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Increasing return on investment for standardized patient training programs through the development of cost-effective instruction

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Abstract

Higher stakes now exist for standardized patient programs to deliver student performance success in light of the required USMLE Step 2 Clinical Skills exam. Identifying and increasing the educational return on the financial investment for these programs is critical as programs are challenged to demonstrate their value to the organization. Rising expectations and finite budgets create an impetus to provide quality outcomes in the most efficient way.

Implementing the instructional design process creates systematic training through a scientific approach to training and evaluation. A structured training methodology provides an effective means to interpret the outcomes of a training cycle. This method permits the trainer to identify and adjust for the multitude of variables influencing a standardized patient's performances within a typical training cycle. After conducting an analysis of training materials, it was apparent that there are no documented benchmarks for training standards or evaluation of various training practices. An instructional design approach was selected to standardize the training process and allow for continued evaluation and improvement. This structured training process is in development, and soon will be implemented as a pilot study.

Why We Chose the Instructional Design Approach

- We have a high rate of trainer turnover
- We have variations in training practices within our training group
- We need a way to evaluate and standardize our training outcomes

Benefits of the Instructional Design Approach

Training consistency – Facilitates the creation of internal standards of practice & knowledge retention of effective training practices

Cost savings – Decreases cost per training by reducing the time and resources needed to prepare instruction for each case

Time savings – Streamlines training so that trainers can deliver effective instruction with the most efficient use of time

Improved learning strategies – Assures that the instruction delivered is successful in helping the learners to meet the instructional objectives

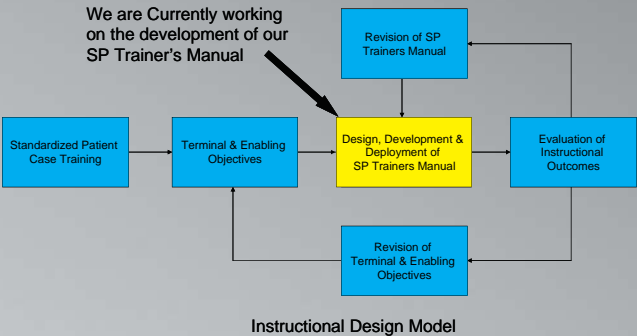
Goal integration – Allows the training department to align with the goals and objectives of the School of Medicine

Improved evaluation & revision of training practices – Enables evaluators to determine the true value of the instruction and revise according to measurable outcomes

The Phases of our Instructional Design Process

- Phase 1: Define instructional goals
- Phase 2: Conduct a task analysis
- Phase 3: Identify learner characteristics
- Phase 4: Develop performance objectives
- Phase 5: Choose an instructional method and strategies
- Phase 6: Assemble instructional material
- Phase 7: Formative evaluation
- Phase 8: Summative evaluation

Standardized Patient Instructor's Manual Planning Grid				
Time	Activity	Instructional Design Strategy	Materials/Media	Enabling Objectives
First Training				
10 min.	Introduction and Sign-in	Lecture, individual	Sign-in sheet, SP handouts, student pictures	
Terminal Objective #1 – After completing the first training the SP will be able to recall case details, checklist items and information given for open ended questions				
35 min.	Case read through and questions	Lecture, Q & A	Case	1a – The SP will be able to identify important case details
10 min.	Review case checklist	Lecture, Demonstration	Case checklist, case	1c – The SP will be able to recognize questions and physical exam maneuvers from the case checklist
30 min.	Identify 2 pieces of information for open-ended questions	Group activity,	Case, case checklist, mind map	1b – The SP will be able to define two pieces of information to give to the student as an answer for a related open-ended question
30 min.	Evaluate SP knowledge of case details (50 questions, Round robin, game)	Drill, practice, group activity	Case, case details summary sheet, checklist, mind map, question and answer sheet	1a – The SP will be able to identify important case details 1b – The SP will be able to define two pieces of information to give to the student as an answer for a related open-ended question 1c – The SP will be able to recognize questions and physical exam maneuvers from the case checklist
5 min.	Closing	Lecture		
Second Training				
5 min.	Introduction and Sign-in	Lecture, individual	Sign-in sheet, SP handouts, student pictures	
Terminal Objective #2 – After completing the second training the SP will be able to explain the case and checklist details				
Terminal Objective #3 – After completing the second training the SP will be able to participate in a role-play encounter with the trainer				
60 Minutes	Question and Answer, and Role-play with Faculty Advisor	Guest trainer, guided practice, role-play, group activity	Case checklist, case	2a – The SP will be able to discuss the case details as they relate to the checklist history question 2b – The SP will be able to exhibit relevant physical exam maneuvers
10 Minutes	Establish final version of the case	Modifying, group	Case, case details summary sheet, checklist, mind map, question and answer sheet	2a – The SP will be able to discuss the case details as they relate to the checklist history question 3b – The SP will be able to provide sufficient information in response to the questioning style of the trainer
40 Minutes	Role-play and check listing	Guided practice, role-play, group activity	Role-play script, case checklists	2b – The SP will be able to exhibit relevant physical exam maneuvers 3a – The SP will be able to demonstrate appropriate affect for the case 3b – The SP will be able to provide sufficient information in response to the questioning style of the trainer
5 Minutes	Closing	Lecture		
Third Training				
5 Minutes	Sign-in	Lecture, individual	Sign-in sheet, SP handouts, student pictures	
Terminal Objective #4 – After completing the third training the SP will be able to portray a standardized patient during a clinical examination				
Terminal Objective #5 – After completing the third training the SP will be able to observe and record medical student actions and behaviors during a clinical examination				
100 Minutes	Role-play and check listing	Guided practice, role-play, group activity	Role-play script, case checklists	4a – The SP will be able to simulate symptoms specific to the case 4b – The SP will be able to deliver information to the student within the constraints of the case 5a – The SP will be able to identify student behaviors and physical examination maneuvers during a clinical examination 5b – The SP will be able to record observations using the required checklists
15 Minutes	Review Exam day logistics, closing and evaluation	Lecture, individual	Evaluation worksheet	



Why we chose Return on Investment (ROI) as an evaluation tool

ROI serves as a valuation method that can be used to sum up the effectiveness of a program to stakeholders using understandable and measurable results. It is a difficult task to communicate the value of standardized patient training using only qualitative measures. ROI results will give our program the means to effectively showcase our worth to the School of Medicine.

How we plan to increase ROI for our program

Through the use of the Instructional Design process our training department will be able to realize a measurable decrease in time and resources necessary to complete training for our SP cases. Also, we expect training outcomes to improve as we will be offering increasingly effective instruction.

$$\frac{\text{Increasing Benefits} - \text{Decreasing Costs}}{\text{Decreasing Costs}} = \text{Increasing ROI}$$

