

3-D printing provides low-cost alternative in bronchoscopy simulation training

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Researchers from Beth Israel Deaconess Medical Center in Boston, Massachusetts, found that 3D-printed tracheobronchial tree models compared favorably against other more standard models in training pulmonary physicians to perform bronchoscopy. The researchers compared the two models based on realism, accuracy, look and feel, and overall usefulness as a teaching tool.

Currently, most simulation centers use models that are more expensive than 3D-printed models and fail to capture the subtle anatomical details of the airways.

The 3D-printed models tested were printed into a flexible nylon tracheobronchial tree and stained to match the coloration of the airway mucosa. Participants with different levels of training performed bronchoscopy on both the standard and 3D model and graded each using a sliding scale from 0 to 100. Overall, physicians preferred the 3D printed models regardless of their level of training.

"3D-printed airway models are low-cost, realistic, educational, and clinically useful bronchoscopy teaching models," said Dr. George Cheng, Beth Israel Deaconess Medical Center physician and lead researcher. "They can be readily generated with 3D printing technology."

More information: Further results will be shared during CHEST 2015 on Sunday, October 25, 2015, at 4:30 pm at Palais des congrès de Montréal, room 512dh. The study abstract can be viewed on the CHEST website, [journal.publications.chestnet... 443937&resultClick=3](http://journal.publications.chestnet.org/doi/10.1377/journal.publications.chestnet.11-443937)

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