

LIFE TIME OF SERVICE

WORDS: KERRY DIXON. PHOTOS: TIM TERRY.

After working at the Royal Darwin Hospital for a time, Sue Sayers was struck by the number of Aboriginal babies who were being born too small.

She had worked around the world – the United States, Britain, Japan, New Zealand, Fiji, the Philippines, Indonesia – and was always concerned about the long-term outcomes of the babies who had fetal growth restriction but had never had the right circumstances to follow them up.

At about the same time, she watched as Dame Patti Menzies planted a tree in the hospital grounds to mark the beginning of the Menzies School of Health Research.

“I thought, ‘Wow! With this new research school there may be an opportunity for me to see what is happening to these growth-restricted babies.’”

The neonatal paediatrician began what was to become one of the oldest and largest Indigenous birth cohort studies in the world – monitoring the health of Aboriginal babies at regular intervals

throughout their lives and comparing the outcomes of the small growth restricted babies with those normally grown at birth.

Associate Professor Sayers didn’t have any “runs on the board” as a researcher, but Menzies founding director John Mathews encouraged her and taught her the “scientific rigour” of research.

She started on January 1, 1987, and over the next three years recorded the weight, length, head circumference and gestational age of 686 Aboriginal babies.



THE TEAM (FROM LEFT): ASSOCIATE PROFESSOR SUE SAYERS, DR ROBIN MARSH, DR GURMEET SINGH AND ASSOCIATE PROFESSOR HEIDI SMITH-VAUGHAN

Seventy per cent of the babies were from remote Aboriginal communities and the rest from Darwin and Palmerston.

They were underweight mainly because their mothers were teenagers, underweight themselves and many smoked during pregnancy.

The program is known as the Aboriginal Birth Cohort study, ABC for short.

Dr Gurmeet Singh, the ABC Director, joined the study 18 years ago and introduced to the biomedical assessments useful non-invasive ultrasound techniques to monitor the health of the cohort.

The team managed to track down 572 of the original study group when they were 11 years old.

“Just finding the children was challenging,” says Associate Professor Sayers. “We would fly into a remote community only to find the child had been driven to where we’d just come from.

“But we had an amazing team and managed to reach an incredible number of the cohort.”

The group was examined again at 18 years old. A follow-up at 25 years of age is under way, with 445 of the participants seen so far.

“I want this study to continue throughout the lives of the original group,” says Associate Professor Sayers. “I want it going on when I’m pushing up daisies.”

The longitudinal prospective study is seen as an ideal way to monitor and assess the causes of chronic disease.

Findings so far show that into young adult life the growth restricted babies remain underweight and shorter than those of normal growth at birth. The researchers anticipate seeing abnormal “biomarkers” in the latest health checks and subsequent checks as these underweight babies are much more susceptible to developing chronic conditions, such as diabetes, in later life, particularly if they gain excessive weight.

Associate Professor Sayers says there is a “window of opportunity” for people to reduce the risk of chronic disease by changing their lifestyle to prevent excessive weight gain around the ages of 18 and 20.



A GROWTH RESTRICTED BABY AND A NORMAL BABY AT THE SAME AGE

“Conditions such as diabetes can be prevented,” she says. “At 18, many Indigenous girls are preparing for childbirth. If they can fix these problems pre-conceptually, they will be healthier themselves and will also help their unborn children to be healthier.”

None of the study group has died of chronic diseases – they are still too young – but 43 have died, some from trauma, including drowning, road accidents and suicide.

Associate Professor Sayers has now turned her considerable energy to a new initiative, the mobile health laboratory, known as HealthLAB.

This was launched last year with Associate Professor Heidi Smith-Vaughan, Dr Robyn Marsh and Rebecca Cass, whose successful Gap Year Traineeship was to develop HealthLAB.

HealthLAB is an innovative “hands on” educational experience where participants take their health measures, such as blood pressure, BMI, fat percentage, grip strength and blood oxygen levels, in a pop-up laboratory.

Associate Professor Smith-Vaughan says: “HealthLAB aims to empower community members to ‘own their health’ and to make positive lifestyle choices for better health for themselves and, in the case of the youth, for their children yet to be born.”

To date, more than 1000 Territorians have taken part in HealthLAB activities at community events.

They are also given dramatic demonstrations of the effects of

smoking and the amount of sugar in soft drinks.

“People love it – there has been overwhelming public support,” says Associate Professor Smith-Vaughan. “The results can often be a wake-up call, and people tell us that HealthLAB is encouraging them to make diet and exercise changes.”

The aim is to take the mobile lab throughout the Territory, including remote communities.

But these programs cost money.

The logistics of operating ABC are daunting and the HealthLAB vision is for it to be a permanent health outreach program for all Territorians to access.

“Ideally we would one day have a properly equipped van,” says Dr Marsh.

Menzies has built up a reputation as a world leader in Aboriginal and tropical health research over the past 30 years. The dedicated researchers at the institute hope that benefactors will leave an enduring legacy by helping their work. **TQ**

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