

Project title	Proposed start date	Applicant	Application type	Status	Project summary
Before we are born	2010	Growing Up in New Zealand Team	Internal	Completed	This is the first Growing Up in New Zealand that described the new generation of children from before they were born
Cohort profile: Growing Up in New Zealand	2011	Growing Up in New Zealand Team	Internal	Completed	The birth characteristics of the Growing Up in New Zealand cohort with those of all New Zealand (NZ) births over a similar time period has been compared, and cohort alignment to current NZ births has been described.
Now we are born	2012	Growing Up in New Zealand Team	Internal	Completed	This report described the development of the new generation of New Zealand children from before they were born until they were nine months of age.
Too many left at risk by current folic acid supplementation use in NZ: Evidence from Growing Up in NZ	2012	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The use of folic acid during pregnancy utilising New Zealand's contemporary birth cohort study, Growing Up in New Zealand has been described.
Pregnant partners: the other parent of the Growing Up in New Zealand children	2012	Growing Up in New Zealand Team	Internal	Completed	The demography, health, pregnancy behaviours, family histories, and intentions for their children, of the partners who were enrolled antenatally into Growing Up in New Zealand, New Zealand's new birth cohort study has been described.
Growing Up in New Zealand cohort alignment with all New Zealand births	2012	Growing Up in New Zealand Team	Internal	Completed	The birth characteristics of the Growing Up in New Zealand cohort with those of all New Zealand (NZ) births over a similar time period, and the cohort alignment to current NZ births has been described.
Adherence to MoH nutritional guidelines in pregnancy: evidence from the Growing Up in New Zealand Antenatal Wave	2012	Growing Up in New Zealand Team	Internal	Completed	The adherence to nutritional guidelines by pregnant women in New Zealand and maternal characteristics associated with adherence has been determined.
Maternal and perinatal predictors of newborn iron status	2012	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The iron status at birth had been described in a subsample of children enrolled in the Growing Up in New Zealand cohort and part of the cord blood study.
Early engagement with a Lead Maternity Carer (LMC): Results from Growing Up in New Zealand	2012	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The timeliness of lead maternity carer (LMC) engagement was described and factors associated with timely LMC engagement were identified.
Life course determinants of food allergy in New Zealand children	2012	Growing Up in New Zealand Team	PhD	Completed	This project described the epidemiology of childhood food allergies in NZ over the past 20 years and through a qualitative study, determined what strategies are needed for a New Zealand family to cope, adapt and feel fully supported when a child is diagnosed with a food allergy.
Neonatal vitamin D status and acute respiratory tract infections in infancy	2013	Growing Up in New Zealand Team	PhD	Completed	This thesis determined if children with poorer vitamin D status at birth are at increased risk of hospital admission for respiratory tract infections during the first year of life.
Characterising the socio-cultural and economic predictors of paternal investment/future aspirations for their children	2013	Barnaby Dixon-University of New South Wales	External	Completed	The study seeks to uncover the size of the gender gap in expectations for direct infant care, the degree to which socio-economic and alloparental investment relate to this gap and how these effects predict parental aspirations for their child
The influence of childcare on preschool dietary patterns, eating behaviours and childhood obesity	2013	Growing Up in New Zealand Team	PhD	Active	The thesis proposal is to explore the role of childcare in shaping the dietary patterns and body weight of infants, toddlers and pre-schoolers.
How do early life factors influence and protect social and emotional developmental trajectories?	2013	Growing Up in New Zealand Team	PhD	Active	This project will take a life-course epidemiological approach that seeks to determine and quantify the effects of multiple early-life variables on the socio-emotional developmental trajectories and outcomes of preschool aged children, paying attention to the complex interrelationships of these bio-psychosocial variables and their cumulative effects upon the trajectories, in order to elucidate temporal and causal hierarchies among the variables.
Immunisation decision making during pregnancy by future mothers and fathers	2013	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	How do immunisation intentions and reality differ by demographics and characteristics of families and their relationship with health care services? Where are the biggest differences between intentions and reality for these factors and why do we think they occur? These research questions were investigated in the Growing Up in New Zealand cohort.
Family structure, household composition, and infant and family factors at nine months	2013	Growing Up in New Zealand Team	Internal	Completed	The study is investigating: (1) how is family structure in the antenatal period related to family and environmental/social factors at nine months? (2) how is household composition related to family and environmental/social factors at nine months? and (3) how are both related to infant health and developmental variables at nine months?
Residential mobility following the birth of a child	2013	Growing Up in New Zealand Team	Internal	Completed	This study described the patterns of mobility before and after birth, and identified factors associated with stability and mobility.
Positive growth and development of contemporary Maori Whānau: evidence from Growing Up in New Zealand	2013	Growing Up in New Zealand Team	Internal	Completed	This study is designed to explore in much greater detail the early life development, environmental influences (including antenatally), socioeconomic circumstances and diversity of the Māori participants and to explore how the parental and whānau affiliations, cultural identity, service accessibility (including health care and social support) and contact with cultural institutions (such as marae) influence the growth and health trajectories of these tamariki in the first 9 months.
A profile of the new generation of Asian families: evidence from Growing Up in New Zealand	2013	Growing Up in New Zealand Team	Internal	Completed	This study explored the longitudinal information being collected from Asian families. This provides a unique resource, not available through any other data set. A profile of the Asian Growing Up in New Zealand participants will set up the baseline information about the Asian families of this cohort.
