

# Training Your Team Using ANGIO Mentor

Endovascular technologies are rapidly evolving, often requiring coordination and cooperation between team members such as primary operator, secondary operator, surgical nurse, anesthesiologist and x-ray technician. These multidisciplinary interactions lead to challenges that are reflected in the high rate of errors occurring during endovascular procedures<sub>1</sub>.

Simulation-based team training has been shown to improve patient outcome. It relies on individual staff members learning the relevant teamwork language and behaviors<sub>3</sub>.

The ANGIO Mentor simulator can dramatically improve Cath Lab, Operating Room and Hybrid OR teams' performance by allowing team members to rehearse all procedural steps and practice dealing with complications in a safe environment. It provides realistic simulation of more than 29 endovascular procedures, from basic tasks to complex interventions, serving 6 medical specialties. The training environment

can be designed, based on the designated team and procedure, and an appropriate training scenario is developed according to the team requirements. A real C-arm, as well as a realistic TEE probe can be integrated into the training environment, contributing to the realism of the training, and allowing to include relevant team members (Echocardiographer, X-ray Technician) in the training.



## Testimonial: Acute Stroke Teams Training at Anglia Ruskin University, UK

Using the ANGIO Mentor Simulator at Anglia Ruskin University, Southend University Hospital established an innovative interventional stroke service from scratch. In dedicated training courses, these high-risk procedures were practiced in a virtual reality cathlab environment and allowed the safe setup of a multidisciplinary service. The hospital found that courses on the ANGIO Mentor simulator quickly enhanced the team's skills and understanding of these high-risk procedures. In addition, they strengthened collaboration and communication between the various clinical teams involved in the treatment chain.

**Prof. Iris Grunwald, Diagnostic and Interventional Neuroradiologist at Southend University Hospital and Director Neuroscience and Vascular Simulation at Anglia Ruskin University:**

"In order to provide timely regional coverage for endovascular stroke treatment, more hospitals and physicians will need to provide endovascular stroke services. To practice this high risk procedure, I believe procedural training on a virtual reality simulator such as the ANGIO Mentor Suite should be mandatory to provide an environment that is as close as possible to the actual setting when treating a patient.....We conduct realistic training for physicians and whole cathlab teams... Especially in stroke treatment this unites the often multidisciplinary team, defines individual roles and allows an optimized flow of the work process".



Anglia Ruskin  
University

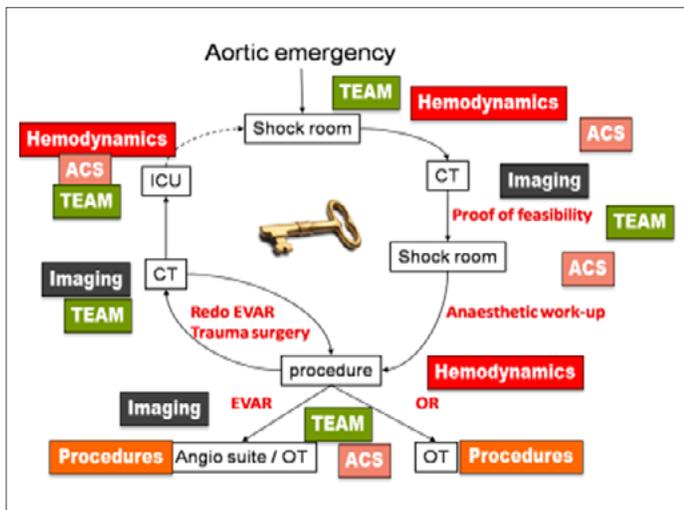
# Testimonial: Endovascular Treatment of Ruptured Abdominal Aneurysm Course at Zurich University Hospital



Ruptured Abdominal Aortic Aneurysm (rEVAR) is a lethal condition from which many patients die before reaching the hospital. An appropriately trained multidisciplinary team has the potential to improve the outcomes of those who reach hospital alive. Rapid diagnosis, appropriate resuscitation (permissive hypotension) and swift transfer are important.

Whole EVAR team training using high fidelity simulation may be the one answer, allowing clinicians to learn, practice, rehearse, improve and maintain team-based knowledge, technical and human factor skills and team attitudes in order to manage this challenging pathology.

ESVS Management of Aortic Rupture course takes place at Zurich University Hospital. The course is convened by Dr. Zoran Rancic and instructed by experienced vascular surgeons (Prof. Mario Lachat and Prof. Isabelle Van Herzele) and additional staff from Zurich University Hospital.



## Prof. Mario Lachat, Head of Vascular Surgery Department:

"The course is based on 20 year experience in rEVAR treatment. It focuses on the most relevant information of 5 keypoints that are that are important for treating our patients: hemodynamics, procedures, imaging, abdominal compartment syndrome and also team building, team behavior and team function, because the treatment of aortic rupture is not only a surgical issue but also an anesthesiological procedure that involves good collaboration of the different specialists working to rescue a patient".

"Simulation in this special field will give the participant the more practical experience that will increase his knowledge and his belief in what he is doing... in VR simulation we use two different levels - one is generic, to explain endovascular treatment, using aortic balloon to stabilize hemodynamics of the patient. In the more advanced level we use patient-specific CT data so we are able to introduce and deploy stent-grafts in a more realistic environment"

## References:

1. Virtual reality simulation for the optimization of endovascular procedures: current perspectives. Rudarakanchana N, Van Herzele I, Desender L, Cheshire NJ. *Vasc Health Risk Manag.* 2015 Mar 10;11:195-202.
2. Team training in ruptured EVAR. Van Herzele I, SEVDALIS N., LACHAT M., DESENDER L., RUDARAKANCHANA N., RANCIC Z., on behalf of EVERest (European Virtual reality Endovascular REsearch Team). *J Cardiovascular Surg* 2014;55:193-206.
3. Simulation-based team training for patient safety: <https://www.rmfi.harvard.edu/-/media/Files/-/Global/KC/Forums/2008/forumdec2008.pdf>