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Integrative Health: An Interprofessional Standardized Patient Case for Prelicensure Learners

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Abstract

Introduction: Integrative health care and complementary medicine are widely used by the U.S. population, yet health professions learners are typically inadequately educated to counsel patients on the use of these approaches. This interprofessional standardized patient exercise (ISPE) provides learners the opportunity to discuss various health care professionals' roles in caring for a patient interested in integrative health strategies, and to collaborate on a care plan. Utilizing this ISPE format aligns with the principles of integrative health as it requires interprofessional collaboration to address the multifaceted needs of patients. Methods: The ISPE is approximately three hours in duration, and required of all UCSF, third-year dentistry, physical therapy, and medical students; second-year nurse practitioner students, and fourth-year pharmacy students. Social work, nutrition, and chaplain trainees also participated. Working in interprofessional teams of 4-5 learners, team members discuss case information, interview the standardized patient (SP) individually, jointly formulate a care plan, and, discuss the plan with the SP. The experience is debriefed with a facilitator. Results: In 2016-17, 520 learners participated in the ISPE. They agreed that they learned about the roles of other health care professionals (M = 5.24 on a six-point scale, SD = 1.27), and that they would recommend the ISPE to fellow students in their profession (M = 5.25, SD = 1.27), and that they would recommend the ISPE to fellow students in their profession (M = 1.27), and that they would recommend the ISPE to fellow students in their profession (M = 1.27), and that they would recommend the ISPE to fellow students in their profession (M = 1.27), and that they would recommend the ISPE to fellow students in their profession (M = 1.27), and the interpretable of the interpretable (M = 1.27). 1.30). Discussion: Students appreciated the ability to observe learners from other health professions interacting with the SP, and how different perspectives and expertise were integrated to create a comprehensive care plan. The exercise can be adapted to accommodate local health professions learners.

Keywords

Interprofessional Education, Simulation, Standardized Patient, Integrative Medicine, Complementary Medicine, Alternative Medicine, Integrative Health

Educational Objectives

By the end of this activity, learners will be able to:

- 1. Demonstrate the ability to efficiently interview a patient interested in integrative medicine and complementary therapies, and show sensitivity to a patient's personal needs and resources.
- 2. Demonstrate the ability to collaborate effectively with learners from other health professions.
- 3. Develop a comprehensive care plan in collaboration with other health profession learners to meet the patient's health care needs.
- 4. Describe the role of other health care professionals in caring for a patient who wishes to pursue integrative health strategies.
- 5. Discuss the experience of developing a comprehensive care plan in collaboration with other health professions learners.

Introduction

Simulation and the use of standardized patients (SPs) are well-established techniques for providing students opportunities to accomplish interprofessional education's primary goal of "learning about, from, and with each other to enable effective collaboration and improve health outcomes." These methods allow students to observe the roles and skills of other health professions students and to practice interprofessional communication and collaboration in a clinically relevant, yet controlled, environment. In

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Appendices

■ OPEN ACCESS

- A. SP Training Materials.docx
- B. Student Feedback Form .pdf
- C. ISPE Materials Checklist .docx
- D. Faculty Facilitator Guide .docx
- E. ISPE Orientation Slides .pptx
- F. Dental Findings.pptx
- G. Sample Schedule Grid.xlsx
- H. Presenting Information
 Door Instructions.docx
 - I. Huddle Tip Sheet.docx
- J. Interprofessional Team Care Plan Template.doc
- K. Sample Interprofessional Team Care Plan.doc
- L. Student ISPE Evaluation Form.docx
- M. Faculty ISPE Evaluation Form.docx

All appendices are peer reviewed as integral parts of the Original Publication.





2009, the University of California, San Francisco established the Interprofessional Standardized Patient Exercise (ISPE) as a formative activity for prelicensure learners and a core component of our campus-wide Interprofessional Practice and Education programming. Two patient cases have been used regularly for the activity: Paul Harris (2009-2012) and Elsie Smith (2012-2016).^{3,4} These complex patient cases required interprofessional teams of students to collaborate on creating care plans that addressed diverse medical and social needs. The exercises are consistently highly rated by learners. Students' perceived benefits of past ISPE cases included learning about the roles of health care professionals, increased comfort working collaboratively in interprofessional teams, and educating students from other health professions about their own profession's role. These findings are consistent with previous studies that show the use of standardized SPs in interprofessional curricula is well received by students.⁴⁻⁶

Building on our expertise and experience in implementing two ISPEs, we created a new case that focuses on principles of integrative health. The National Institute of Health National Center for Complementary and Integrative Health defines complementary and integrative medicine (CIM) as a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine. Biomedicine (also called Western or allopathic medicine) is health care as conventionally practiced by dentists, nurses, pharmacists, physicians, physical therapists, and so on.