Positive growth and development of contemporary Pacific families: evidence from Growing Up in New Zealand	2013	Growing Up in New Zealand Team	Internal	Completed	This study explored the longitudinal information being collected from Pacific children and their 'anau' which provides a unique resource. Where possible, comparisons were made with information from the Pacific Island Families Study (PIFS).
Infant child care-parental expectations and the reality after birth: evidence from Growing Up in New Zealand	2013	Growing Up in New Zealand Team	Internal	Completed	Intentions for care in infancy was measured antenatally and the formal and informal child care environment was determined for the cohort at 9 months of age. The relationship between antenatal intentions and the postnatal reality for families with respect to care for children will be described.
Life-course and antenatal health of older parents in New Zealand	2013	Bryndi Marriot-University of Otago	External	Completed	This project investigated older parents' life course pathways and antenatal health in New Zealand
Who's caring for the children? Childcare intentions and realities	2014	Growing Up in New Zealand Team	Internal	Completed	This study would be the first to report on the gap between parents' ideal childcare arrangements and the realities of obtaining childcare once children are born, either in NZ or internationally.
Antenatal parental determinants of early feeding patterns in New Zealand infants	2014	Growing Up in New Zealand Team	Internal	Completed	This study will assist us to understand the parental determinants of early feeding patterns in New Zealand
NZ children's temperament: validation of an infant behaviour questionnaire in a large sample of 9 month olds	2014	Growing Up in New Zealand Team	Internal	Completed	Infant temperament was measured at 9 months using a newly devised very short form of an established scale (IBQ). This study validated this scale using 9 months data only.
Colonisation by S. aureus and S. pyogenes in New Zealand preschool children	2014	Growing Up in New Zealand Team	Internal	Completed	This was the first look at the data obtained from the nose, throat, and skin swabs taken during the 54 months leading light pilot phase. The objective of this project was to describe the colonisation patterns of S. aureus and S. pyogenes in the preschool age group
Maternal wellbeing during pregnancy-evidence from the Growing Up in New Zealand Antenatal Wave	2014	Growing Up in New Zealand Team	Internal	Completed	The study described the health status of the mothers of the Growing Up in New Zealand cohort, particularly the impact of pregnancy on health and health behaviours and considered the impact of maternal health on early child health outcomes
Internal living environments, household heating and respiratory disease in infancy	2014	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The study investigated the role of indoor environmental factors on respiratory illness among infants.
Validity of the New Zealand MacArthur communicative development inventories: New Zealand English, Maori, Chinese, Samoan, and Tongan	2014	Growing Up in New Zealand Team	Internal	Active	The objective of this study is to assess the validity of our adaptations of the New Zealand Communicative Development Inventories for New Zealand English, Māori, Chinese, Samoan, and Tongan. This study would present validation information for Growing Up's adaptations of the MCDI in five languages that New Zealand children commonly speak
Maternal mental health	2014	Growing Up in New Zealand Team	Internal	Active	The objective of the study is to understand how maternal mental health change between the antenatal period and two years post-partum, and to understand how maternal mental health at the antenatal period can affect child outcomes at two years.
Are maternal experience of racial discrimination before and during pregnancy associated with birth outcomes and postnatal depression?	2014	Laila Becares-University of Manchester	External	Completed	The research project aims to understand the association between racial discrimination and child and mother's health in New Zealand. It is part of a larger study that aims to explore the structuring of ethnic inequalities in child development in child by examining the differential pathways through which social, behavioural and contextual exposures at the individual, neighbourhood, and national level lead to preventable ethnic inequality in the United Kingdom, the United States and in New Zealand
Participation in childcare at 9 months	2014	Julia Arnold-Ministry of Education	External	Completed	The study objective is to get a better understanding of who uses childcare at 9 months and why, and to better understand the relationship between parents' participation in the labor force and use of childcare in New Zealand
The quality of the interparental relationship and early nurturant parenting behaviours	2014	Ross Mackay- Ministry of Social Development	External	Completed	This research will aim to develop a set of measures of the interparental relationship and use these to describe the quality of this relationship and to identify other factors in the family's background and circumstances that are associated with poor outcomes in this relationship, including the presence of conflict and violence.
New Zealand Fetal Alcohol Spectrum Disorder (FASD) prevalence study: Feasibility Assessment	2014	Chris Bullen- University of Auckland	External	Completed	To use Growing Up in New Zealand data to investigate the incidence of self-reported alcohol consumption during pregnancy, assess the level of self-reported alcohol consumption before and during the different stages of pregnancy, and to characterise group at highest risk of self-reported alcohol exposure before and during pregnancy
Ethnic disparities in infectious disease hospitalisation in the first year of life	2014	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The study identified risk factors for infectious disease hospitalisation in infancy within the Growing Up in NZ cohort, and identified differences in risk factors between ethnic groups.
Exposure to parental mental health problems during the antenatal period and infancy	2015	Growing Up in New Zealand Team	Internal	Active	The study will establish the extent to which the cohort children are exposed to parental mental health problems during pregnancy and during infancy, and explore how mental health problems are associated with early parenthood decisions and experiences.
Factors influencing father-infant closeness	2015	Growing Up in New Zealand Team	Internal	Active	The objectives of the study is to: (1) to investigate the influence of father personality on father-infant closeness, (2) to investigate the influence of infant temperament on father-infant closeness, (3) to investigate whether parental support and father confidence in caring for the child affect father-infant closeness.
Association of maternal age group and maternal vulnerability on contact with social services and receipt of income tested benefits	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The objectives of these analyses are to describe the contact of Growing Up in New Zealand participants with social services (as measured when the cohort children were two years of age).
