## Terence Kavanagh, MD, FRCPC, FACC, DSc (Hon) 1927–2018

r Terrence Kavanagh was born in Manchester, England, and completed his medical undergraduate and postgraduate training at the University of Manchester and the University of London. He immigrated to Canada in 1956. Dr Kavanagh was a clinician, researcher, teacher, and pioneering advocate in the field of cardiac rehabilitation. In many ways, he was both a physician and a clinical exercise physiologist. Dr Kavanagh developed the cardiac reha-

bilitation program at the Toronto Rehabilitation Centre (TRC) in September 1968 and was its Medical Director until his retirement in 2000. The program grew from fewer than 100 patients in the initial year to about 1,600 referrals annually from more than 400 physicians; thus, because of Dr Kavanagh's vision, the TRC became one of the largest such programs in North America. During his tenure, the program assisted approximately 25,000 patients.

Dr Kavanagh was a visionary and innovator in cardiac rehabilitation with many ideas that were revolutionary at the time. Some examples of his clinical innovation include ideas which today's cardiac rehabilitation practice is attempting to incorporate. For instance, he used a combination of 1 weekly supervised exercise session and 4 home exercise sessions; and realizing the benefits of the dose of exercise training, he extended the duration of participation to a 12-month program. He also developed a patient education process for each supervised exercise session; he minimized the use of electrocardiogram monitoring during exercise training to those who might benefit from monitoring (i.e., not every cardiac rehabilitation patient wore a telemetry monitor during supervised exercise training); and he recognized the importance of depression screening and treatment as part of the recovery process.

In an interview at the time of his retirement, Dr Kavanagh said the following about developing the TRC:

The impetus for the program of physical activity came from the fact that, in those days, people would be looked at as cardiac cripples. Companies would



pass over them for promotions. They wouldn't be allowed to do anything. The aim was to point out that a patient who made a good recovery was capable of doing something and of taking up a normal life again.

Some of his most innovative work came in the 1970s. At that time, any type of jogging or running was contraindicated for cardiac rehabilitation patients, but in 1973, he prepared a group of postmyocardial infarction patients to be the

first patients to finish the Boston Marathon. In 1985, he trained and ran with the first heart transplant patient to complete the same famed marathon. Ironically, that same patient (Brian Price of Caldicot, England) died earlier in the same year as Dr Kavanagh. When interviewed at his retirement, Dr Kavanagh estimated that more than 60 of his patients had run at least one marathon. With the reemergence of heart transplant procedures in the mid-1980s, Dr Kavanagh studied and published much of the early work on exercise testing and prescription in the heart transplant patient population.

During his career, Dr Kavanagh was continually active in the education of students, clinical exercise clinicians, and physicians. Health care professionals and students from Canada and around the world benefitted from practicum courses in cardiac rehabilitation at the TRC for many years. He was also a national and international ambassador for clinical exercise and cardiac rehabilitation as an invited speaker at scientific meetings, including the American College of Sports Medicine (ACSM) and the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR). Dr Kavanagh was also a founding member of the Canadian Association of Cardiac Rehabilitation.

This pioneering giant in clinical exercise physiology and cardiac rehabilitation who impacted the lives of so many will be greatly missed by many of his former patients, current and former TRC program staff, and many professionals in the field he helped mentor and who benefitted from his groundbreaking clinical advancements and research.