Complementary health care refers to the use of nonbiomedical healing approaches that are taken together with conventional approaches, such as when a patient elects to start taking fish oil capsules for overall health. Most use of CIM by Americans is complementary. Alternative medicine refers to use of nonbiomedical treatments in place of conventional health care. For example, if a patient chooses to take supplements instead of anti-hypertensive medications. Exclusive use of alternative medicine is extremely rare in the U.S.

A 2015 study of compiled data from the 2002, 2007, and 2012 National Health Interview Surveys (*N* = 88,962) found that the prevalence of integrative medicine use ranged from 32% to 36%, and is higher among those with chronic disease. Integrative medicine is attractive to many people because of its emphasis on treating the whole person, promotion of health and well-being, valuing of prevention, and emphasis on personalized approaches to patient concerns. Integrative health emphasizes the combination of the best of both conventional and complementary approaches to address the biological, psychological, social, and spiritual aspects of health and illness. Integrative medicine is a healing-oriented medicine that takes account of the whole person (body, mind, and spirit), including all aspects of lifestyle. Integrative health care refers to the coordinated combination of nontraditional practices with biomedical ones through a collaborative relationship between the patient and an informed practitioner, such as the coordination of acupuncture, diet, and mind-body approaches to address symptoms for a patient undergoing chemotherapy. The boundaries between integrative health care and conventional health care are not absolute, and specific practices may, over time, become widely accepted.

There are eight core principles of integrative medicine, adapted from Weil⁸:

- 1. The partnership between patient and practitioner is central to the healing process.
- 2. Both conventional and complementary methods should be used to facilitate the body's innate healing response.
- 3. All factors that influence health, wellness, and disease should be considered, including mind, spirit, community, and body.
- 4. Alternative therapies should not be accepted uncritically and conventional medicine should not be rejected uncritically.
- 5. Good health care is based on good science, is inquiry-driven, and is open to new paradigms.
- 6. Natural, effective, and less-invasive interventions should be considered whenever possible.
- 7. The promotion of health and the prevention of illness should be emphasized, as well as the treatment of disease.





 Practitioners should be trained to be models of health and healing, committed to the process of selfexploration and self-development.

Despite the high prevalence of integrative health strategies, evidence of the safety and effectiveness of many complementary health practices is lacking. Additionally, because integrative health care has not historically been included in biomedical health care professional education or standards of care, integrative medicine is not routinely discussed, and many patients use complementary therapies without the awareness of their health care team, and nondisclosure of complementary therapy use may be as high as 77%. Without involvement on the part of trained biomedical health professionals, patients remain uninformed and without guidance. Given that integrative health and complementary medicine are widely used in combination with biomedical health care by the U.S. population, health professions learners must be informed and knowledgeable of integrative health and knowledgeable in order to discuss integrative therapies that patients are using or thinking of using in order to effectively communicate with and counsel their patients. 10

Although there exist several ISPEs in *MedEdPORTAL*^{3-6,11-13} this is the first ISPE with a focus on integrative health. Utilizing an ISPE aligns with the principles of integrative health by requiring interprofessional collaboration to address the multifaceted needs of patients.

Methods

This ISPE was preceded by a foundational course, "Core Principles of Interprofessional Practice," ¹⁴ a series of five quarterly small-group, classroom-based sessions that occur in the first and second year of all schools/programs. Although the concepts taught in this course are useful for this exercise, there is no specific prerequisite knowledge of interprofessional collaboration or integrative health required of learners or facilitators.

