Early start key to easing the trajectory of childhood obesity

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“Childhood obesity is a major health issue, particularly among Australia's more disadvantaged populations. There are many different and varied interventions to help, but evidence suggests a child's habits and behaviors form early,” said Professor Lisa Askie of the University of Sydney's Clinical Trials Centre and Charles Perkins Centre.

“This is the first study of its kind to look at interventions at the pre-birth and early infancy stages.”

Professor Askie and her team, together with researchers from the University's Charles Perkins Centre, were approached to conduct this study because of their expertise in prospective meta-analysis (PMA). The team is a worldwide leader in PMA, recently publishing "A guide to PMA" in the British Medical Journal.

In a PMA, studies are identified for inclusion before the results of the studies related to the PMA research question are known. PMAs are suited to high priority research questions where limited previous evidence exists and where new studies are expected to emerge.

Professor Askie and her team used PMA to bring together four Australian and New Zealand trials studying early intervention in a total of over 2,000 children. The trials agreed to collect the same measures of childhood obesity, weight and habits associated with later obesity, so their data could be combined. This led to the creation of the world's largest database on early childhood obesity prevention to date.

The combined data show that early interventions lead to a modest weight reduction at two years of age and importantly are also effective in forming positive habits early in childhood in relation to healthy eating and reduced TV time.

"The idea is to set children on a positive weight
trajectory early-on by forming good habits that can prevent overweight and obesity in later childhood," said Professor Askie.

With the world's largest database on early childhood obesity prevention, the PMA team is set to become an international hub for future studies in the field.

Next steps

While evidence for early intervention is good news for childhood obesity prevention, questions still exist around which interventions work best and the best way to deliver them for different socio-economic groups.

Current interventions, such as at-home nurse visits or community health center support groups, are mostly a one-size-fits-all approach.

To answer these questions, Professor Askie and her team were recently awarded funding from the National Health and Medical Research Council for a follow-up study that aims to open up the 'black box' of interventions.

"Policy makers want population-specific interventions that are going to work. No individual trial can answer these questions, but a collaborative PMA approach can fast track findings by years, by leveraging existing data," said Ph.D. candidate Anna Lene Seidler from the Clinical Trials Centre, who is the lead investigator on this follow-up study. Ms Seidler was co-investigator on the previous study.

The study will collect data from more than 25 trials and over 8,500 participants to determine which interventions and delivery types work best for different populations. Data will be collected and analyzed from many countries, including Australia, New Zealand, the United States, Guatemala, Spain, China, and the Netherlands.

Deputy Director of the Centre of Research Excellence in the Early Prevention of Obesity in Childhood, Professor Kylie Hesketh from Deakin University, said early intervention studies offer the greatest opportunity to reduce obesity in children and improve long term health.

"Childhood obesity rates are soaring yet it is one of the most visible and widely neglected public health problems. We need concrete evidence to tackle the problems of convenient but fatty foods, less physical activity and increased screen time among children.

"Findings from these Clinical Trial Centre studies will be directly translated in policy and practice, using existing health service channels, to tackle this key problem of our age."


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