# THE ORIGINS PROJECT: LEADING A NEW GENERATION OF INTERVENTIONAL BIRTH COHORTS







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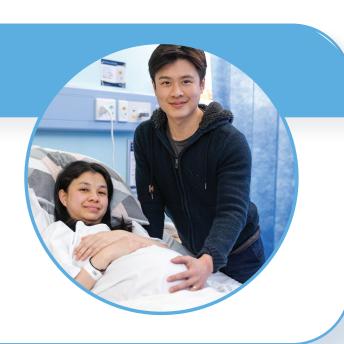
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### BACKGROUND

Non-communicable diseases (NCDs), pose the greatest threat to human health globally. The dramatic rise in these chronic inflammatory conditions - such as childhood obesity, the allergy epidemic and an increasing burden of neurodevelopmental disorders and mental ill health in young people - reflect the profound early impact of modern environments on developing systems. Many of these conditions are pre-programmed in pregnancy and early life.

### AIM

To create an extensive research platform in Western Australia which integrates and harmonises nested clinical studies, enabling cutting edge research into the origins of NCDs.

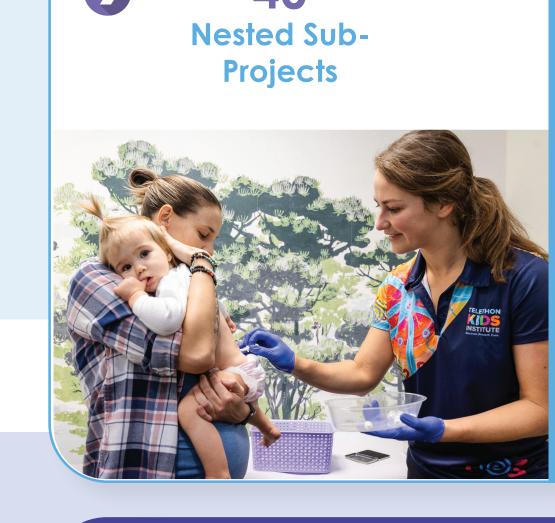


ORIGINS provides
real-time feedback
to participants
if a health issue
is identified and
encourages early
intervention.

