Historical perspectives of The American Association for Thoracic Surgery: Fred A. Crawford, Jr

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Fred A. Crawford, Jr, the 83rd president of The American Association for Thoracic Surgery (AATS), was born in Columbia, SC, on October 17, 1942, in the middle of World War II, the only child of Scotch-Irish parents. His father's ancestors had arrived in Charleston, SC, by boat from Ireland in the late 1700s; his mother's family had already settled in South Carolina by then. Dr Crawford's parents were educators who both taught the value of education and provided education. His mother was his grammar school principal, and his father was his high school principal. Dr Crawford grew up in the Low Country of South Carolina, 10 miles from Holly Hill, SC (population of 1400). As a child, he learned to love the outdoors, an interest that continued throughout his life. His father was an excellent athlete and was also his coach in several sports.

EDUCATION AND SURGICAL TRAINING

Dr Crawford attended Duke University as an undergraduate for 3 years but started medical school before he had enough credits to obtain an undergraduate degree. He finished Duke University School of Medicine first in his class (Alpha Omega Alpha Honor Medical Society) in 1967. The most important influence on his subsequent career was the opportunity to work in the laboratory with Dr Will C. Sealy for 3 summers while in medical school, during which time he was taught the importance of mentoring. At the end of his freshman year in medical school, David C. Sabiston, the 65th AATS president, arrived from Johns Hopkins as the new Chairman of Surgery and subsequently developed what may arguably have been the best surgical residency and training program for future department chairs and division chiefs of that era.¹ Dr Crawford's residency took place during the Vietnam War, and service in one of the armed forces was required during that time. Accordingly, at the end of 2 years, he entered the United States Army and served 2 years as a surgeon, including 1 year as a trauma surgeon with the rank of major at the 24th Evacuation Hospital in Vietnam. Here, Dr Crawford learned the importance

of diversity in surgical training (as many of his cosurgeons had trained in other institutions and had learned different ways of doing things) and also the importance of surgical efficiency. He returned to Duke in 1971 and completed a residency in both general and cardiothoracic surgery in June 1976.

ACADEMIC SURGICAL CAREER

Dr Crawford was recruited by Dr James Hardy to the University of Mississippi, where he served as Chief of Cardiac Surgery from 1976 until August 1979. During this time, he performed all cases of congenital heart surgery in the state of Mississippi. In 1979, he was recruited back to South Carolina to become Professor and Chief of the Division of Cardiothoracic Surgery at the Medical University of South Carolina (MUSC), a position that he held for the next 30 years until July 2009, when he stepped down but remained on the faculty as a Distinguished University Professor. For 19 years (1988–2007), he was also the Horace Smithy Professor and Chairman of the Department of Surgery at MUSC.² During his tenure at MUSC, he trained more than 80 general surgical and 38 cardiothoracic surgical residents. His surgical career was somewhat unusual in that approximately half of his clinical activities were devoted to congenital heart surgery and the remainder to adult cardiac surgery.

Dr Crawford's clinical interests included valve surgery and congenital heart surgery, as well as arrhythmia surgery for both children and adults. In the mid 1980s, he collaborated with Dr Paul Gillette, Chief of Pediatric Cardiology at MUSC, and for a number of years he performed more arrhythmia surgical procedures in infants and children than were done anywhere else in the world. During his residency, he became interested in complete atrioventricular canal defects, which had an operative mortality of approximately 50%. From 1979 until 2007, Dr Crawford performed all atrioventricular canal operations in South Carolina, during which time the operative mortality declined from about 20% to zero.³

ACCOMPLISHMENTS AND CONTRIBUTIONS TO THE FIELD OF CARDIOTHORACIC SURGERY

Although Dr Crawford served as author or coauthor of more than 260 publications in peer-reviewed journals, perhaps his most important contributions have been in the area of surgical education.^{4,5} He was a residency program director for 30 years and was fortunate to serve on the American Board of Thoracic Surgery for 10 years,

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including a stint as its chair for 2 years, as well as on the Thoracic Surgery Residency Review Committee. Numerous changes were made at the American Board of Thoracic Surgery during his tenure, but perhaps most important was the decision made by the Board in 2001 to relax the requirements for American Board of Surgery certification as a prerequisite for cardiothoracic surgery certification.^{6,7} This was the first step that ultimately led to the development of alternate pathways to American Board of Thoracic Surgery certification, including the 6-year integrated program and “4–3” combined general and thoracic training programs, which appear to be growing rapidly in popularity and revitalizing interest in cardiothoracic surgery.^{8–10}

