Background

- New advances in CT technology, both in hardware and software has transformed much of medical imaging.
- The cross-sectional images afforded by CT scanning have allowed visualization of anatomical structures with improved detail.
- The need for the CT Technologist to balance high patient centered care skills and maintain competence with the latest CT scan software has become an increasing part of the CT Technologist’s professional life.

Objectives

- Bridge the gap between new CT Software and it’s clinical use by the CT Technologist.
- Develop new CT Software Training Program, incorporating Adult Learning Styles, and include:
  - didactic sessions
  - discussion sections
  - hands-on training sessions
- Increase the CT Technologist’s familiarity and confidence with the new software, to improve patient care.

Improvements

Changes that this project implemented are:
- Ensure protected time is provided for CT Technologists for training
- Facilitate communication between CT Technologist to share experiences using the new software and interesting cases

Action taken to address this issue:
- Ensure schedule provides release time at least six weeks in advance, so the CT Technologists can receive dedicated time to participate in upgraded training programs
- Collect and centralize the information about the new software, utilizing the AIM Server (an online storage server that can be accessed on any JDMI PC).

Project Impact

- Potential that increased familiarity with software will enable the CT Technologist to adjust the CT protocol to suit given patient’s specific needs
- The ability to adjust the scan parameters affords ownership of the CT scan. This increases job satisfaction and move the Technologist away from being just a “button pusher”

For the long-term outcomes, this continued training would smooth out the work flow and increase the efficiencies of CT operations. This would further support the healthy work environment by minimizing stress related to last minute staffing scheduling, changes and replacements.

Summary: From the quantitative and qualitative results of the Post-session evaluation this Upgraded Training Program and the future potential of expanding the content to include other speakers is a valuable resource.

Results

Table 1: CT Technologist Opinion on Training Template

<table>
<thead>
<tr>
<th>Learning Format in advance</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>89%</td>
</tr>
<tr>
<td>No</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfied with the overall training format</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>73%</td>
</tr>
<tr>
<td>No</td>
<td>27%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Savings of second - date prior to new software installation</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>74%</td>
</tr>
</tbody>
</table>

Results: From the Post-Session evaluation the CT Technologists found that the Upgraded Training Program would be useful and the overall training format satisfactory (Table1)

- Qualitative feedback from staff on the post-session evaluation included:
  - “Have regular meeting to keep us all on the same page...going through software updates and sharing experiences learnt from case studies”
  - “Good program and idea to start with”
  - “Have 1-2 sessions with the 3D Cardiac Lab Tech...so the CT Cardiac Technologist know what is required for good 3D post processing”
  - “Result Increase in knowledge from before the Session to after the session” (Table3)

Table 2: Evaluation of Session Format

<table>
<thead>
<tr>
<th>Evaluation of the Session Format</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 hours session</td>
<td>75%</td>
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</tbody>
</table>

Table 3: Learning Objectives

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Level of Knowledge</th>
<th>Level of Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didactic</td>
<td>Coronary Artery</td>
<td>5.00</td>
</tr>
<tr>
<td>Coronary Artery</td>
<td>Processing</td>
<td>4.00</td>
</tr>
<tr>
<td>Coronary Artery</td>
<td>Subtraction</td>
<td>3.00</td>
</tr>
<tr>
<td>Coronary Artery</td>
<td>Confidance</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Sustainability

- To sustain the Upgraded Training Program, the Joint Department of Medical Imaging can:
  - Ensuring that the CT Technologists continue to receive their training sessions prior to the release of new or upgraded CT software.
  - These session(s) should be geared toward the CT Technologists.
  - The resources and reference material should be collected on the AIM Server which is easily accessible by the CT Technologist.

Next Steps

- Implement formal role responsibility for collecting and posting essential information on the AIM Server going forward.
- Establish a biweekly/monthly meeting to enable the continued communication of shared clinical experiences.

References


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