GUEST Editorial

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Cardiac Surgery—State-of-the-Heart Review

This is the second of a 12-part series: This year we're focusing on the phenomenal progress that the medical community has made in the 30 years of Federal Practitioner's *existence. Each month we'll feature an editorial written by one of our Editorial Advisory Association members, reminding us how much has changed in their particular medical field over the past 30 years. This month's focus is thoracic and cardiovascular surgery. –James V. Felicetta, MD*

February is Heart Month, and I am honored to provide commentary regarding cardiac surgery past, present, and maybe even the future, depending on the clarity of my crystal ball. The American Heart Association established Heart Month to focus attention on maladies of the heart and circulatory system. Cardiovascular-associated diseases affect millions of Americans and are a significant portion of health care expenditures. Despite my research, I have not been able to definitively determine why February was designated Heart Month. Many assumed that the designation was related to Cupid and Valentine's Day. Perhaps, February was chosen because the well-intentioned resolutions of the New Year have begun to lose their shining appeal by February. Those new health club memberships are not being used with the same fervor that they were in January. Fast food and nicotine are renewing their place as old friends in our lives. The intent to have a "God-like body" by summer has been replaced with the same old "Buddha-like body" mentality.

Nevertheless, I want to recap the brief history of cardiac surgery and its impact on our lives. I am a middle-aged thoracic and cardiovascular surgeon. My training consisted of the usual general surgery residency followed by a cardiac surgery fellowship. My skills and practice were built on the foundation of my predecessors and my mentors. The field of cardiac surgery is relatively new compared with other surgical specialties. Cardiac surgery was born in the 2 decades from 1950 to 1970. The pioneers of those 2 decades were innovators who created what we now hold to be commonplace practice patterns.

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In the 1950s, Dr. Jeremy Swan excised a stenotic pulmonary valve using hypothermia, and Dr. John Gibbon performed the world's first heart surgery under extracorporeal circulation. Shortly thereafter, Dr. Walton Lillehei performed his landmark works using a bubble oxygenator. These procedures, having never before been performed, were the foundation of the modern-day heart-lung machine and myocardial protection techniques, which allow heart surgeons to perform the multitude of procedures that are now routinely performed on a daily basis.

The 1960s and 1970s were a period of development during which coronary artery bypass grafting was conceived and perfected. Dr. Arthur Vineberg was the first surgeon to place a mammary artery directly into the myocardium to improve blood flow to an ischemic ventricle by development of collateral vessels. Dr. David Sabiston performed the first vein bypass graft to a coronary artery, followed shortly by Dr. Michael DeBakey's success with the same technique. Dr. Donald Effler and his colleagues at The Cleveland Clinic became world renowned for their revascularization techniques.

Cardiac transplantation was also founded during the same time when in 1967, Dr. Christian Barnard performed the world's first heart transplant. There were many successes and many more failures. Cardiac transplantation almost became a lost art until it was resurrected and perfected by Dr. Norman Shumway, who will forever be known as the father of modern-day cardiac transplantation.

Today, cardiac surgeons perform a multitude of procedures. These in-

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clude conventional incisions and minimally invasive techniques, on-pump and off-pump coronary artery bypass procedures, robotic-assisted procedures, valve repair and replacement, arrhythmia surgery, and heart-lung transplantation. The patient population has become more complex with many preexisting comorbidities. Outcomes are closely scrutinized. Third-party payers expect short hospital stays and no complications despite high-risk procedures. Amazingly, this can all be accomplished with the knowledge and experience that was gifted to us by our predecessors of the past 5 decades.

Cardiac surgery remains a young specialty. I do not think we will ever experience the rapid growth and development that our pioneers experienced. Regulatory agencies and a litigious modern-day society preclude that from happening. In addition, the greatest challenge that we face as cardiac surgeons may well be the preservation of our specialty. The ability to attract and train young surgeons will become more difficult. The personal and financial commitment involved in the lengthy training program to become a thoracic and cardiovascular surgeon is not for the faint of heart. The social and political environments may preclude candidates from pursuing such a venture. I hope we will never remember February as Heart Month due to a fatal cardiac wound from Cupid's aberrant arrow that could not be repaired due to a paucity of cardiac surgeons. ●

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Author disclosure

The author reports no actual or potential conflicts of interest with regard to this editorial.

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