Auckland Regional Community Stroke Study Group

Stroke is currently the leading cause of disability in the adult population of New Zealand.

The Auckland Regional Community Stroke Study Group (ARCOS) has undertaken three studies funded by the HRC to quantify the impact of stroke.

Spanning three decades, the ARCOS studies have been recording trends in the incidence of stroke in Auckland. Factors such as mortality rates, the management of stroke patients, the level of disability and the ongoing quality of life for sufferers and their families have all been monitored.

These unique studies have also given researchers reliable data on the ethnic differences in stroke risk subtypes. Collectively, these stroke studies have put New Zealand at the forefront of stroke epidemiology research.

Findings over the 20-year period show that there has been a significant decline in the incidence of stroke for New Zealand Europeans, but rates have remained high or increased in other ethnic groups.

The current study is led in New Zealand by Associate Professor Valery Feigin, a neurologist from the Clinical Trials Research Unit (CTRU), School of Population Health at the University of Auckland.

Major findings from the data accumulated over the last 20 years show that Maori, Pacific Islanders and Asian people are 1.5 to 3 times more likely to suffer ischaemic strokes (blood clotting in the brain) and intracerebral haemorrhagic strokes (bleeding into the brain) than New Zealand Europeans.

The increased risk of stroke in these ethnic groups is partly attributed to a higher prevalence of obesity, diabetes and high blood pressure. These factors are thought to be associated with lifestyle influences such as an unhealthy diet, smoking and excessive alcohol intake.

“We have been aware of the disparities in health amongst different populations for some time, but this is the first time we have an exact measure not just of the incidence of stroke, but the outcomes, including mortality rates, long term disabilities and the impacts on the quality of life for sufferers across different groups. Clearly more research is needed to identify causes of these disparities and to develop effective preventive and rehabilitation strategies to reduce the burden of this devastating disease,” Associate Professor Feigin says.

The studies have also shown that living or working with smokers almost doubles a non-smokers risk of stroke.

The collective studies are the first outside the United States to show significant ethnic disparities in the incidence of stroke subtypes. Studies in the US have shown a substantial difference in the risk of stroke between White and non-White Americans.

These studies are funded by the Health Research Council of New Zealand and carried out in collaboration with The George Institute for International Health in Sydney, Australia.