

The primary responsibilities of a diagnostic medical physicist are associated with the acquisition and display of images. Nonetheless, it is helpful to understand the informatics processes associated with hospital information systems (HIS) and radiology information systems (RIS) and the technology used for image networks and archival storage (i.e. PACS). Consistent labeling of images requires an understanding of the subset of SNOMED terms that are incorporated in the DICOM standard and the manner in which these terms are defined and used in RIS and PACS systems. Improvements in imaging workflow are now being profiled by the IHE (Integrating the Healthcare Enterprise) initiative of the RSNA and HIMSS professional societies. These can be helpful for implementing consistent image presentation, modality worklists, post-processing worklists, and patient identification corrections. Modern PACS system use advanced network architectures. Understanding TCP internet protocols and network management tools is helpful when resolving problems with acquisition of images from modalities or delivery of images to alternative archives or display workstations. Understanding trends in storage and backup technologies is important for handling the increasing volume of data coming from new imaging devices. In some centers, limitations in the available staff and/or expertise for PACS, RIS, and/or HIS personnel may result in the physicist assuming a primary role in certain areas.

Educational Objectives:

1. Learn how medical/radiological terminology is standardized.
2. Learn how workflow profiles are being developed and implemented.
3. Understand basic approaches for network protocol and management.
4. Understand trends for data storage and backup.