This ISPE case ("James") was carefully designed to have relevance for several health professions. Details of the case can be easily adjusted based on the health professions learners that are available to participate. At our university, participants came from eight health professions schools or programs: chaplaincy, dentistry, medicine, nursing, nutrition, pharmacy, physical therapy, and social work. All students were in their third or fourth year, except for the nurse practitioner and social work students, who were in their second year of training, and dieticians and chaplains, who were participating in a one-year internship. Ideally, student participants should be at similar points in their clinical training to prevent those who are less experienced with direct patient care from not being able to contribute and have a less satisfactory experience. We found that teams of 4-5 students are the optimal size⁴; when teams are larger, the SP encounter part of the exercise takes too long to complete. When there are fewer team members, less diversity of perspectives and expertise detracts from the richness of the collaborative experience.

SP Recruitment and Training

We recruited SPs who fit the profile of a 70-year-old man. An acting background was not required. We did not specify a single ethnicity, but instead intentionally recruited SPs who represented the four most populous ethnic groups in the San Francisco Bay Area (White European American, Chinese American, Latino, and African American). Although not essential for the success of this exercise, we encourage educators to consider utilizing SPs of diverse ethnicities in order to represent the local population of patients that learners will encounter.

SPs participated in one 4-hour training session prior to the exercise. During this session:

- SPs read through the case as a group and asked the SP trainer clarifying questions.
- SPs practiced the case with the SP trainer.
 - Some SPs role-played parts of the case with faculty and subsequently received feedback from the group.





- Each SP was given an opportunity to do an individual role play from start to finish with either a faculty
 member or an SP trainer. We found that including faculty from the participating health professions in
 the trainings helped ensure the accuracy of the case portrayal.
- SP trainer instructed SPs on use of the student feedback form (Appendix B). This form is an
 abbreviated version of the SEGUE (Set the stage, Elicit information, Give information, Understand the
 patient's perspective, and End the encounter) checklist of medical communication tasks, which has
 demonstrated high interrater reliability, feasibility, and generalizability across health professions.¹⁵
 The trainer and SPs read the form aloud and discussed any questions about the meaning of any item
 as they read them.
- · The group observed an encounter (live or recorded) and each SP practiced scoring the encounter.
- The group then read over their written feedback comments and verbally critiqued them.

Ideally, the training occurred within one week of the exercise. If more than one month will elapse between the training and the exercise, we recommended a two-hour refresher training prior to the exercise. All SPs were expected to study the SP training materials in advance of the session (Appendices A and B).

Implementation Logistics

Although the SP encounter was set to occur in an outpatient clinic, the actual exercise took place in our clinical skills, simulation, and telemedicine center, which has the capacity for remote monitoring so that faculty facilitators could view the interactions of the student teams in real time. We also used the center's technology to digitally record the students both in their team huddles and individual SP interviews, and offered students access to these recordings after the session. The ISPE Materials Checklist details the materials and equipment required for the exercise (Appendix C).

Student and Faculty Preparation

Prior to the ISPE, a detailed faculty facilitator guide (Appendix D) was distributed to all faculty facilitators. ISPE orientation slides and a dental chart were distributed to all student participants (Appendix E, F).

The ISPE Exercise

The ISPE itself took approximately 3 hours and 15 minutes to complete. The schedule of events is detailed in the Sample Schedule Grid (Appendix G) and outlines the following:

Faculty Orientation: For each session of the ISPE, 4-5 faculty facilitators, one from each participating profession, participated, thus reinforcing the interprofessional nature of the exercise. Immediately prior to the exercise, faculty facilitators were oriented to the logistics of the exercise and reviewed the facilitator guide as a group (Appendix D). Each faculty was assigned two student teams to remotely observe throughout the exercise (30 minutes).

Student Orientation: Led by a faculty facilitator, who reviewed the ISPE Orientation Slides (Appendix E) with students and faculty (12 minutes).

Team Huddle: Students then divided into 8-10 preassigned interprofessional teams (one student from each profession), as our clinical skills/simulation center can comfortably accommodate 8-10 student teams. Each team convened in a clinic room. Together they read the Presenting Information/Door Instructions, which included a brief summary of the SP's chief complaint, vital signs, medications, lab results, and imaging (Appendix H), and reviewed the Huddle Tip Sheet (Appendix I). The dental student also reviewed the patient's dental findings (Appendix F). It was important to emphasize to students that this was an opportunity for them to strategize about the team's approach to the patient, their individual roles, as well as how to capitalize on the collective skills of the group (e.g., rather than repeat parts of the history or physical examination that other group members have already performed). We asked students to decide the order in which they would interview the SP, because we have found that this task promotes more discussion among team members (15 minutes).





