Childhood obesity remains one of the most important public health challenges globally, potentially affecting 60 million children by 2020. Increasingly, children are becoming overweight at a relatively young age, which affects metabolic health, both in childhood and later life. In New South Wales NSW, Australia, one in four school-aged children and adolescents are overweight or have obesity. Noticeably, the prevalence of severe obesity continues to increase in this age group.

Despite this prevalence, weight issues are rarely recognised or managed when patients attend clinical services and there are few appropriate clinical services available.

Several Local Health Districts LHDs, across socio-economic and culturally diverse populations, are implementing a new service aiming to deliver integrated weight management services for children and adolescents. This presents a unique opportunity to research the implementation and integration of these new services alongside established services to determine the clinical effectiveness and impact of the services. No such research has been undertaken previously in Australia.

**Methods:** This study will ascertain what factors affect acceptability, reach, and participation and retention rates and measure clinical effectiveness through changes in child weight outcomes.

**The study aims to:**

Audit existing tertiary and secondary care models for managing children above a healthy weight.

Evaluate the newly established secondary care clinics, models of care and healthcare pathways.
Determine what factors, including acceptability, reach, participation and retention rates, effectiveness and sustainability, are important for different models of care through focus groups and stakeholder interviews.

Undertake economic analysis to determine cost of services.

A range of process and economic cost measures will be collected from: i routinely collected data; ii document review; and iii surveys, key informant interviews and focus groups with clinical staff, health service managers, and patients and families.

For the clinical effectiveness component, the primary outcome will be change in body mass index, adjusted for age and sex, at 6 months from baseline. The secondary outcomes will be change in key food and physical activity behaviours at 6 months from baseline.

The study has successfully secured funding through the NSW Health Translational Research Grant Scheme.

Outcomes: The findings will provide an understanding of the most effective design and delivery of local services, enhancing the accessibility, acceptability, reach and impact of paediatric weight management services.

This will enable recommendations to be made for future services planning to optimise scalability and sustainability of integrated, responsive and effective care of paediatric patients with overweight or obesity.

**Keywords:** paediatric obesity; secondary care; delivery of health care; integrated