



# 2022 LEAD Capstone Poster Session

## A Simulation Program for Hands-on Experience in Interventional Radiology Residency

Christine K. Chen, MD  
Assistant Professor  
Interventional Radiology





# Abstract

- It is thought that trainees remember 90% of what they do versus 50% of what they see or hear. Therefore, active hands-on learning is key to excellent training, particularly in procedural fields such as Interventional Radiology (IR).
- Simulation training has been shown to improve technical skills in multiple procedural fields and is an integral part of many training programs, including at our own institution. However, it has thus far not been a significant teaching tool in IR, either at UT Southwestern or in the specialty as a whole.
- Proposal: to create and sustain a forward-looking and unique simulation curriculum focused on the first 3 years of integrated IR residency to enhance hands-on experience and trainee procedural skill and confidence.





# Objectives

- To create a simulation curriculum for interventional radiology trainees.
- To increase overall amount of time spent in hands-on training in procedural skills
- To improve trainee and attending confidence in procedural skills even before performance in real cases.





# Background Information

- Trainees are thought to remember 90% of what they do versus 50% of what they see or hear—thus the focus in medical education on active over passive learning.
- Simulation training has been shown to improve technical skills in multiple fields, including laparoscopic surgery, colonoscopy, and bronchoscopy—improving procedural times, increasing accuracy, decreasing errors, requiring less senior assistance.
- Training on ultrasound phantoms has been shown to improve knowledge level, dexterity, confidence levels.
- Endovascular simulation training has been shown to decrease procedure time and complications.





# Project Plan

- Create a simulation curriculum for integrated Interventional Radiology residents, focused on their first 3 years of training as below:
  - IR 1 year – ultrasound guided procedures
  - IR 2 year – CT guided procedures
  - IR 3 year – fluoroscopic, predominantly endovascular skills
- Sessions would occur monthly, with rotating interventional radiology faculty overseeing the modules





# Application of What You Learned at LEAD

- Effective communication with leadership and faculty to convey a vision, and leaning in to develop buy-in
- Understanding and working with a variety of personalities (DISC types) to create the most effective learning environment
- Alignment of the project with the UT Southwestern strategic plan to enhance engagement from departmental and institutional leadership
- Transformational leadership to create and sustain a new component of the residency program





# Proposed Budget

- Startup cost: \$7000
- Annual recurring cost: \$2000
- Protected time for residents to attend monthly sessions (1/2 day each)
- Protected time for faculty participants (1/2 day per year)





# Innovation and Significance

- Incorporates a teaching tool used by many other specialties, but not common in Interventional Radiology currently
- Utilization of a great resource available at our institution, the Simulation Center—and more specifically, an endovascular simulation device (Mentice)
- Increases resident experience and confidence even before the start of their hands-on and procedure heavy years of training.





# References

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