SP Interviews: Students took turns individually interviewing the SP (performing a history, physical examination, and patient education relevant to their profession) while the other team members observed seated quietly in the encounter room. Depending on the facility available, they could also observe remotely through video monitors or using two-way mirrors (10 minutes per interview, with a 5-minute break between each interview). During the 5-minute breaks, the SP completed the Student Feedback Form (Appendix B), while students stepped out of the room where they were encouraged to discuss the case in their interprofessional teams and further strategize.

Team Plan Huddle: After all students completed their interviews, the SP left the room. Students, in their interprofessional teams, then developed a comprehensive care plan for the patient (15 minutes). Students used the Interprofessional Team Care Plan Template (Appendix J) for this.

Discuss Plan with SP: Based on student feedback from prior ISPE cases, we included time for students to share their assessment and plan with the SP (15 minutes).

Debriefing Session: Each interprofessional team of students met with a faculty facilitator to present their care plan briefly and discuss the interprofessional experience (35 minutes). We recommend combining two interprofessional teams per faculty for the debriefing session to increase the variety of student and faculty perspectives. There was a tendency for students to become focused on the details of the care plan for the patient, rather than discussing their experiences with interprofessional collaboration. It was important for the facilitators to remind students that the main point of the debriefing session was to discuss interprofessional collaboration. We found it helpful to inform students that they would be receiving a detailed sample Team Care Plan at the conclusion of the exercise (Appendix K).

Evaluation: Students and faculty completed the Student and Faculty ISPE Evaluation Forms, respectively (Appendix L, M).

Learner Assessment

In this formative exercise, students were assessed by their peers (peer assessment included in Student ISPE Evaluation Form, Appendix L), and by the SP (via the Student Feedback Form, Appendix B, which focuses on the individual student-SP interaction). These assessments collectively provided feedback to students on their collaboration-related behaviors and communication skills. Students were also offered the option of watching a video of themselves from any part of the exercise with a faculty facilitator at a later date.

Results

This ISPE case of "James" was implemented on 16 days in 2016-17. 520 learners and 58 faculty from the different schools/programs participated in this required exercise (Table).

Table. Learner and Faculty Participants by School/Program

School/Program	Learners (N)	Faculty Facilitators ^a (<i>N</i>)
Chaplaincy	14 (3%)	3 (5%)
Dentistry	93 (22%)	7 (12%)
Medicine	138 (33%)	13 (22%)
Nursing	86 (20%)	12 (21%)
Nutrition	20 (5%)	3 (5%)
Pharmacy	116 (27%)	11 (19%)
Physical Therapy	46 (11%)	7 (12%)
Social Work	7(2%)	2 (3%)
Total # of Participants	520	58

a Note that some faculty participated on more than one date.

Students (520/520) and faculty (52/58) completed ISPE evaluation forms that contained qualitative and quantitative measures, the latter being reported on a 6-point Likert-type scale (1 = Strongly Disagree, 6 =





Strongly Agree). Students agreed that they learned about the roles of other health care professionals (M = 5.24, SD = 1.27), that the ISPE increased comfort working as an interprofessional team to develop a care plan (M = 5.17, SD = 1.29); that the team developed a care plan that represented the perspectives of the professions present (M = 5.38, SD = 1.35); and that they would recommend the ISPE to a fellow student in their profession (M = 5.25, SD = 1.30). There were no statistically significant differences in responses between learners by profession type.

Students' positive feedback centered on the format of the exercise, the ability to discuss with others how they approached the case, and to observe others interact with the patient. Representative student quotes include:

- "I liked how we had 10 minutes to read the case as a team and share with each other how we would approach the case. This opened up a discussion that enabled each member of the team to understand how each profession approached patient care. I also liked how we all had the opportunity to be in the room to watch how each practitioner interviewed the patient, and then we could use that information to build on questions the next person would ask."
- "I really enjoyed working with the team. One of the strengths was to see how other professions
 approach a patient and to learn what their priorities are and how they approach patient care. I also
 thought it was valuable to have to coordinate our care and work together in all phases of evaluation
 and treatment. I liked the format and that we had time to discuss between each evaluation by each
 health care professional."
- "Good opportunity to see other health care professionals interact with patient (we often work with other professions in the hospital, but communication is often indirect—i.e., via pager, email, charting—and we don't get to observe their actual interactions with patients). Also nice to have the opportunity to talk to other professionals in real time about how they would approach a patient care scenario."
- "I really liked the case they gave us because it had a lot of different components that every profession could comment on and give insight for. It was great to work with other students of different specialties and see the way they think and ask questions, and how they get to their conclusions."

