

# Integrated video, audio and data solution triples advanced clinical training capacity at The Pennine Acute Hospitals NHS Trust.

New Simulation and Clinical Skills Centre helps ensure first-rate patient care within The Royal Oldham Hospital.



**Organization:**  
The Royal Oldham Hospital

**Location:**  
Oldham, Greater Manchester, UK

**Industry segment:**  
Healthcare

**Application:**  
Remote guidance and training

**Axis partner:**  
Pure Audio Visual

## Mission

Following an increase in demand for enhanced clinical training within The Pennine Acute Hospitals NHS Trust, The Royal Oldham Hospital began work on an 18-month project to construct a £600,000 state-of-the-art Simulation and Clinical Skills Centre. The aim of the centre is to extend training beyond the North Manchester General Hospital, where presently 700 doctors, nurses and midwives receive advanced clinical training each year. The new centre will include two simulation rooms including high-tech manikins where training procedures would take place. The main challenge the hospital faced was collecting all the data from a training session for playback, including audio, visual and patient data, to ensure an effective debrief for trainees.

## Solution

The hospital decided an integrated video, audio and data networked system would be the most efficient method of ensuring all details during a simulation are retained. The Royal Oldham Hospital then enlisted Pure Audio Visual, a leader in the design and installation of

audio visual (AV) solutions, to implement an end-to-end Axis solution within its Simulation and Clinical Skills Centre. This included four AXIS P5515 PTZ Dome Network Cameras, providing high video quality for detailed images of simulations, as well as the added benefit of zooming in on a manikin to observe medical procedures. The camera also features audio detection to recognise vocal interaction during a session. The solution includes a further three AXIS M5014 PTZ Dome Network Cameras, offering broad coverage so trainers observing a session have a far-reaching overview of all simulated procedures. Audio integration is facilitated by three AXIS P8221 Network I/O Audio Modules, seamlessly plugging into the network video system.

## Result

Through the use of Axis' audio and video networked solution, The Royal Oldham Hospital has successfully enabled doctors, nurses and midwives to be trained in advanced clinical procedures.

**“The installation took place over an 18-month period and was professional throughout. We felt involved during the entire decision-making process when certain elements needed adapting. The support from both Pure Audio Visual and Axis Communications has been excellent throughout the process.”**

**Katherine Robertson, Learning and Organisational Development Project Manager at The Pennine Acute Hospitals NHS Trust.**

The training centre provides the hospital with the ability to capture and review all aspects of the training participants' actions and responses to different medical scenarios. The hospital anticipates that it will successfully upskill 1,400 clinicians per year within its new high-tech Simulation Suite, meaning approximately 2,100 staff within The Pennine Acute Hospitals NHS Trust will have access to hands-on training that supports them in their role, helping to provide a higher level of patient care.

The Royal Oldham Hospital, part of The Pennine Acute Hospitals NHS Trust, is on a mission to ensure its clinical staff are highly skilled and able to provide their patients with first-class care. In order to achieve this, the hospital has opened a state-of-the-art Simulation and Clinical Skills Centre, including a two-bay simulation ward, a one-bay simulated acute setting, a clinical skills room and two debriefing rooms. The variety of clinical settings will help doctors, nurses, midwives and other clinical staff access the training they need in an environment that reflects their daily clinical practice.

Katherine Robertson, Learning and Organisational Development Project Manager at The Pennine Acute Hospitals NHS Trust, states, “During the simulation debrief, all aspects of the training undertaken can be analysed in order for detailed feedback to be given to delegates, helping them to develop the skills needed to deal with the challenges faced on a daily basis within a real hospital environment. The end-to-end Axis solution is used for recording all training carried out, as well as playback during the debriefing phase of the training. This includes the management of 21 separate feeds such as video, audio and patient data.”

### **Integrating video, audio and data into one solution**

Tony Crossley, Pre-sales Technical Director at Pure Audio Visual, states, “One of the biggest challenges we were facing when implementing this solution was integrating audio into the network. Within a healthcare training environment, often what a trainee says is far

more important than what they're seen to do. Axis had a significant advantage over its competitors in this scenario, as its audio solutions integrate seamlessly with its network video technology, ensuring lip syncing is in-line with the video output. Many network camera companies don't have this functionality.”

Tony Crossley continues, “It was also important that the number of different data feeds were able to integrate with the audio and visual feeds, including information such as vital signs that would appear on a monitor at the side of a patient, as well as X-rays and scans. This is crucial during a debrief session so trainers can recognise a simulated patient's heart rate was raised, then analyse trainees' reactions to this scenario and identify what learnings must be made.”

### **Beyond medical training**

Katherine Robertson states, “While the main purpose of the new facility is to ensure clinical staff have the required knowledge and skills to provide patients with first-rate care, the suite also features additional training rooms to extend the training that can be offered. One of the simulation rooms mirrors a GP office, which will be used for training beyond purely medical and surgical processes, including HR issues, breaking bad news to families, coroners' inquests and managerial appraisals.”

Tony Crossley states, “There are also many other applications or industries where this type of training solution could be applied beyond the healthcare environment. Any scenario in which audio input is vital, as well as a need to access other streams of data including video, could be adapted to this setup. For example, reviewing responses within an emergency call centre or monitoring workers' actions during safety or new product training within a manufacturing environment. Indeed, any hands on critical training environment where there is a need to understand and react to multiple sources of information.”



The Pennine Acute Hospitals   
NHS Trust

  
integrated audio visual solutions