Review principles of **safety**, including

- Patient identifiers
- Personal dosimeter to monitor dose for personnel
- Repeat exposures, common cause for increased radiation to patients
- Most intense and dangerous beam, primary beam
- Advantage of non-ionic iodinated contrast, less likelihood of reaction
- Reaction to contrast solution, recognizing and taking action
- Minimize exposure in fluoroscopy
- Protective apparel in fluoroscopy
- Patient who is receiving O\(_2\), continue O\(_2\) during procedure
- Maintain stabilization of neck in X-ray to detect cervical fracture.

Review principles of **infection prevention**, including

- Handwashing before and after working with each patient
- Handwashing rather than hand sanitizer with Clostridium difficile (C. diff)
- Keep urinary drainage bag below level of bladder
- Use protective covering on cassette when patient is in isolation

Review **radiographic principles**, including

- ALARA
- Time, distance, shielding
- Most effective protection for radiographer, distance
- Rad, unit of absorbed dose
- Recommended safe distance from source
- Set of factors that controls quality and quantity, kilovoltage, milliamperage, time (seconds)

Review important aspect s of **radiographic procedures**, such as

- Checking position of nasogastric tube, portrait view to include subdiaphragmatic area
- Adjust technique to compensate with osteoporosis
- Thickness of body part guide to correct mAs and kVp
- Detent position to assure proper alignment and optimal exposure
- Patient unable to cooperate, increase mA and decrease exposure time
- COPD, decrease standard exposure factors
- Barium study, notify radiologist when barium reaches terminal ileum
- Include wrist and elbow joint in forearm fracture X-ray
Review purpose and operation of **equipment**, including

- PACS, part of permanent record
- DICOM, transfer of data among machines
- Image intensifier, permits image on TV monitor
- Phototimer, limits time patient exposed to X-ray
- Grid in radiograph, cleans up scatter
- Collimator, a beam restricting device

Review principles and content of **Communication/Patient Teaching**, including

- Patient satisfaction, importance of team approach including the patient and family