Validity of a brief parent-child observation tool for over 6500 families: Growing Up in New Zealand	2015	Growing Up in New Zealand Team	Internal	Active	This methodological paper would present validation information for the parent-child observation tool at 2 years. The objective of the study is to assess the validity of the parent-child observation tool at 2 years.
Maternal drinking patterns in a recent New Zealand birth cohort	2015	Jeremy Robertson- SUPPERU	External	Completed	The aim of the study is to describe maternal alcohol consumption in a recent NZ birth cohort, to identify the characteristics of mothers who drink and the factors associated with alcohol consumption in this group.
Why does the decline in immunisation coverage and timeliness with increasing age vary by ethnicity and household deprivation	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The aim (s) of the project is to determine the factors that are associated with the widening gap in immunization coverage and timeliness that occurs with increasing age in New Zealand, and whether the factors that contribute to the decline in immunisation coverage with increasing age vary between ethnic and socioeconomic population subgroups.
What is different about pregnant women who do versus do not receive information antenatally about immunisation	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The study objectives are to describe the characteristics of the women enrolled in Growing Up in New Zealand who antenatally received information about infant immunisation and to compare these women to those who did not receive information about infant immunisation.
The challenges of infancy: maternal mental health, feeding, growth and early sleep patterns	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The research questions are: (1) how are infant sleep, feeding, growth and health associated with maternal depression (both antenatally and at 9 months), and change in maternal depression, (2) do multiple infant regulation difficulties have a stronger association with maternal depression, and (3) what broader family and social factors moderate these associations
Associations between physical activity before and during pregnancy with birthweight and gestation with child development outcomes	2015	Growing Up in New Zealand Team	Summer studentship	Active	The study objectives are to investigate the relationship of vigorous physical activity during pregnancy with birthweight and then with psychosocial, cognitive and motor development during early childhood.
Association between sleep, diet, body mass in 2-year old children: Evidence from Growing Up in New Zealand	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	Sleep, diet and body mass are key determinants of child health and development. The study aim is to determine the impact of shorter sleep on dietary intake and body mass during early childhood.
Maternal mental health and stress during pregnancy: associations with birth outcomes	2015	Growing Up in New Zealand Team	Internal	Active	The study is investigating whether maternal depression, stress or anxiety during pregnancy is associated with birth outcomes, and if so what aspects of the pregnancy experience are particularly important, as a focus for healthcare practitioners and future policy and whether ethnic or racial discrimination is a particular source of stress in the prediction of adverse birth outcomes.
The association between breastfeeding duration and hospitalisation for acute respiratory tract infections in infants in NZ	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The study is investigating the association between breastfeeding duration and hospitalisation for acute respiratory tract infections (ARI) during infancy. Specific objectives include to (1) investigate the effect of exclusive and partial duration of breastfeeding on hospitalisation for ARI in infancy, (2) establish the effect of exclusive and partial duration of breastfeeding on hospitalisation for ARI in infancy within each four major ethnic groups in NZ and within population groups defined by socioeconomic status, and to (3) determine if the relationship between breastfeeding and ARI is independent of other factors.
Maternal mental health, child temperament and the mother-child relationship: Evidence from Growing Up in New Zealand	2015	Growing Up in New Zealand Team	Internal	Active	The study describes associations across time between maternal depression (antenatal and 9 months dataset), child temperament, and the quality of the mother-child relationship, both in terms of mother report (9 months and 2 years), and independently observed mother-child interactions (2 years).
Media use of New Zealand infants and toddlers	2015	Growing Up in New Zealand Team	Internal	Active	The objective of the study is to describe the media use of infants and toddlers in New Zealand. The research aims are: how often are New Zealand infants and toddlers engaging with media, and of what types, and how does this media use align with international recommendations for little or no media use for under-2s.
Risk factors for antenatal depression in Pacific pregnant women	2015	Growing Up in New Zealand Team	Summer studentship	Completed	The objective of the study is to understand why Pacific women have such significantly higher rates of antenatal depression compared to European women and to develop a risk profile for antenatal depression in Pacific women.



Research Project List

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The highlights and challenges of raising a child under two years of age	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The study will describe the highlights and challenges that parents' report face when raising children aged 9 months versus raising children aged 2 years and to report on how these are highlights and challenges are similar and different for both mothers and partners and across these two time points.
How do Dads see their role? Contemporary evidence from Growing Up in New Zealand	2015	Growing Up in New Zealand Team	Internal	Completed	This study utilizes results from the 'Who are today's dads?' questionnaire. Establishing the role of contemporary fathers in the lives of their children can inform policy that enables paternal involvement in optimising their children's developmental trajectories
Partner conflict during pregnancy: evidence from Growing Up in New Zealand	2015	Growing Up in New Zealand Team	Internal	Active	The study findings will address partner conflict antenatally and associations with partner conflict and violence across time.
Effect of BCG vaccination on respiratory illness in New Zealand children	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The study findings will add to the literature on live vaccine effects on infant and childhood respiratory infections +> atopic conditions.
Mother-child interaction, eating and sleep routines	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The study is investigating whether children who have more routines around eating and sleep are also more self-regulated and have better quality parent-child interaction
If you are a terrible infant will you be a terrible pre-schooler? Children's temperament and their behaviour over time in the Growing Up in New Zealand	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This study will investigate the structure of temperament at age 4 and temperament development over time
Who are Today's Dads?	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The key aim of the project is to understand the role of fathers in contemporary NZ families with school-aged children with respect to the three constructs of availability, engagement & responsibility. The research attempts to answer the following questions: (1) what are the screen-use behaviours of contemporary New Zealand pre-schoolers? (2) are there socioeconomic and/or ethnic differences in screen use behaviours in New Zealand? (3) are there any associations between screen use in the first two years of life and pre-school health/cognitive/psychosocial outcomes? (4) what populations are at high risk for heavy screen use in very young New Zealanders?
