**Radiation Safety in a Hospital Setting**

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| **Objective** | **Type of Content** | **Strategies** | **Activities** | **Assessment** |
| 1.Identify the personal and instructional significance of radiation safety in a hospital setting. | Attitudes  Interpersonal Skills | Motivational Strategy  Hook:  Establish personal importance  Initial Presentation: Model and Recall | Video Role play a casual conversation between two employees about the importance of wearing a dosimeter and using radiation safety methods properly.  Initial Presentation of the following information through visuals with a video of presenter speaking:   1. Health Effects of Radiation 2. Importance of Training 3. Wearing a Dosimeter 4. Wearing PPE 5. Reporting a Radiation Concern   Open-ended:  What would happen if radiation safety methods were not employed? | Quiz Questions:  Why do employees need this training?  Why do employees need to wear a dosimeter and know how to report radiation safety concerns? |

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| **2.** Describe the use of three radiation protection methods (Time, Distance, and Shielding) and their significance in relation to the ALARA policy. | Facts  Concepts  Procedures | Initial Presentation: Presentation and Recall  RUL-EG/ Integration  Examples and Non-Examples | Initial Presentation of the following information through visuals with a video of presenter speaking:  ALARA acronym:  “As Low as Reasonably Achievable”  Radiation Safety Methods and Concepts:   1. Time 2. Distance 3. Shielding | Scenarios with Quiz:  Scenario 1: A scenario in which Time of exposure caused a radiation concern.  Three Multiple Choice Questions: Fact, Concept, Procedure  Scenario 2: A scenario in which Distance from the source caused a radiation concern.  Three Multiple Choice Questions: Fact, Concept, Procedure  Scenario 3: A scenario in which a lack of Shielding caused a radiation concern.  Three Multiple Choice Questions: Fact, Concept, Procedure |
| Demonstration  Organization | Video:  While watching a video, employees are encouraged to take notes on the Radiation Protection Methods used in the video. |
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| **3.** Utilize ALARA radiation safety methods. | Principles and Rules | EG-RUL Elaboration  Demonstration, elaboration, practice | Present a photograph or video in which employees must identify which radiation protection methods are being used, how they are being used, and if there is room for improvement.  Share three examples of contamination or overexposure scenarios.  Ask the employee to explain what caused the contamination and overexposure in each scenario. Explain the proper radiation safety procedure.  Employees are presented with a video of a scenario. They are encouraged to take notes on the procedures used to protect against radiation in the video. At the end of the video, they are given dosimeter readings of each person in the video and asked to explain why one is high and one is low. They are asked if there was a way to decrease exposure for anyone in the room. | Three Multiple Choice Questions:   1. Radiation protection methods 2. Example 3. Non-example   Three Multiple Choice Questions:   1. Differentiate between exposure and contamination. 2. Causes of contamination 3. Give scenario and choose proper procedure.   Three Multiple Choice Questions:   1. True/false regarding dosimeter readings. 2. Reason dosimeter reading may be high or low. 3. Way to decrease exposure |

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| **4.** Describe the proper care and use of a dosimeter and be able to read a personal exposure report as it relates to dose limits. | Facts  Procedures | Initial Presentation/Recall/  Demonstration  RUL-EG and Integration  Examples and Non-Examples | Initial Presentation of the following information through visuals with a video of presenter speaking:  Dosimeters-facts, radiation sources, how to wear, when, care, issues, against protocol, pregnancy  Show examples and non-examples of how to wear and when to wear dosimeters.  Show examples and non-examples of how to care for dosimeters.  Show examples and non-examples of what to do if there are issues with the dosimeter.  Personal Protective Equipment-lead aprons, thyroid shields, goggles  Employees are shown examples and non-examples of how and when to wear each. | Scenario Question with True/False and Multiple Choice:  Employees are presented with a scenario and a group of characters working with radiation. Then, employees are given an example of their dosimeter reports and asked to determine whether the dose limit was appropriate for the scenario. They are asked to determine the reason dose limits might not be expected or are accurate.  Worked Example:  Employees are shown a dosimeter report and asked to identify the vital information in the report. |
| Demonstration, organization, elaboration, practice  Worked Example | Dose limit chart and example of everyday exposure rates for comparison  (i.e., flying in an airplane, getting a dental x-ray, living in a higher altitude state).  Show an image of a dose report and define where the valuable information is in the dose report and what to look for. |

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| **5.** Utilize the Radiation Safety website to locate resources and points of contact necessary for a given scenario. | Procedures  Interpersonal Skills | Initial Presentation/Recall and Demonstration  RUL-EG  Examples and non-examples | Initial Presentation of the following information through visuals with a video of presenter speaking:  Show employees how to access the website and where they can find various resources that are important.  Restate the conditions under which radiation safety concerns need to be reported. | Scenario with True/False and Multiple-Choice Questions:  Provide a scenario or video in which a concern occurs. Employees must identify the concern and be able to explain the concern. Ask employees to use the website to find the correct paperwork and/or contact for the scenario.  Repeat multiple scenarios.  ***Printable Handout Guide attached for this section as a resource.*** |
| Procedural-Demonstration, organization, elaboration, practice  Interpersonal Skills-Model, Imaginal models, Mental rehearsal | Provide scenarios that occur in a hospital setting that need to be reported versus ones that do not need to be reported. |
| **REVIEW** |  |  |  | Multiple Choice Questions:  One Question for Each Objective |