



European Air Ambulance, branch of Luxembourg Air Ambulance

Paediatric and neonatal transportation services



ว๊ Presentation of European Air Ambulance

European Air Ambulance is a world-leader in neonatal and paediatric aeromedical transport.

Our highly trained and experienced medics and state-of-the-art equipment set us apart from other air ambulance providers; and through the service we offer to clients and patients we have gained a deserved global reputation as experts in this most demanding of fields.

Transporting young patients is challenging both medically and logistically – but our expertise and experience means we minimize the risks, and guarantee every client, patient and family the very best care in the air.



The challenge

Emergency medical transport of a baby – whether premature or full-term – requires state-of-the-art equipment that can replicate (as closely as possible) a neonatal intensive care unit.

These fragile patients need intensive and continuous treatment, with close temperature control, cardiorespiratory and haemodynamic monitoring and intervention where necessary; and they are acutely sensitive to the tiniest environmental change including noise, air pressure, temperature and vibration.

EAA's aim is to create a transport 'cocoon' where the conditions can be controlled and adapted to the specific needs of the patient – and thanks to our high-performance equipment, we can do just that, creating optimum travel conditions whatever the medical need.





Temperature control and respiratory aid

During medical transport of babies, it is crucial to maintain a stable temperature inside the aircraft, helicopter or ambulance, and on the stretcher in transit between the vehicle and the neonatal unit. Specially designed transport incubators are used for this purpose.

However, differences and incompatibilities in electrical set-up between vehicles can cause difficulties. To help overcome this EAA developed an intelligent interface, the BLUEBOX, to deliver power to the incubator and all connected appliances such as respirator and monitoring equipment, ensuring continuous operation in any vehicle for any length of transport. Another vital consideration in emergency neonatal transport is the provision of respiratory assistance. Recent advances in the understanding of the needs of premature babies have led to a shift away from invasive respiratory care, towards more gentle assistance such as CPAP (Continuous Positive Airway Pressure) and HFNC (High-Flow Nasal Cannula).

While the techniques themselves are not problematic, implementing them during transport is a challenge as CPAP and HFNC require a warmed and humidified gas, a source of air and oxygen, an air/oxygen mixer and a respirator.

EAA has therefore purchased a Hamilton T1 transport respirator, equipped with special software for newborn babies, which allows for the addition of a heater/ humidifier to offer these new techniques.



On-board specialists

Every EAA neonatal and paediatric mission is staffed by specialist medics.

Each flight has on board a paediatrician specialised in neonatal intensive care medicine; and an intensive care flight nurse from the EAA team - all of whom are certified as providers of Neonatal Life Support and Paediatric Advanced Life Support by the ERC (European Resuscitation Council).

All medical crew members follow an inhouse training program to ensure they maintain their expertise and certification, and are fully trained in the latest neonatal and pediatric medical techniques and equipment. INVESTMENT AND

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Investment and innovation

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EAA has invested in fully-equipped transport incubators with neonatal heated/ humidified ventilator and invasive/noninvasive monitoring, allowing mechanical ventilation, CPAP (Continuous Positive Airway Pressure) and HFNC (High Flow Nasal Cannula) - providing an equivalent level of care to that in a hospital NICU. Equipment includes: Mediprema Nite Transport® incubator; Ventilator Stephan F120®, Hamilton T1®, Fisher and Paykel® humidifier; Corpuls monitoring® with invasive/non-invasive blood pressure control.

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The BLUEBOX is a neonatal innovation from EAA – an intelligent interface that controls the electrical input into the transport incubator and all connected appliances, ensuring they run continuously in any vehicle on land or in the air.

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EAA makes regular use of the Babypod®, a lightweight carbon composite transport device without built-in technology, which can be secured onto any stretcher. This is used for babies or infants weighing between 1500g and 6000g, whose condition is stable. Heat can be provided via a transwarmer mattress.

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EAA uses a specific neonatal unit stretcher, designed for air transport and incorporating the incubator, the neonatal ventilator, pumps, monitoring, suction and the Bluebox. This unit is also for used for ground transport, when secured to a regular stretcher.

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For slightly older children, EAA uses pediatric equipment including a ventilator with invasive/non-invasive monitoring, allowing invasive ventilation and HFNC. Equipment includes Hamilton T1® ventilator (with or without Fisher and Paykel® humidifier); Corpuls monitoring® with invasive/noninvasive blood pressure control.