The relationship between early screen use and health and behavioural outcomes in pre-schoolers	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The main aim of the research relates to the overarching Psychosocial Domain question: What are the key determinants of the development trajectories that lead to psychosocial competence, and what precipitates either continuity or change in these trajectories?
Trajectories of child behaviour: Growing Up in New Zealand	2015	Growing Up in New Zealand Team	PhD	Active	The research focuses on whether this variant is present within the Growing Up in New Zealand cohort and if so whether it is associated with measures of growth and obesity. This will be of interest as it will explore the role of a genetic variant in early childhood growth in a cohort with a large proportion of Pacific children.
CREBRF variant associated with body mass in Māori and Pacific children	2015	Growing Up in New Zealand Team	Internal (with accredited researcher)	Completed	The study is investigating how the types of child care change between 9 months and 2 years, as children approach the age for accessing New Zealand's 20 hours free' childcare at age 3, parents' reasons for utilising (or not utilising) childcare at age 2 will be examined, and how longitudinal researchers can work alongside policy makers to enhance policy translation.
ECE findings from Growing Up in New Zealand: implications for policy translation	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This project proposes to analyse the relationship between residential moves and family outcomes, using Growing Up in NZ data up to the 45 month data collection wave. The main outcome of interest is children's connection to and use of services such as primary healthcare, childcare, vaccinations, and Well-Child checks.
Disrupted lives: Exploring residential mobility and service use	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The aim of this proposal is to examine child vulnerability in the first 1000 days of life, focusing on the Growing Up in New Zealand children that live within the geographical region of South Auckland as defined by The Southern Initiative (Auckland Council). This includes the Māngere-Ōhāhuhu, Ōtara-Papatoetoe, Manurewa and Papakura local board areas. The purpose of this research is to find out whether there are differences between South Auckland and the wider population and whether alternative strategies might be required to improve outcomes for children and families.
Child vulnerability in South Auckland	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This project will investigate relationships between a mother's emotional state and attitude towards her infant, and the development of relational trajectories, including language of her infant over the first two years of life.
The impact of social support for infant relational competencies: Disrupting negative life course trajectories	2016	Jan White- Waikato University	External	Active	The study objectives are: (1) to investigate the measuring of emotional understanding with our adapted AKI, and if it discriminates across a large and ethnically diverse cohort, (2) to investigate early predictors of pre-schoolers' emotional understanding, including temperament, preschool attendance etc, (3) to investigate the relationship between pre-schoolers' emotional understanding and their school readiness.
Relationship between pre-schoolers' emotional understanding and their personality development.	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The aim (s) of the study is: to determine if early childhood otitis media has adverse effects on hearing, language, cognitive, social or behavioural development at age 4½ years and, if so, whether the adverse effects of otitis media are potentially preventable by antibiotic treatment with ventilation tube insertion.
The epidemiology of otitis media and the effect of early childhood ear infections on language, cognition and behaviour	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	There is very little existing literature of factors associated with children's primary care engagement during the preschool years, and findings will have direct relevance for targeting healthcare resources towards our more vulnerable families.
Primary care access and use across the preschool years	2016	Growing Up in New Zealand Team	Internal	Active	This project aims to: (1) determine the factors that are associated with (i) children being hospitalised with unintentional injury, and (ii) having recurrent hospital admissions as a result of unintentional injury, (2) whether the factors that contribute to the hospital admissions for unintentional injury vary between population subgroups defined by ethnicity and socioeconomic status.
What are the risk factors associated with recurrent accidental injury?	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The study is investigating how prenatal and postnatal maternal stress impact development of early childhood obesity at age 5?
Timing of Maternal Stress Exposure and Early Childhood Obesity	2016	Growing Up in New Zealand Team	Internal	Active	This study will describe cross-sectional and longitudinal associations between children's dispositions (9 months, 2 years, 4 ½ years), parental aspirations (antenatal and 4 ½), parental work status and relationships (9 months, 2 years, 4 ½ years), parent-child interactions (9 months, 2 years, 4 ½ years), and early childhood education experiences (antenatal intentions, 9 months, 2 years, 4 ½ years) in relation to children's well-being (behaviour), communication (language), and exploration (cognition) (9 months, 2 years, 4 ½ years).
Te Whāriki: Predicting Success in Children's Well-Being (behaviour), Communication (language), and Exploration Development (cognition)	2016	Growing Up in New Zealand Team	Internal	Active	The aims of this project are to (i) describe the range of sleep patterns in contemporary New Zealand children at age 2 years and how these vary with child and family characteristics, and (ii) determine whether sleep patterns in the first two years of life are independently associated with behaviour and development at school entry age.
Sleeping patterns at age 2 years and relationship with child behaviour and development at school entry age	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This project will describe the behaviours of families and impacts upon families of having a child with a disability. This research will help to assess the effects on well-being, working situation and relationships for the parents of children with disability.
Understanding the impact of childhood disability on families	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	There is growing interest in maternal micronutrient status. Since the 1970s, studies have shown relationships between decreased maternal levels of folate and an increased risk of neural tube defects in the fetus. This study will compare the Growing Up in New Zealand antenatal folate intake data with Pirociv Study data (a birth cohort conducted in São Paulo, Brazil).
