
In memoriam:

Shukri F. Khuri, MD, FACS: May 27, 1943–September 26, 2008

by *Kamal M. F. Itani, MD, FACS*

On September 26, 2008, the world of surgery lost one of its giants. A friend, educator, and innovator, the unwavering dedication, enthusiasm, and accomplishments of Shukri Khuri, MD, FACS, are forever engrained in our memory. It is with the utmost respect that we pay tribute to a friend and to a life served for helping to improve the quality of care in surgery.

Dr. Khuri is best known for his leadership in developing the National Surgical Quality Improvement Program (NSQIP). In conjunction with his colleagues Jennifer Daley, MD (now chief medical officer at Partners Community Healthcare Inc., Boston), and William Henderson, PhD (previously director of the Cooperative Studies Program at Hines, and now professor of biostatistics at the University of Colorado Health Outcomes



Dr. Khuri

Program), Dr. Khuri led this unique national effort within Veterans Affairs (VA), which was established in 1994. The NSQIP is the first national, validated, outcomes-based, risk-adjusted, and peer-controlled program for the measurement and enhancement of the quality of surgical care*; it allows for a comparison of the quality of surgical care among various institutions using validated models for risk adjustment of surgical outcomes. The NSQIP is now recognized by the surgical community at large as the model for the comparative assessment of quality of surgical care and for continuous improvement in surgery.

At the 2002 annual meeting of the American Surgical Association, Haile T. Debas, MD, FACS, then-chancellor and dean at University of California–San Francisco and president of the American Surgical Association, paid tribute to Dr. Khuri, whom he described as “the VA surgeon who has effectively placed surgery on the forefront of the new revolution.”†

The Institute of Medicine, in a report published in November 2002, singled out the NSQIP as one of three elements that have made the VA the best health care system in quality management. In 2001, Dr. Khuri led a large collaborative study between the VA and the American College of Surgeons, funded by the Agency for Healthcare Research and Quality, which was conducted in 14 non-VA academic medical centers. The study demonstrated the feasibility of applying the NSQIP to the private sector at large and validated its effect on quality improvement. The results of that study prompted the Board of Regents of the American College of Surgeons to establish the ACS NSQIP for private sector hospitals, modeled after the VA NSQIP. Dr. Khuri continued to advise the ACS as it enrolled hospitals into this program, which Thomas R. Russell, MD, FACS, Executive Director

*Khuri SF, Daley J, Henderson W, et al; and The Participants in the National VA Surgical Quality Improvement Program. The Department of Veteran's Affairs NSQIP: The first national validated, outcome-based, risk-adjusted, and peer-controlled program for the measurement and enhancement of the quality of surgical care. *Ann Surg.* 1998;228(4):491-507.

†Fink AS, Campbell DA, Mentzer RM, et al. The National Surgical Quality Improvement Program in Non-Veterans Administration Hospitals. Initial demonstration of feasibility. *Ann Surg.* 2002;236:344-354.

of the College, called “the most important initiative the College is undertaking today.”

Dr. Khuri was born in Jerusalem and moved as a child with his family to Beirut, Lebanon. At a young age, he distinguished himself as an outstanding student, receiving the Stephen Penrose Award—which is given annually to a student who most contributes to the school through scholarship, character, and leadership—twice at the end of high school and later upon graduating from medical school.

Although one might think that the Penrose Award criteria were written to describe Shukri Khuri’s achievement later in life, they truly reflected what he already achieved early at school: he received both his bachelor and medical degrees from The American University of Beirut (AUB) with distinction and was elected alpha omega alpha; he was the editor-in-chief of the yearbook for his high school and later for the university; he achieved leadership status in the Lebanese boy scouts, started the music club at AUB, and produced several plays for the drama club.

One of his former teachers at AUB described him as “a person with unfailing courtesy and generosity in dealing with others, with intense curiosity, with dedication to preserve the wisdom of the body, with unique team leadership, an ability to objectively quantify in all areas of studies; all of these qualities being unified in an individual with infinite capacity for friendship and loyalty” (personal communication, Michel Slim, MD, FACS, September 2008).

After completing his first year



NSQIP founders, left to right: Dr. Henderson, Dr. Daley, and Dr. Khuri.

in surgery at AUB, he married Randa Domian, the woman who would become his lifelong teammate, his supporter in all his academic endeavors, and the one person he was so proud to describe as “the reason for my success.”

