



THE FACULTY OF MEDICINE
Harvard University

Richard Van Praagh



Drs. Richard and Stella Van Praagh at the Cardiac Registry in Boston Children's Hospital (circa 2000)

Born in London, Ontario, on April 11, 1930, Dr. Van Praagh received his medical degree from the University of Toronto before completing postgraduate training at Toronto General Hospital (pediatrics), Boston Children's Hospital (pathology and pediatrics), Johns Hopkins Hospital (pediatric cardiology), the Mayo Clinic (cardiopulmonary physiology and cardiac catheterization), and the Hospital for Sick Children in Toronto (pediatric cardiology). His cross-disciplinary training in developmental pathology and embryology, and his partnerships with notable leaders in cardiac pathology and pediatric cardiology (such as Drs. Maurice Lev, Jesse Edwards, Helen Taussig, Catherine Bull, John Keith, and Peter Vlad), helped shape a career defined by profound intellectual curiosity and an unwavering commitment to anatomic precision and discovery.

In 1965, at the invitation of Dr. Sidney Farber, then Chief of Pathology at Boston Children's Hospital, Dr. Van Praagh

joined the faculty in the Department of Pathology, where he and his wife (and scientific partner), Dr. Stella Van Praagh, founded the Stella and Richard Van Praagh Cardiac Registry. This unique collection of heart specimens—ultimately comprising more than 4,000 meticulously documented autopsy specimens of congenitally malformed hearts—is an internationally renowned resource for training and research in the pathologic anatomy of congenital and acquired childhood heart disease. Dr. Van Praagh, in partnership with Dr. Stella Van Praagh and other investigators, used registry material to produce more than 300 peer-reviewed publications, describe 13 new congenital heart defects, propose five cardiac operations, and train countless fellows, residents, and other medical specialists from across the globe.

The symbiotic combination of Richard's encyclopedic knowledge, inquisitive mind, passion, and warmth with Stella's personal approach to teaching and unending patience made learning in the Cardiac Registry at Boston Children's Hospital an unforgettable experience for generations of cardiologists, surgeons,

*In tribute to their dedicated efforts to science and medicine, deceased members of the Harvard Faculty of Medicine (those at the rank of full or emeritus professor) receive a review of their life and contributions with a complete reflection, a **Memorial Minute**.*

pathologists, and trainees from around the world. Attending one of Richard's sessions analyzing a heart specimen was a multi-hour tour de force involving a deep dive into how the heart came to be, the embryologic and evolutionary underpinning of the malformation, the history of discoveries about the cardiovascular system, and anecdotes about the modern history of pediatric cardiology and cardiovascular surgery.

Dr. Van Praagh began his academic career in the 1960s tackling the challenge of understanding dextrocardia and hearts with one ventricular chamber (single ventricle hearts). He quickly realized that cardiac nomenclature was a morass, with conflicting and ambiguous terms, that was literally impeding progress in understanding congenital heart defects. This led to his most influential contribution to the field: the Segmental Approach to the diagnosis and classification of congenital heart defects, first published in 1972 (1). He recognized that the heart is composed of three semi-independent main segments—atria, ventricles, and great arteries—and two connecting segments—the atrioventricular canal between the atria and the ventricles and the conus or infundibulum between the ventricles and great arteries. This recognition provided cardiac morphology and pediatric cardiology with a systematic, coherent, and precise framework to describe any heart, but especially congenitally malformed hearts. This scientifically accurate language made it possible to describe every possible cardiac malformation.

During more than four decades on the Harvard Medical School faculty, Dr. Van Praagh published extensively across pathology, embryology, imaging-anatomy correlation, and surgical approaches to congenital heart defects. He made fundamental contributions to our understanding of many cardiac malformations, including pulmonary venous anomalies, atrioventricular canal defects, ventricular septal defects, tetralogy of Fallot, transposition of the great arteries, double-outlet ventricle, double-inlet ventricle, and many more. In multidisciplinary conferences at Boston Children's Hospital and across the globe, Dr. Van Praagh's offered insights frequently reshaped the understanding of complex malformations and improved surgical decision-making. Colleagues recall his ability to distill embryologic development into clinically meaningful pathways and to illuminate the "story" underlying each malformed heart. His insight and intuition enabled Dr. Van Praagh to comprehend the nature of many congenital heart defects long before their molecular and mechanical bases were understood. His observations often served as an important foundation in congenital cardiac care for clinical practitioners across specialties. As his surgical colleague, Dr. Aldo Castaneda, wrote, "I must confess that, not infrequently, I failed at first to recognize the essence of his arguments and only after further reflection managed to grasp the importance and validity of his ideas" (2).

The international impact of Richard Van Praagh's work is immense. Pediatric cardiologists from all over the world trained by the Van Praaghs have felt compelled to pass on this generously shared knowledge, to increase it by the study of their own cardiac specimens, and to invite Richard and Stella to lecture in their respective countries.