Folate acid intake and the developmental origins of health and disease: A comparison between birth cohort studies in Brazil and New Zealand	2016	Growing Up in New Zealand Team	PhD	Active	The broad aim of this study is to investigate the determinants and impact of exposure to electronic media for children aged 0-5, using Kotchick and Forehand's (2002) model of the ecology of parenting.
The role of media exposure in early childhood development.	2016	Growing Up in New Zealand Team	PhD	Active	The study will examine the nutrition and physical activity environments within the mesosystem of home and Early Childhood Education and Settings for a subsample of 1188 Growing Up in New Zealand children (those for which we have collected actual data from their main childcare provider in the Kai Time in ECE online survey).
Preschool Nutrition and Physical Activity in Home and Early Childhood Education Environments	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This study is divided into 3 parts: (1) determining parent-child learning interactions: associations with parent-child relationships and interactions across the preschool years, (2) how does early child temperament relate to parent-child learning interactions and children's language and cognitive outcomes?, (3) determining longitudinal predictors of child language and literacy at 4 ½ years, understanding children readiness.
Parent-child interaction and children's language and literacy development in the pre-school years: a longitudinal study.	2016	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This study provides a summary report of the GUNZ cohort at 4.5 years of age. This report will highlight key descriptive statistics from each of the six research domains.
Now we are four	2016	Growing Up in New Zealand Team	Internal	Active	The immediate aim of this research is to use Growing Up in New Zealand data to identify child and maternal outcomes (from 9 months data) that are associated with poverty and material hardship taking into account socio-demographic, behavioural and other contextual factors (starting from the antenatal period).
Low incomes, material hardship and child family outcomes in the GUNZ cohort: an early analysis using the antenatal and 9 months data	2016	Clare Dominick- Ministry of Social Development	External	Completed	This research is designed to understand the demographic processes contributing to the increasing ethnic diversity of New Zealand's population. It will examine how ethnic identity is transmitted across generations.
Using the Growing Up in New Zealand data to understand NZ's growing ethnic diversity	2016	Jeremy Robertson- SUPERU	External	Active	The purpose of this study is to test a life course- informed model on the linkages among key characteristics of individual mothers (e.g. age, parity, marital status etc.), population trends in those characteristics in their home countries, and their management of young children's early learning and educational opportunities (e.g. cognitively stimulating parenting, enrolment in early education programs) in a set of English-speaking countries (Australia, Canada, Ireland, New Zealand, United Kingdom, United States).
Fertility trends, changing maternal characteristics, and mother's support for early childhood education in six countries	2016	Robert Croasnoe- University of Texas	External	Active	The aim of this PhD is to explore the dietary management of GDM in New Zealand through three projects. First, using data from the Growing Up in New Zealand study to identify the dietary patterns of women with GDM and compare this with the dietary patterns of women without GDM to determine whether there is a particular dietary pattern that is associated with a decreased or increased risk of GDM in New Zealand and whether these dietary patterns influence child outcomes at birth, nine months, and two years of age. Secondly, dietetic services and practice in the management of GDM have been evaluated through a nationwide survey. Lastly, a mixed-methods study will evaluate the nutrition knowledge level of women with GDM, whether dietetic intervention leads to changes in nutrition knowledge and explore the perceptions, barriers and enablers of following dietary recommendations of women with GDM.
The role of maternal diet on the development of GDM and its influence on child outcomes	2016	Growing Up in New Zealand Team	Internal	Active	The main study objective is to measure the role of familial and whānau processes and cultural expectations in maternal and paternal altruistic actions related to child health and to develop a household production function of child health which delineates and values altruistic actions influencing child health.
Life course determinants of asthma in NZ children	2017	Growing Up in New Zealand Team	PhD	Active	The project will describe the current state of vulnerable children, and to identify a number of protective factors that serve to ameliorate the dangers posed by growing up in a risky environment. The main research objective is to identify whether and to what degree social connectedness within the family system and between it and the wider community, and society ameliorates risks posed by both vulnerability and family transitions. The project aims to obtain indices of social connectedness from GUNZ and determine associations between them with incidence and impact of family transitions (e.g. Changes in household and family structure) as well as health and wellbeing outcomes for identified vulnerable children. In this fashion, we will be able to discern whether, and in what fashion, social connectedness functions as a protective factor against family transitions and poor outcomes for this at risk group of children.
Incorporating Measures of Familial Economic Behaviour into Household Human Capital Production Functions	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The project will describe and predict respiratory hospitalisations in early childhood. Specific study objective is to identify interactions, thresholds, and hierarchies in the relationship between potential risk factors and respiratory hospitalisations in early childhood and to develop a robust predictive model that quantifies these relationships and identifies the areas of most influence on respiratory hospitalisations. The project will investigate whether there are any patterns of interactions between risk factors and outcomes and whether the relationship between risk factors and outcomes is different in the most deprived groups when compared to least deprived groups and if the factors combined together interact differently in lower decile groups.
Does social connectedness buffer the impact of family transitions among vulnerable youth? A longitudinal investigation with Growing Up in New Zealand	2017	Paul Jose (Victoria University of Wellington)	External	Active	There is very limited information available on sleep in New Zealand children. We don't know the number of children meeting (not meeting) these guidelines as they develop across the pre-school years, and the social and demographic factors associated with children obtaining recommended sleep durations (or not). This project will use Growing Up in New Zealand dataset to assess sleep in a large group of New Zealand children and answer key questions: how many NZ children are meeting the MOH guidelines for sufficient good quality sleep over time and what social and demographic factors are associated with NZ children meeting or not meeting the sleep guidelines.