Dr Crawford’s 2003 AATS presidential address, “Thoracic Surgery Education—Responding to a Changing Environment,” was a direct outgrowth of his long-standing interest in education.¹¹ During his tenure on the American Board of Thoracic Surgery, he had become somewhat frustrated with resistance to change in the educational process of thoracic surgery despite significant changes in the specialty itself, declining interest in thoracic surgical specialty training, and the predicted shortfall of cardiothoracic surgeons in the future. In his address, he traced the formation of our specialty and its educational process, specifically addressing the lack of change in our educational processes despite the radical changes in our specialty from one that at its formation operated on empyema and tuberculosis to one that now deals with all aspects of congenital heart disease, transplantation, aortic disease, and other complex conditions. He documented the declining interest in surgery and particularly in cardiothoracic surgery, which could be traced as much as anything to an increased interest in lifestyle among medical students. He then projected this decline to demonstrate how it would ultimately lead to a shortage of thoracic residents and practicing thoracic surgeons. He concluded by outlining the process and rationale for the changes in thoracic surgical education that were subsequently implemented by the American Board of Thoracic Surgery.

Dr Crawford was the first chair of the Joint Council on Thoracic Surgery Education, served on the editorial board of *The Journal of Thoracic and Cardiovascular Surgery*, and was editor of *Operative Techniques in Thoracic and Cardiovascular Surgery*. He received the Distinguished Alumnus Award from Duke University School of Medicine in 2003 and the MUSC Honorary Alumnus Award in 2009. In 2007, he received the Order of the Palmetto, South Carolina’s highest civilian honor for service. In 2008, MUSC opened the Ashley River Tower, a facility designed specifically for the treatment of cardiovascular and digestive disease. As a tribute to Dr Crawford’s contributions to MUSC, the operating suites within the Ashley River Tower bear his name (Figure 1).

Fred A Crawford Jr

FIGURE 1. Top, Dr Crawford pictured outside the new Medical University of South Carolina Ashley River Tower operating suites. Below, Dr Crawford’s signature.

PERSONAL LIFE

Dr Crawford met his wife, Mary Jane, during very early childhood and has been married to her for more than 40 years. They have 2 children and 5 grandchildren (Figure 2). His son, Dr Fred A. Crawford III, received a Fulbright Fellowship after graduating from Duke and completed medical school and cardiology training at MUSC to practice interventional cardiology. His daughter, Mary Beth, received her undergraduate degree from Davidson and a master’s degree from Harvard; she now runs her own art education consulting firm. Dr Crawford has diverse interests outside of medicine; these include golf, fly fishing,

FIGURE 2. Dr Crawford with family at his farm near Holly Hill, SC. Left to right, front row: Son-in-law Jim Ausman, granddaughter Cameron Ausman, grandson Zaco Crawford, grandson Marcus Crawford. Left to right, back row: Daughter Mary Beth Ausman, granddaughter Allison Ausman, daughter-in-law Lola Crawford, grandson Sean Crawford, son Fred A. Crawford III, wife Mary Jane Crawford, Fred A. Crawford, Jr.

FIGURE 3. Crawford on African safari with Dr Randolph W. Chitwood.

hunting, and photography (Figure 3). True to his roots, he also owns a large, working farm less than an hour away from Charleston near his hometown of Holly Hill.

When asked about all his accolades and academic appointments, Dr Crawford has identified his nomination as president of the AATS as the crowning accomplishment of his career. He first attended the AATS as a junior medical student in 1967 at its 50th anniversary meeting in New York, where he and his colleagues presented a research paper that was based on work he had performed in Will Sealy's lab at Duke as a medical student.¹² Now, as a past president of this prestigious organization, he looks forward to its 100th anniversary meeting.

AATS LIFETIME ACHIEVEMENT AWARD

The AATS presented the Lifetime Achievement Award, one of the most prestigious honors that can be given by

the AATS, to Dr Crawford during the 94th Annual Meeting in Toronto, Canada. The award serves to recognize individuals for their significant contributions to cardiothoracic surgery in the areas of patient care, teaching, research, or community service. Dr Crawford has been a true leader in the field of cardiothoracic surgery and is only the fifth recipient of this prestigious award, joining F. Griffith Pearson, Frank C. Spencer, Thomas B. Ferguson, and Eugene Braunwald. It was with great pride that the AATS awarded the Lifetime Achievement Award to Fred A. Crawford, Jr, for a distinguished career with contributions in multiple areas that have profoundly benefited the specialty of cardiothoracic surgery.

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