Segmental analysis, the first common language of congenital heart defects, forms the basis of the

International Paediatric and Congenital Cardiac Code (IPCCC), now enshrined in the eleventh iteration of the International Classification of Diseases. This was achieved by long, often heated but always constructive discussions among the members of the International Society of Nomenclature for Paediatric and Congenital Heart Disease (ISNPCHD), who come from nine countries and three continents. As an example, the classification of ventricular septal defects in ICD11 is based on the geographic approach described by Richard Van Praagh in 1989.

The “transatlantic taxonomic warfare”, as described by Aldo Castaneda (2), is well known in the world of pediatric cardiology. The controversies between the European school led by Robert H. Anderson in London and the American school represented by Drs. Richard and Stella Van Praagh, have resulted in enormous progress in the comprehension of congenital heart malformations. The two schools are now reunified in the IPCCC IDC11 nomenclature, which permits clinicians worldwide to share the same terminology for complex heart defects.

Dr. Van Praagh was honored with innumerable visiting lectureships and professorships. He was a member of many academic organizations including Fellow of the American Heart Association, Fellow of the American College of Cardiology, Fellow of the Royal College of Physicians of Canada, Honorary member of the British Cardiac Society, Honorary member of the South African Association of Pediatrics, Deutsche Gesellschaft für Thorax-, Herz- und Gefasschirurgie, and a member of the Roland Hetzer International Cardiothoracic and Vascular Surgery Society. His many honors and awards include Distinguished Achievement Award for 1999 of the Society for Cardiovascular Pathology (co-recipient with Dr. Stella Van Praagh), the 2004 Paul Dudley White Award from the American Heart Association (co-recipient with Dr. Stella Van Praagh), Bakoulev Gold Medal and Plaque, Doctoris Medicinae Honoris Causa, Universität zu Köln, and Doctoris Medicinae Honoris Causa, Jagiellonian University, Krakow.

In 2022, late in his career, Dr. Van Praagh completed what many regarded as his life’s definitive work: *Congenital Heart Disease: A Clinical, Pathological, Embryological and Segmental Analysis* (3). Spanning more than 1,000 pages and incorporating over 500 original images and diagrams, the volume synthesized decades of scholarship and provided the most comprehensive exposition of the segmental method to date. The book stands as an enduring tribute to his lifelong dedication to truth-seeking and to improving care for children with congenital heart disease.

All those who had the privilege of knowing him recognize that Richard Van Praagh was a thoughtful and generous man with a huge heart, a master teacher and mentor, particularly caring for those starting their medical careers and who had not had the same opportunities as others. He welcomed students from all over the world and dedicated precious time to making sure they were acknowledged, their questions answered, and their perspectives seen and heard. He made sure that they received the highest level of teaching, not only about science, but also about life and philosophy, sharing his insightful perspectives. In their warm and lovely home in Wellesley, Richard and Stella opened the “doors of their lives” to

medical trainees from all over the world, creating life-long relationships, strong bonds that shaped these individuals as professionals and human beings for the rest of their lives.

Beyond his scientific achievements, Richard is remembered for his generosity, warmth, and devotion to family. He might forget himself in a professional setting and address Stella as “my Queen” or “my Bride,” and he always recognized her to be every bit his intellectual equal. They (Figure) complemented each other professionally and personally. Each had a passion for learning fueled by insatiable curiosity and a desire to share knowledge with others. From the Greek classics, to Durant’s *Story of Civilization*, to Sherlock Holmes, to books on evolution, WWII, statistics, poetry, and so much more, Richard’s books would be underlined, annotated, and often enthusiastically introduced as “the best thing I’ve ever read!” If he were still around to read or hear this tribute, he would “blush madly,” and at the same time, he would want to raise a glass of “hydroxyl groups” and toast all who were present.

The Van Praaghs complemented each other professionally and personally. They opened their hearts and home to countless physicians from across the globe, including the authors, touching so many lives. After Stella’s death in 2006, his children and grandchildren continued to be a source of deep pride, and his personal kindness left a lasting impression on all who knew him. The global congenital heart community mourns the loss of an extraordinary teacher and visionary. His intellectual legacy resides not only in his publications and conceptual architecture of the segmental approach, but also in the thousands of clinicians who learned to “think anatomically” through his mentorship.

Respectfully submitted,

Stephen P. Sanders, MD, *Chairperson*

Tal Geva, MD

Lucile Houyel, MD

Jacqueline Kreutzer, MD

Alex Van Praagh (Son of Richard and Stella Van Praagh)

References

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3. Van Praagh R. *Congenital Heart Disease: A Clinical, Pathological, Embryological and Segmental Analysis.* Philadelphia, PA: Elsevier, 2022.