and the avatars would malfunction. For these reasons, we were extremely pleased that the much simpler phone laboratory proved to be equally effective. In fact, staff commented that they often communicated with patients and families by phone, and so this was a familiar and realistic modality to use. (It should be noted that when using the same technology to teach medical students, this tech savvy younger generation really enjoyed the Second Life modality. Our somewhat older staff did not share their enthusiasm.)

Aside from the technicalities, the effectiveness of the laboratory and its acceptance by our reluctant staff was heartwarming. We believe this laboratory can easily be replicated for many different professions. We informed the pilot year attendees that we would not report their results to their supervisors, but in the future we will use the information as part of our staff development. The feedback from the mentors regarding areas where the staff need further education is being used for both evaluation and teaching purposes. This will be particularly useful in home hospice care, where staff may work for months or even years without ever being observed in action by more experienced staff or teachers. For example, we found that some staff who spoke the right language (eg, “I never impose my agenda on the patient”) did not perform in accordance with their self-report, and we were able to use the laboratory to gently begin to move them in a different direction.

We were pleased to see that this laboratory was as highly rated by experienced and excellent professionals as by those who were not as proficient. The model has the advantage of being able to tailor the “lesson” perfectly to the learner. The mentoring relationship is of course dependent on the skill of the mentors, and in that respect we were extremely fortunate. All 10 mentors were well respected in the agency. In fact, their skills became even more evident when they had to mentor an actress playing a mentee. All mentors, the facilitator, and others in the audience gave them feedback. Their work was outstanding and is certainly a large reason why our laboratory was so effective. A limitation of this study is that simulated performance was observed rather than actual performance during patient care. Research evaluating the effectiveness of the CSL by surveying the patients and their families before and after the intervention would be ideal but would be very challenging to execute, especially in the hospice setting. Currently, the research team is conducting follow-up surveys with both the participants and their team leaders to provide some data on the perceived long-term effectiveness of the laboratory. In addition, this research was done without external funding, and despite organizational approval it required a large and unreimbursed investment of time and effort by all who participated. We are pleased we were able to carry out a rigorous randomized study, given these limitations. This educational project was developed over the course of 2 years and to find that it produces measureable and desirable results is very satisfying.

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