

## Original Article

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# In Memoriam: Professor Marc R. de Leval (April 16, 1941–June 26, 2022) – an exceptional, inspirational, and most modest man

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**Abstract**

Professor Marc de Leval (16 April 1941 –26 June 2022) was a pioneer in the field of congenital cardiothoracic surgery and former chair of the British Congenital Cardiac Association [<https://www.bcca-uk.org/>]. Professor de Leval was appointed as a Consultant Cardiothoracic Surgeon at Great Ormond Street Hospital in 1974. Throughout his distinguished career at Great Ormond Street Hospital, he worked with dedication to improve outcomes for cardiothoracic surgery. His contribution to academic cardiothoracic surgery was significant and far-reaching with over 300 peer-reviewed publications. Of particular note was his work in improving the palliation of children with cyanotic congenital heart disease by the use of the modified Blalock-Thomas-Taussig shunt and his pioneering work over many years to improve understanding of the Fontan circulation using in vitro modelling and computational fluid dynamics that led to the development of the total cavopulmonary connection. His other significant contributions include the importance of analysing surgical failures, being the co-editor of the most readable textbook in our field, and so much more. During his career, he trained many eminent surgeons from around the world, and a Marc de Leval Fellowship of The American Association for Thoracic Surgery [<https://www.aats.org/about-the-foundation/the-reach-of-our-programs/foundation-honoring-our-mentors-program/marc-r-de-leval-md>] now allows the opportunity for a trainee to study congenital cardiac surgery in the UK or Europe. Marc is fondly remembered by the staff at Great Ormond Street Hospital. The nurses recall his arrival at the break of day on the intensive care unit, having already been for a swim, and the diligence with which he observed his patients following surgery. Former trainees remember a man who, despite his standing, always remained courteous, approachable, and kind. Professor de Leval will be remembered not only as a skilled and dedicated surgeon but also as a distinguished scholar, one with a quest for knowledge in the pursuit of excellence.

Professor Marc de Leval, a pioneer in the field of congenital cardiothoracic surgery and former chair of the British Congenital Cardiac Association [<https://www.bcca-uk.org/>], died following a brief illness on Sunday 26th June at the age of 81 years.

Originally from Charneux, Belgium, following his junior training at Liege University in Belgium, Professor de Leval wished to pursue a career in the evolving field of cardiothoracic surgery. Without a training programme in his home country, he applied for a Fellowship at the Pacific Medical Centre in San Francisco where he spent 2 years training under Dr Frank Gerbode. Following this, he continued his cardiothoracic training as a surgical senior registrar at Great Ormond Street Hospital. From 1973–1974, under the Evarts A. Graham Memorial Travelling Fellowship of the American Association for Thoracic Surgery, he worked under Dr Dwight McGoon at Mayo Clinic. It was during this time that he developed an interest in perfecting outcomes of the Fontan operation. It was also the start of his ongoing interest in optimising patient safety that he was to pioneer throughout his career.

Professor de Leval was appointed as a Consultant Cardiothoracic Surgeon at Great Ormond Street Hospital in 1974. Throughout his distinguished career at Great Ormond Street Hospital, he worked with dedication to improve outcomes for cardiothoracic surgery. His contribution to academic cardiothoracic surgery was significant and far-reaching with over 300 peer-reviewed publications. Of particular note was his work in improving the palliation of children with cyanotic congenital heart disease by the use of the modified Blalock-Thomas-Taussig shunt and his pioneering work over many years to improve understanding of the Fontan circulation using in vitro modelling and computational fluid dynamics that led to the development of the total cavopulmonary connection. His other significant contributions include the importance of analysing surgical failures, being the co-editor of the most readable textbook in our field, and so much more. During his career, he trained many eminent surgeons from around the world, and a Marc de Leval Fellowship of The American Association for Thoracic Surgery [<https://www.aats.org/about-the-foundation/the-reach-of-our-programs/foundation-honoring-our-mentors-program/marc-r-de-leval-md>]

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**Figure 1.** Professor Marc R. de Leval (April 16, 1941–June 26, 2022).

[r-de-leval-md](#)] now allows the opportunity for a trainee to study congenital cardiac surgery in the UK or Europe.

Professor de Leval was a driving force behind the development of the heart transplant programme, performing the first transplant at Great Ormond Street Hospital in 1988. Despite the challenges of early cases, he failed to be deterred, with the programme going from strength to strength. It is a fitting tribute to his early determination and drive that just a few days before his death, Great Ormond Street celebrated the 500th patient to undergo a transplant being discharged home following a successful procedure and recovery.

An important legacy of his years at Great Ormond Street Hospital was his work in patient safety and risk management. He investigated the role of human factors and errors in surgical outcome. He examined factors in the surgical outcome of

transposition of the great arteries from around the UK to improve the understanding of how errors can arise due to the alignment of smaller failings in a system. His work also highlighted the importance of how we learn and recover from errors and the vital importance of communication which is now widely recognised in all fields of medicine.

He retired from the National Health Service (NHS) in 2006 and clinical practice in 2010 but remained a friend and mentor to former colleagues and continued with charity work as the Vice President of the Chain of Hope charity. In 2011, his work was recognised by the prestigious American Association for Thoracic Surgery Scientific Achievement Award honouring his scientific contributions in the field of thoracic surgery – one of only nine individuals to receive this award at the time.

On a personal level, Marc is fondly remembered by the staff at Great Ormond Street Hospital.

The nurses recall his arrival at the break of day on the Intensive Care Unit, having already been for a swim, and the diligence with which he observed his patients following surgery.

Former trainees remember a man who, despite his standing, always remained courteous, approachable, and kind.

He will be remembered not only as a skilled and dedicated surgeon but also as a distinguished scholar, one with a quest for knowledge in the pursuit of excellence.

He is survived by his wife Véronique, daughters – Nathalie and Fabienne, son-in-law – Nick and grandchildren – Sam, Béatrice, and Leia de Leval.

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**Conflicts of interest.** None.

**Ethical standards.** The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national guidelines on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.