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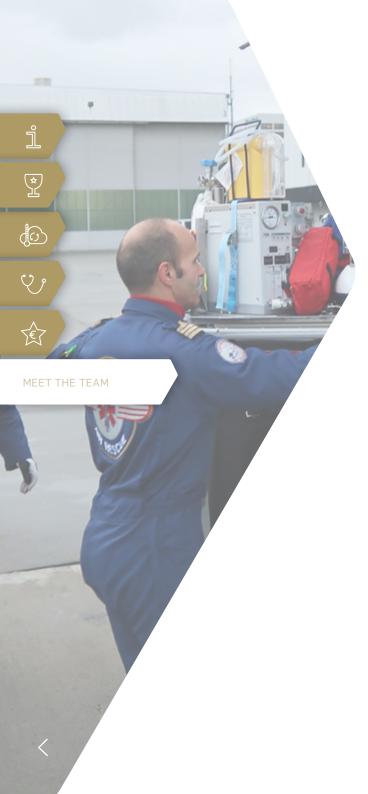
A special harness system allows adult stretchers to be safely adapted for pediatric patients.

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Spare devices, including ventilator, perfusor, Corpuls monitoring and Bluebox, are carried on all relevant missions in case of an unexpected (albeit unlikely) equipment failure.

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EAA published its own illustrated book designed to explain the transport process in a way that can help young children relax in what can be a very frightening time.



(?) Meet the team

EAA's paediatric and neonatal physicians are all highly skilled and trained specialists, with huge experience in all aspects of intensive and critical care of the youngest patients.



Dr. Jean Bottu

Dr Jean Bottu is internationally-respected, with a long and distinguished career in neonatology and paediatrics. He has worked with EAA since 2015.

He began his medical training at Namur and UCL Brussels, before specialising in paediatrics and neonatology at the Catholic University of Louvain (UCL); taking up a Neonatal Fellowship at the Hospital for Sick Children in Toronto, Canada; then returning to Belgium, becoming Head of the Neonatal Unit at the Grand Hopital de Charleroi.

Moving to the Centre Hospitalier de Luxembourg in 1999, he became Director of the National Intensive Neonatology Service, and Head of the Paediatric Department, leading the renovation and development of the Kannerklinik children's hospital. He is heavily involved in training medical professionals in neonatalogy and paediatrics in both Belgium and Luxembourg, and is a member of several working groups at the Department of Health in Luxembourg; a founding member and board member of the Luxembourg Resuscitation Council; a member of both the Belgian and Luxembourg Paediatric Societies; and has had various work published in medical journals.





Dr. Stéphanie Coquelet

Dr Stéphanie Coquelet, specialist in Neonatology and Paediatric Critical Care, began her general medical studies at FUNDP in Namur then at UCL Brussels; before specialising in neonatology and paediatrics at the Catholic University of Louvain and the University Hospital of Nancy in France.

She is qualified in emergency medicine, neonatal resuscitation and paediatric resuscitation.

She works in neonatology and paediatric intensive care at the Centre Hospitalier de Luxembourg, and is also a European Resuscitation Council Instructor for Neonatal Life Support (NLS)and European Paediatric Advanced Life Support training (EPALS).



Dr. Christine Géron

Dr Christine Géron, specialist in Neonatology, studied at Namur then at the Catholic University of Louvain, qualifying in Medicine, Surgery and Childbirth, before adding paediatrics as a specialty.

She further trained in neonatology in Lausanne in Switzerland and then in Luxembourg, where since 2005 she has worked at the National Intensive Neonatology Service.

She is certified in Advanced Paediatric Resuscitation (PALS), and has taught at the Technical High School of Health Professions for paediatric nurses and midwives for over a decade.

She is a member of the Luxembourg Paediatric Society, and has a particular interest in oral disorders affecting infants and young children.



Dr. Damien Olivier

Dr. Damien Olivier, specialist in Neonatology and Paediatric Critical Care, qualified in in medicine and paediatrics at the UCL in Brussels, before training in neonatology in Lausanne in Switzerland and at the University Hospital of Lille in France.

He is qualified in both neonatal and paediatric resuscitation, as well as paediatric intensive care, and is a senior doctor in the neonatology and paediatric intensive care team at the Centre Hospitalier de Luxembourg.

He is highly experienced in the stabilization and transport of newborns and paediatric patients; is a member of the European Society of Paediatrics and Neonatal Intensive Care (ESPNIC); and is an EPALS and NLS trainer for the European Resuscitation Council.

He has a particular interest in neonatal and paediatric haemodynamics.