Predictive modelling of respiratory hospitalisations in early childhood	2017	Chris Schilling (KPMG)	External	Active	The project will determine the prevalence of family violence using the Pacific Growing Up in NZ families and identify the risk and protective factors relevant to preventing and enhancing Pacific family resilience to family violence and related harms. The findings from this research will equip the government with the evidence necessary to make strength-based policy and funding decisions that enhance Pacific family resilience to family violence and related harms.
Analysis of early childhood development outcomes and the association of alcohol exposure during pregnancy	2017	Gail Kelly (NZIER)	External	Active	There is very limited information available on sleep in New Zealand children. We don't know the number of children meeting (not meeting) these guidelines as they develop across the pre-school years, and the social and demographic factors associated with children obtaining recommended sleep durations (or not). This project will use Growing Up in New Zealand dataset to assess sleep in a large group of New Zealand children and answer key questions: how many NZ children are meeting the MOH guidelines for sufficient good quality sleep over time and what social and demographic factors are associated with NZ children meeting or not meeting the sleep guidelines.
Pacific family violence - Building resilient Pacific families	2017	Deborah McLeod (Malatest International)	External	Active	
Are New Zealand children meeting the Ministry of Health guidelines for sleep?	2017	Leigh Signal (Massey University)	External	Active	

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Protective factors of children and families at highest risk of adverse childhood experiences: an analysis of children and families in the	2017	Rhema Vaitianathan (AUT)	External	Active	This project seeks to identify the cluster of factors that best mitigate risk factors of adverse birth circumstances. At the first stage children will be stratified according to risk factors observed at birth. The risk factors chosen to be those that are most likely to contribute to adversity in the first 2 years of life (defined as multiple ACEs or multiple failure of the Better Public Services (BPS) targets). Utilising the statistical techniques of cluster analysis and a variant of Oaxaca decomposition, the set of factors that best protect families and children will be investigated. That is, what cluster of individual, family and community factors are most closely associated with those children who, at birth, are at the highest risk of adversity and yet go on to suffer no adversity.
Intentions and outcomes in early childcare choices: Understanding the determinants and dynamics of households' early intentions at	2017	Kare Meissel (University of Auckland)	External	Active	This project will examine how parental ECE choices are related to personal and family whānau beliefs, priorities and needs; as well as to ecological and structural factors, such as access, cost and mobility. We will investigate whether antenatal early childcare intentions change once the child is born and why such changes occur. Finally, we will examine the influence of childcare subsidies policy on 0-2 year formal ECE uptake.
Infant feeding in New Zealand: Adherence to the national food and nutrition guidelines	2017	Teresa Gonjlo de Castro (University of Auckland)	External	Active	The study will investigate adherence to the nutritional guidelines for New Zealand infants. Growing Up in New Zealand data will be used to create a composite index that describes the degree of adherence to recommendations in the Ministry of Health's Infant Feeding Guidelines and allows for exploration of associations with socio-demographic characteristics. The components of the index will be based on the Food and Nutrition Guidelines for Infants from the Ministry of Health for the year that the GuINZ 9 month interview took place.
Investigating the effects of screen time on preschool health and development: How much screen time is too much?	2017	Scott Duncan (AUT)	External	Active	The aims of this project is to examine the temporal trends in the duration and types of screen usage at 2 years, 45 months (3.75 years) and 54 months (4.5 years) in the Growing Up in New Zealand cohort. We will also determine the associations between screen usage at 2 years of age (a range of physical, behavioural, and social outcomes). Response to technology use items at 2 years will be treated as exposure variables. A range of outcome variables will be analysed including physical, behavioural, and social variables from parental proxy interview response and individually administered tests. The information will be used to generate relevant, accurate, and evidence-based policy relating to screen usage in pre-schoolers.
How much does deprivation matter: A comparison of deprivation in NZ and outcomes from GUINZ cohort at age 4	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	Previous research has used NZDep to demonstrate a deprivation-health gradient for many health outcomes in the GUINZ datasets. Our team has recently developed the Index of Multiple Deprivation (IMD), an alternative measure of deprivation from routine administrative datasets. The IMD comprises 7 domains and an overall deprivation index. This study uses measures such as immunisation timeliness, oral health, and obesity to investigate the extent to which the IMD and its domains explains the deprivation/health relationship, and how these results differ to those obtained using NZDep.
Partner conflict, parenting and child outcomes	2017	Growing Up in New Zealand Team	Internal	Active	The project will specifically examine associations within ethnic groups. In particular, rates of antenatal and postnatal depression and IPV are high among Pacific women. These analyses will consider the impact of these risks for Pacific children. The project will also consider whether IPV places children at increased risk on the SDQ, and also whether parenting behaviour and the quality of the parent-child relationship mediates this relationship.
1. Determinants of preschoolers' access to dental care 2. Determinants of preschoolers' oral health 3. An evaluation of current screen	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The first project will understand determinants of access to routinely available preschool dental care and identify predictors of children's oral health across the preschool years. The second project will involve the linkage with oral health data and will consider how well the 'lift the lip' assessments in the Before School Check predict oral health assessments and treatment by Dental Therapists and how well the parent or children's oral health relate to oral health assessments and treatment by Dental Therapists. The third project will identify factors associated with the development of early childhood caries, identify among children with early childhood caries factors associated with early childhood caries, factors associated with a general anaesthetic for dental treatment and extractions. The project will also identify strategies to reduce the risk of early childhood caries and prevent the need for general anaesthetic dental treatment and extractions.
