

Let us next examine the impact that the Framingham Heart Study had through the years.

So the graph on the right shows the number of papers written every year using data from the Framingham Study as a function of time, and we observe the very significant increase in the number of such publications.

Altogether, there has been 2,400 studies written using the Framingham data.

During the years, many other risk factors were evaluated.

Obesity, exercise, psychological, and social issues.

In fact, the Texas Heart Institute Journal named the Framingham Heart Study as the top 10 cardiology advance of the 20th century.

In addition to the study, there has been an online tool that assesses the risk for your 10-year risk of having a heart attack.

So you input in this online tool your age, your gender, the total cholesterol, the HDL cholesterol, whether or not you are a smoker, the systolic blood pressure, and then it calculates your 10-year risk.

So how about new research directions and challenges that the study is facing?

So currently, we are in the third generation that started in 2002, but there was also a second generation study of people enrolled in 1971, and the third started in 2002.

As a result, this enables the study to examine family history as a risk factor.

More diverse cohorts started in 1994 and 2003.

In addition to the classical measures we have used so far, social network analysis of the participants has also been utilized.

And additionally and quite importantly, genome-wide association study is underway linking genetics to heart conditions as a risk factor.

Of course, many challenges are related to funding.

Funding cuts in 1969 nearly closed the study, and the 2013 sequester is threatening to close the study as well.

A very important impact of the Framingham Heart Study is the development of clinical decision rules.

The early work on the study paved the way for clinical decision rules as it is done today.

And the graph shows the clinical prediction rules published as a function of the year from 1960s to today.

And you observe that more than 70,000 published rules, clinical decision rules, have been published across medicine, and you observe that the rate of publication is increasing.

So these clinical decision rules are developed using patient and disease characteristics, and then observed test results from patients that can assess the effectiveness of such rules.