Overview

Military aeromedical evacuation and air ambulance crews need to be prepared to handle a range of patient health-related issues that may occur during flight. Crews also need to be proficient in aircraft systems and operations to ensure the safe transportation of patients and mitigate complications in normal or emergency situations. With governments facing constrained budgets, the high cost of operating live aircraft and the desire to use aircraft primarily for operational missions, militaries and air medical services are turning increasingly to cost-effective simulation-based training to ensure preparedness and readiness. A variety of air mobility aircraft platforms are used extensively by militaries around the world for a range of airlift and tactical transport missions, including aeromedical evacuation and air ambulance operations. As a world leader in aviation training as well as healthcare simulation and training, CAE has developed an Aeromedical Evacuation Training System to address the training challenges and requirements for aeromedical evacuation.

Aeromedical Evacuation Fuselage Trainer

CAE can design, develop and deliver a high-fidelity replica of the fuselage of any air mobility aircraft platform specifically configured for aeromedical training scenarios. The training device incorporates both real and simulated aircraft parts and systems employed to replicate environments used by crews when performing aeromedical evacuation missions.

Realistic, high-fidelity patient simulators from CAE Healthcare are included as part of CAE's Aeromedical Evacuation Training System. A hand-held, wireless tablet instructor operator station provides the instructor with full control of the training environment and the ability to customize a variety of training scenarios. Aeromedical evacuation courseware and curriculum along with the capability for CAE to provide instructors are options that can be added as part of this fully integrated Aeromedical Evacuation Training System.

Medical Simulation Products

CAE is a global leader in medical simulation and training technology. CAE Healthcare designs and builds products for patient, surgical, and ultrasound simulations as well as audiovisual management systems. CAE Healthcare has well over 1,000 medical simulation products in use by militaries around the world. As part of the Aeromedical Evacuation Training System, CAE combines world-class medical simulation products with a tailored aeromedical evacuation curriculum to create an integrated, realistic aeromedical evacuation training environment.
Key Features

CAE’s Aeromedical Evacuation Training System delivers the following features and benefits:

- High-fidelity fuselage trainer of any aircraft platform;
- Optional motion system to replicate in-flight movement and operating environment;
- Aeromedical evacuation pre-flight, in-flight, post-flight and emergency procedures;
- In-flight patient care training scenarios for both routine and emergency situations;
- Patient simulators;
- Curriculum and courseware adapted to the training needs;
- Fully-functional communication system for crew coordination;
- Aural cue sound simulation system;
- Easy-to-use instructor operator system featuring touch-screen tablet computer.

Program Examples: C-130, C-17, and KC-135 Aeromedical Evacuation Training Systems

In 2014, CAE was awarded a contract to provide the United States Air Force Reserve Command (AFRC) at Dobbins Air Reserve Base (ARB) with a comprehensive C-130 Aeromedical Evacuation Training System. CAE provided a high-fidelity C-130 fuselage trainer with medical simulation products configured for aeromedical evacuation missions. CAE Healthcare’s patient simulators feature internal robotics that mimic human cardiovascular, respiratory and neurological systems. The overall C-130 Aeromedical Evacuation Training System includes courseware, as well as a hand-held tablet instructor operator station to provide full control and customization of a variety of training scenarios. The C-130 Aeromedical Evacuation Training System was delivered to Dobbins ARB in 2016 and has now been integrated onto a six degree-of-freedom (6-DOF) motion system that will provide realistic flying cues such as turbulence, banking, take-off and landing.

In late 2015, CAE was awarded a contract to provide the United States Air Force Reserve Command (AFRC) with a comprehensive C-17/KC-135 Aeromedical Evacuation Training System. This new training device features a motion system and includes partial replicas of both the C-17 and KC-135 fuselage outfitted for the aeromedical evacuation mission. CAE Healthcare also provided high-fidelity patient simulators and instructors.