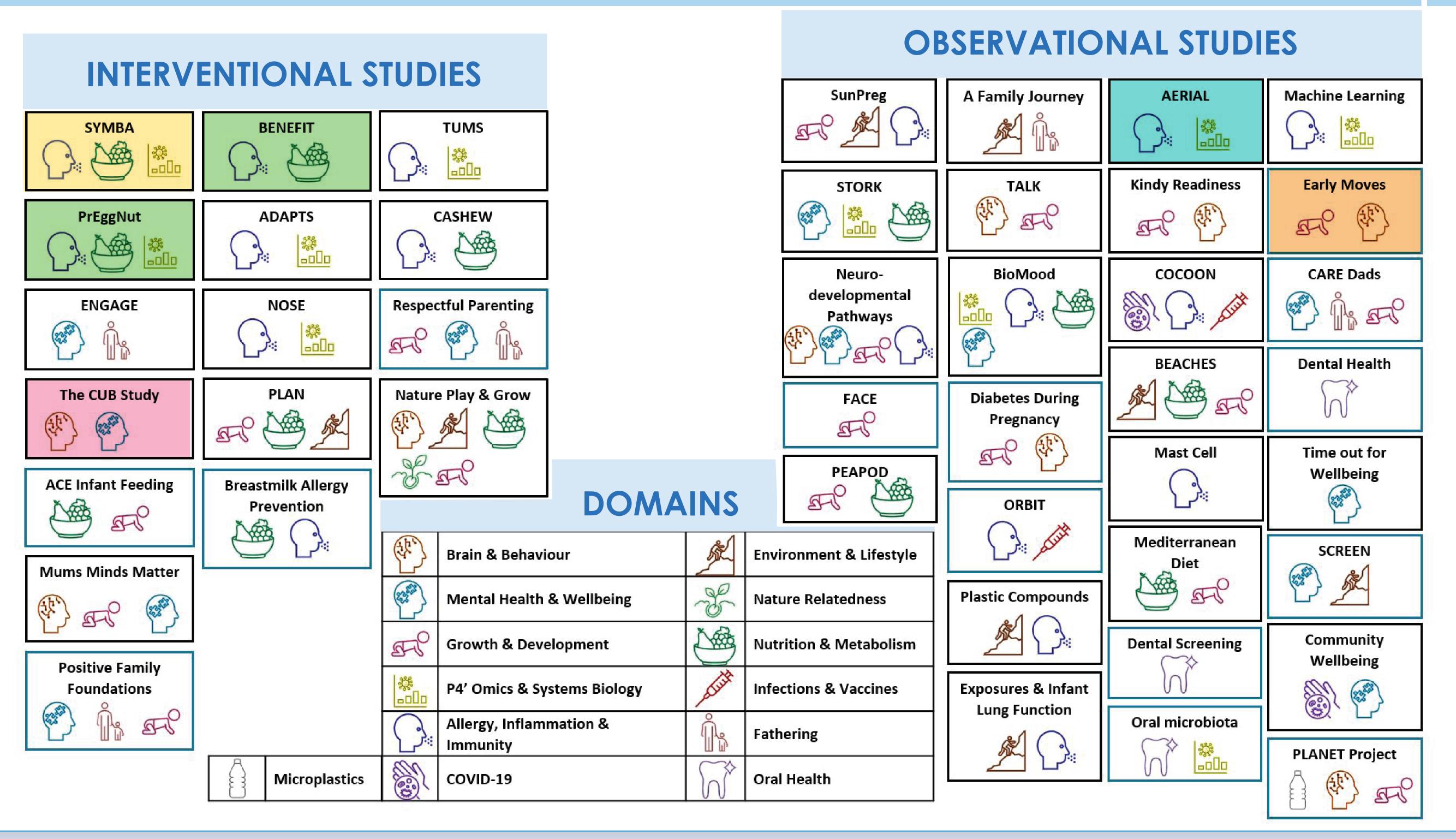
### METHOD

The ORIGINS Project is a collaborative initiative establishing a birth cohort of 10,000 children born at Joondalup Health Campus. Families are followed from early pregnancy to when the child turns five years. While collecting biological samples and data across several timepoints, the ORIGINS governance structure provides a framework for the integration of sub-projects nested within the main observational cohort, including randomised controlled trials, interventions, mechanistic and observational studies.

# SNAPSHOT AT FIVE YEARS 16,205 Individuals in the current ORIGINS POPULATION 13 million+ Datapoints 300,000 Biological Samples







### **KEY SUB-PROJECTS**

Early Moves: Using home videos, researchers are investigating whether we can identify babies at risk of cognitive difficulties very early to provide critical support and intervention.

BENEFIT & PrEggNut: By age one, 10% of babies will develop a food allergy. These studies are investigating whether the amount of eggs and peanuts a mother eats during pregnancy and breastfeeding has an influence on reducing the chances her baby will develop an egg or peanut food allergy.

SYMBA: Giving mums a high fibre prebiotic supplement during pregnancy, and whilst breastfeeding, to explore the impact on reducing the risk of children developing allergic disease.

AERIAL: Studying the importance of the cells lining the airways in the nose and lungs at birth to help to understand the development of early-life airway conditions.

CUB Study: Video technology is helping researchers learn more about the early communication style of infants with a family history of autism, ADHD or intellectual disability.

## CONCLUSION

ORIGINS is an intervention cohort invested in making positive change—not only for children and their families, but for the wider community. It is our goal that ORIGINS will also serve an example of how The ORIGINS platform not only enables local and international research but provides pathways for prevention, early identification and treatment in vulnerable children.