The ethnic identification of the new New Zealanders: evidence from Growing Up in New Zealand	2017	Growing Up in New Zealand Team	Internal	Active	This research focuses on the ethnic identification of the children of Growing Up in New Zealand. Measuring ethnicity clearly and consistently is important in order to make sure that comparisons between groups and across time are clear. In New Zealand, measurement of outcomes by ethnicity is critical for achieving equity. Growing Up in New Zealand collects unique and detailed information about ethnicity from children and their parents, and this research will consider the ethnic identification of parents and their children (where this matches and where it does not); the different ways of describing ethnic identification, particularly those who identify with more than one ethnicity; how parents prioritise the ethnic identification of their multi-ethnic children; and how ethnic identification changes over time.
Infectious disease hospitalisations in the first 5 years of life	2017	Growing Up in New Zealand Team	Internal	Active	NZ children have a high rate of hospitalisation due to infectious disease, and rates amongst Maori and Pacific children are higher than those for other NZ children. This project will identify hospitalisations for infection in the National Minimum Dataset of hospital admission data, and use the GUINZ datasets to identify risk factors for infection admission using unadjusted and multivariable analyses. To examine the effects of ethnicity, multivariable analyses will be performed with and without ethnicity variables in the model, and within each ethnic group separately. Additional analyses will examine the effects of changes in family environment, e.g. residential mobility and limited access to primary care.
Associations between Staphylococcus aureus and Streptococcus pyogenes colonisation and skin and soft tissue infection	2017	Growing Up in New Zealand Team	Internal	Active	NZ children suffer from very high rates of skin and soft tissue infections (SSTI). This project aims to determine whether colonisation with <i>Staphylococcus aureus</i> or <i>Streptococcus pyogenes</i> plays an important role in SSTI in NZ. The GUINZ cohort children had bacterial swabs taken 54 months of age. Rates of bacterial colonisation will be described. SSTI rates will be determined from parental report and hospital admission (NMDS) data. Associations between bacterial colonisation and SSTI will be investigated using unadjusted and multivariable analyses that account for known risk factors for SSTI. The results of this project will guide potential novel interventions.
Spa-typing of Staphylococcus aureus isolates colonising the nose, throat and skin of children in the GUINZ cohort, associations with	2017	Growing Up in New Zealand Team	Internal	Active	NZ children suffer from very high rates of skin and soft tissue infections (SSTI). This project aims to determine whether colonisation with specific genotypes of <i>Staphylococcus aureus</i> plays an important role in SSTI in NZ. The GUINZ cohort children had bacterial swabs taken 54 months of age. Isolates of <i>S. aureus</i> will be genotyped using spa-typing. The distribution of spa types will be described. SSTI rates will be determined from parental report and hospital admissions. Associations between specific spa-types and SSTI will be investigated using unadjusted and multivariable analyses. The results of this project will guide potential novel interventions.
Pregnancy and early childhood determinants and consequences of breastfeeding	2017	Growing Up in New Zealand Team	Internal	Active	Breastfeeding prevents infectious diseases, particularly acute respiratory and gastrointestinal infections. Breastfeeding is also believed to prevent the development of allergic diseases and obesity and to enhance cognitive development. Currently we do not know what strategies would be most likely to increase the duration of breastfeeding in all NZ children. We aim to evaluate ante and post-natal determinants of duration of exclusive and any breastfeeding in New Zealand and to describe the relationships of duration of exclusive and of any breastfeeding with the risk of respiratory and allergic diseases, obesity and language, cognitive, and behavioural development up to age 5 years.
Dad's word: The importance of the father (and father-figures) in a child's psychosocial, behavioural and cognitive development at	2017	Growing Up in New Zealand Team	Internal	Active	The role of the father in promoting healthy child development is becoming increasingly highlighted among research psychologists. Both the presence and engagement of a father (or father-figure) with regard to child-rearing and play has been shown to influence the offspring's behaviour, cognition and socioemotional outcomes. There remains a distinct lack of longitudinal investigations into the nature of this paternal influence. The current set of studies will use Growing Up in NZ data to understand the family (notably fathers) factors and sociodemographic influences that promote and hinder socioemotional, behavioural and cognitive functioning in the Growing Up in NZ cohort.
Determinants of behavioural and cognitive functioning at age 4.5 years.	2017	Growing Up in New Zealand Team	Internal	Active	In a series of studies, we will explore the main determinants of cognitive functioning among 4.5 year-old NZ children. In this regard, cognition refers to language, motor and numerical ability, as well as working memory and inhibitory control. We will first describe the data and its associations with early childhood and parental socio-demographic and behavioural data with the aim to develop a cohesive Cognitive Functioning Index. Next, we will determine the correlates and predictors of adaptive cognitive development. Child behaviour (strength and difficulties) at ages 2 and 4.5 years will be analysed in tandem with the cognitive data, both as mediating and moderating factors.
Breastfeeding indicators and misclassification of exclusive breastfeeding duration within a contemporary NZ cohort	2017	Growing Up in New Zealand Team	Internal	Active	Breastfeeding provides benefits for children, women, and the society. Currently NZ does not have available data on breastfeeding indicators that are generalizable to the national birth cohort. Additionally, studies have reported high levels of bias for exclusive breastfeeding duration estimated solely through retrospective maternal report, suggesting the need of accrual methods in order to minimize misclassification for the indicator. This project objectives to describe breastfeeding indicators and its maternal associated factors, as well as describe misclassification of exclusive breastfeeding duration in a contemporary representative sample of NZ children.