A couple themes emerged from the student suggestions for improvement. Students felt the exercise suffered if particular professions were absent, or that it could be improved if even more professions were added. They also had a wide range of opinions regarding the time allotted for interviewing/examining the SP, as the excerpt below demonstrates:

Because the professions have different procedures for examinations normally and time is often different for different examinations, the same amount of time for each profession made for some challenges in getting through all of a particular profession's evaluation while others had more than enough time (especially since there were two of one profession in our group). Having a more fluid group time with the patient and still having each professional step in as needed might allow for a more thorough examination and provide an opportunity to see what was most important to each profession at the same time.

Faculty facilitators all agreed or strongly agreed that they would recommend the ISPE to learners in their profession (M = 5.77, SD = 0.43). Their qualitative comments were strongly positive:

- "The facilities were excellent, and the case was designed well. The team members definitely learned
 from each other. The time dedicated to the exam/interviews and huddles was spot-on... no need to
 alter the schedule. There were enough health concerns for each of the professions to show what they
 know and share their expertise."
- "Enough structure to understand expectations, and enough latitude to explore/experience new points of view."





Discussion

The ISPE is highly valued by students and faculty alike. Students appreciated the interactive, case-based approach. They particularly appreciated the ability to observe their fellow students interacting with the SP, and how different perspectives and expertise were integrated to create a more comprehensive care plan. The ISPE also gave learners an opportunity to appreciate the knowledge and role of other professions in integrative health.

This case was created by a core team of faculty from dentistry, medicine, nursing, pharmacy, and physical therapy. Several members of the team are experts in integrative health and/or interprofessional education (IPE). This case was intended to challenge the students to fully explore the patient's medical and social needs as well as interest in particular therapies, and to develop a comprehensive care plan through the combined expertise of the interprofessional team. We consulted the relevant literature to ensure that we provided students with an up-to-date, evidence-based, sample team care plan. We have learned that one key to successful implementation is the level of complexity of the case, which should be sufficiently intricate and multifaceted to showcase each profession's unique and complementary areas of expertise/skill. Further, an interprofessional faculty team has collaborated on each of our ISPE cases. This group participation has been instrumental in achieving the desired level of case complexity and one that is appropriate for the learners' training stage.

This ISPE case included eight professions, but the case can be adapted to fit the range of locally available professions. The logistics of implementation were handled by an interprofessional faculty team representing the participating professions, each of whom secured leadership and financial support from their respective schools/programs, recruited faculty facilitators, and coordinated the timing of the exercise with respect to their school's academic calendars. The cost of the ISPE implementation is dependent upon the number of learners, the resources available at the institution, and rates at which SPs/actors are reimbursed in each location. Necessary resources include administrative support for the program (i.e., scheduling students and running the exercise), SP trainer time, SP time (i.e., training and performance), and faculty facilitator time.

One limitations of this ISPE include limited learner assessment. As this activity provides a formative assessment, students receive written feedback from their peers and the SP. Faculty facilitators may provide general feedback on the team's process during the debriefing session, but that session is not intended to provide individualized feedback to students. An additional limitation is the number of resources needed. Implementing this exercise requires time, space, money, as well as leadership and administrative support from the health professions programs involved. These factors, in general, may pose challenges for many institutions providing IPE.

Despite the resources needed, our educational leadership, faculty, and students have felt the ISPE is well worth the investment and it remains a favorite component of our campus-wide IPE curriculum. Each year students request additional ISPE experiences, particularly earlier in their training. This level of interest on the part of newer students points to a future direction for this work: creating sufficiently complex SP cases while accounting for the more limited clinical skills of early learners.

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Ethical Approval

Reported as not applicable.

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