After general surgery training at AUB, Dr. Khuri decided to take the advice of his mentor Timothy Harrison, MD, FACS, chair of the department of surgery, and move to the U.S. to pursue his interest in cardiothoracic surgery. He left Lebanon in 1972 and completed two years of research in the cardiovascular laboratories at Johns Hopkins under Vincent Gott, MD, and Vivien Thomas. This experience was followed by two and a half years of training in cardiothoracic surgery at the Mayo Clinic, Rochester, MN. He was then recruited by Ernest Barsamian, MD, FACS, to the West Roxbury VA, Harvard Medical School, and the Brigham and Women’s Hospital in Boston, MA.

Within one year, Dr. Khuri became chief of cardiac surgery and after another seven years,

chief of surgery. Within the same period, he rose to the rank of professor of surgery at Harvard Medical School and vice-chairman of the department of surgery at Brigham and Women’s Hospital at the age of 43. He spent 20 years as chief of surgical services at the West Roxbury VA Medical Center (now the VA Boston Healthcare System) and stepped down in September 2004.

His research laboratory at West Roxbury has been continuously funded since 1977 and has trained more than 60 residents and postgraduate students in applied and translational research. It has also established close associations with the Naval Blood Research Laboratory in Boston and other laboratories at the Brigham and Women’s Hospital and the Massachusetts Institute of Technology. Dr. Khuri’s laboratory has made major contributions in the fields of myocardial protection, where his research led to the development of the first metabolic tool for the online assessment of myocardial protection during

cardiac surgery. The research in his laboratory also led to the development of long-term preservation of vascular conduits and organs. Dr. Khuri was also closely associated with the VA's Cooperative Studies Program, where he participated in several of the program's multicenter studies as principal investigator or member of the executive and planning committees.

Dr. Khuri was instrumental in the VA's efforts over the years to automate medical records. In 1978, he established at the West Roxbury VA Medical Center the first automated data-management system in a surgical intensive care unit in the Northeast and subsequently chaired the VA Surgery Specific Interest Users Group, which developed the first clinical module in the VA's Decentralized Hospital Computer Plan (DHCP). Today, the electronic patient record in the VA is by far the most advanced and comprehensive electronic medical record system in the world. Dr. Khuri has contributed significantly to its development by serving on the advisory panels that set the direction for the development of DHCP (including the Undersecretary's Information Resource Advisory Council) and by leading the development of the Surgery Package, which remains the main framework of surgical informatics in VA DHCP and its evolution into VISTA.

Based on his experience as co-founder and Chair of the NSQIP, Dr. Khuri's expertise in quality of care was recognized nationally and internationally, as evidenced by the numerous invitations he had received over the years for

lectureships and professorships in the U.S. and abroad. He was a member of numerous professional organizations, including the American Surgical Association, where he served as vice-president in 2005–2006. In addition, he served on and chaired numerous regional and national committees and served a three-year term as president of the Massachusetts Affiliate of the American Heart Association.

Dr. Khuri was the recipient of numerous awards, including the Brigham and Women's Robert Matson teaching award, the American Heart Association's Paul Dudley White Award, and the Nicholas G. Berans Veterans Association's Distinguished Service Award. In 1998, he was the first physician from the VA to receive the prestigious Frank Brown Berry Prize, which singles out annually an outstanding physician in the U.S. federal health care system, which includes in part the National Institute of Health, the Centers for Disease Control and Prevention, the Agency for Healthcare and Research Quality, the health care system of the U.S. Department of Defense, and the Veterans Health Administration. In 2006, Dr. Khuri was awarded the Philip Crosby Award for Quality and the American Heart Association Mentorship Award in Surgery, and in 2008, he was awarded the Presidential citation by The Association of VA Surgeons.

Two days after his death, Randa was informed that Dr. Khuri had been chosen to be the recipient of the 2008 Ernest Amory Codman Award for improvements in safety of care to the public. In a press release,

Mark R. Chassin, MD, MPP, MPH, president of The Joint Commission, which administers the award, stated, "The 2008 Codman Award recipients exemplify how performance measurement improves the quality and safety of health care. Their achievements demonstrate the progress that can be made when process and outcomes measures are combined into meaningful practices that result in better patient care."

In his 65 years, Dr. Khuri made a lasting impact on the practice of medicine and health services and an enduring impression on countless lives. His legacy stems from his unwavering dedication; his enthusiasm; and his accomplishments as a remarkable surgeon, innovator, and leader. He courageously fought a battle against brain cancer and even while receiving chemotherapy and recovering from surgery, he was always planning the next move with the NSQIP, the next step in the research that he loved, and the next chapter for a book on surgical outcomes.

Dr. Khuri and his wife Randa were always the consummate host and hostess. Each one of their friends and colleagues were treated in their home as family members. Their hospitality was legendary and their friendship everlasting.

We are deeply indebted to Dr. Khuri and we will best honor him by continuing to strive for safer and better care for all our patients.

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