Chapter VII
Implementation of Filmless Hospital

INTRODUCTION

A PACS has tremendous benefits (Bryan, Weatherburn, Watkins, Buxton, 1999) and values outside of radiology as well as internally. The biggest benefit derived from a PACS is breaking the physical as well as time barrier for information exchange. The other benefit from PACS implementation is not the decreased operating cost in Radiology. The radiology cost benefit, while significant, does not compare with the system wide benefits of networking images throughout the hospital and physician offices.

All PACS implementations should start with a business plan. This is the summation of many small plans and also summarizes the global goal. The plan should be segmented into smaller separate plans for cost justification, risk assessment, capacity planning, and the last consisting of an implementation plan.

THE BUSINESS PLAN

A business plan (Lemke, Niederlag, Heuser, & Pollack, 2001) for setting up a filmless hospital is required for a successful project. The first thing in the plan is to define a clear objective for the project which is fully understandable by the whole healthcare
organization from front line staff to senior management. The detail business plan should include the followings:

**Cost Justification**

This covers the area of hard and soft cost reductions and revenue enhancement (Reilly, Avrin, 2005).

- Hard cost reduction should include low skill labour costs in the darkrooms, film libraries, film management, and film cost. However, in real situation, the Full Time Equivalent (FTE) of the labour costs may be reduced but the net cost associated with this will most likely be offset by the higher paying job of a PACS network administrator either within radiology or Information Systems.
- Soft cost reduction will include decreased film waiting time for clinicians, no film transportation is required, improved infection control as less physical interaction is needed, and thus leads to increased productivity of staff.
- Revenue enhancement can be experienced by setting up new services for the radiologists and clinician as a profit sharing venture. This can be realized because there is no longer the physical boundary of geographic location. Services such as providing remote medical consultation for small hospitals are now possible.

**Risk Assessment**

This includes an inventory checking and assessment relating to the risk of filmless hospital operation.

- Evaluate medical equipment or imaging modality that need integration including their upgradability.
- Evaluate personnel needs and technology education level of all users.
- Compile a list of imaging equipment, computer equipment, network equipment, vendors, and training capabilities.
- Check with local networking and internet service providers regarding services available in the area.

**Capacity Planning**

- Set up a methodology to evaluate the needs and resource requirement.
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