

**Abstract Form**

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<b>Project Title:</b>	Improving PGY-1 competency in identifying proper line and tube placement on chest radiography		
<b>Research Category (please check one):</b>			
<input type="checkbox"/> <b>Original Research</b>	<input type="checkbox"/> <b>Clinical Vignette</b>	<input checked="" type="checkbox"/> <b>Quality Improvement</b>	<input type="checkbox"/> <b>Medical Education Innovation</b>

**Abstract**

**Background**

Post-graduate year one (PGY-1) physicians are required to confirm correct placement of lines and tubes on chest radiography on a regular basis. Many PGY-1 physicians have not received formalized training regarding this critical skillset. Incorrect confirmation of these lines and tubes can lead to patient harm which includes hypoxemia, pneumothorax, and even death. Thus, residency programs should consider implementing formalized didactics regarding this topic. We will present a quality improvement effort whereby a formalized curriculum for radiographic evaluation of line and tube placement was tested for efficacy.

**Methods**

Our QI projects aims to increase the accuracy in which the PGY-1 class (2021 - 2022) at UCLA-Olive View Medical Center identifies accurate placement of lines and tubes on chest radiography. We also have the secondary goal of increasing PGY-1 physician confidence in this skillset. Our first PDSA cycle consists of inviting 35 PGY-1 physicians to complete an online module that provides formal instruction on how to radiographically evaluate the placement of lines and tubes. Prior to completing the module, participants were asked to complete a 20-item pre-module assessment and to once again complete this assessment after finishing the module. We compared pre and post assessment scores to determine the efficacy of this modular training activity.

**Results**

Out of 35 total PGY-1 physicians, 13 completed the pre-test, online module, and post-test. The scores of the pre-test and post-test were compared with a paired t-test. We obtained a T score of 0.0001 which indicates that the difference was statistically significant. Overall there was a 12.1% increase the scores. Additionally, we surveyed the physicians with 4 supplementary questions to account for balancing measures and downstream effects of our intervention. We found that 78% of participants felt that completion of the online module did not add any additional stress. 100% of participants felt the module was beneficial to learning. 100% of participants would recommend this module to a colleague. And 100% of participants would recommend implementing this module into mandatory residency coursework.

**Conclusions**

Confirmation of the correct placement of lines and tubes on chest radiography is an essential skillset expected of all physicians, yet many physicians have not received formalized training on this topic. Our QI project demonstrates how PGY-1 residents demonstrate deficits in knowledge that improve after completion of an online module. Online modules may be useful in serving as a mechanism for physicians to increase their competency in the skillset of proper line and tube identification.