What promotes and hinders school readiness and the school readiness gap in NZ children: consideration of child, family, environmen	2017	Growing Up in New Zealand Team	Internal	Active	This research will describe the factors that both promote and hinder school readiness and contribute to the school readiness gap in NZ. We will consider a number of individual and contextual factors including child factors (temperament, number of languages spoken, early behavioural problems, socio-emotional development, self-concept), parent factors (parent-child interactions, beliefs, expectations, mental health, work and relationship status), early childhood education (attendance, type, timing, duration, intensity) and environment (media exposure, home learning environment, and household structure). We will also consider the importance of socio-emotional learning for emerging behavioural problems, school readiness and the school readiness gap (see related School Readiness DAC).
Defining school readiness in Growing up in NZ: how ready are NZ children, NZ parents and NZ schools?	2017	Growing Up in New Zealand Team	Internal	Active	This study will use Growing Up in NZ data to create a school readiness measure for the Growing Up in NZ study that can be used both as an outcome from the preschool years (0-5) and a predictor of future outcomes for the child. Specifically, this research will create a school readiness variable that in keeping the Unicef School Readiness conceptual framework (Britto, 2012) includes both a ready child and a ready families component and ready schools component. Once defined, we will then describe the school readiness of the demographically diverse Growing Up in NZ cohort.
Socio-emotional development during the preschool years: how developed are NZ children, what promotes and hinders development.	2017	Growing Up in New Zealand Team	Internal	Active	In a series of manuscripts we will describe the socio-emotional development of NZ children across the pre-school years and how individual and contextual variables relate to its development. These factors considered will include: socio-demographic variables (ethnicity, socio-economic status), child factors (temperament, languages spoken, behavioural problems, self-concept), parent factors (parent-child interactions, educational beliefs, mental health, work and relationship status), early childhood education (attendance, type) and environment (media exposure, home learning environment, and household structure). We will also consider the importance of socio-emotional learning for emerging behavioural problems, school readiness and the school readiness gap (see related School Readiness DAC).
Attitudes to child rearing and the caregiver role among Pacific families in NZ, antenatal to nine months	2017	Growing Up in New Zealand Team	Internal	Active	NZ has a rapidly changing population, with childcare beliefs influenced by (among others) cultural factors, work and caregiver roles, shifting migration patterns and inter-cultural partnerships. This paper attempts to tease out some of these complexities and provide a snapshot of Pacific families in New Zealand. We hope to provide a better understanding of how Pacific families approach child rearing in New Zealand in the birth to 9 month period. Doing so will allow policy makers to better support these families in achieving the best outcome for their children in this critical period of child development.
The role of Pacific fathers in a contemporary setting	2017	Growing Up in New Zealand Team	Internal	Active	Fathers play a significant role in the lives of their children. With almost half of Pacific fathers born overseas and over 50% of these migrant fathers based overseas, further attention needs to be given to the challenges and strengths of fathers in NZ and what policies and services would best respond to the needs of a diverse mix of fathers in NZ. Parenting practices, the amount and quality of time spent with their child and the expectations and hopes for their children are all important indicators of healthy and positive engagement and experiences. There are implications for a range of settings beyond the family, including community and workplace.
Engagement of Pacific families in NZ with health services and information in the perinatal period	2017	Growing Up in New Zealand Team	Internal	Active	This paper addresses how Pacific families in NZ interact with health information and health services from before the baby is born to when the baby is 9 months old. We will look at such things as attitudes to health care, the way health care and information is delivered, and the impacts of factors like language, migration history, community support and cultural beliefs. We hope to provide a better understanding of the health needs of our rapidly growing and changing Pacific population. This paper is planned to be the first in a series, to be expanded on with future longitudinal data sets.
The home environment for Pacific children growing up in NZ.	2017	Growing Up in New Zealand Team	Internal	Active	The current housing situation in parts of New Zealand has led to a shortage of affordable homes, impacting on many families. Given the significant impact of the housing environment on childhood illnesses and diseases, it is imperative that any evidence on the current housing environment is presented to help inform housing policies in NZ and in turn, reduce the rates of preventable illnesses and diseases among children. This paper describes the housing environment for Pacific children and in turn, provides evidence to support both housing policies and healthy environments for families.
School Readiness among children in the Pacific cohort	2017	Growing Up in New Zealand Team	Internal	Active	Starting big school or primary school is a major transition for pre-schoolers. Many parents proactively prepare their children for the school environment. For others, there is little awareness of interactions or activities that enhance pre-schoolers' readiness to learn and to engage with others in a school setting. This paper looks at factors among Pacific children that reflect their ability to listen and learn and to engage with teachers and peers at primary school. By reviewing a range of developmental areas from cognitive abilities through to emotional regulation and pro-social behaviour, a greater understanding of the strengths and needs of Pacific children can lead to improved policies for school transition.
Engagement of Asian families with health services and information 2 years - 54 months	2017	Growing Up in New Zealand Team	Internal	Active	This paper addresses how Asian families in NZ interact with health information and health services in the early childhood period (2 years - 54 months). We'll look at such things as attitudes to health care, the way health care and information is delivered, and the impact of factors like language, migration history, community support and cultural beliefs. We hope to provide a better understanding of the health needs of our rapidly growing and changing Asian population and comment on whether we can see any early impacts on the children. This paper follows on from the earlier paper covering the perinatal period.

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School Readiness among children in the Asian cohort	2017	Growing Up in New Zealand Team	Internal	Active	Starting big school or primary school is a major transition for pre-schoolers. Many parents proactively prepare their children for the school environment. For others, there is little awareness of interactions or activities that enhance pre-schoolers' readiness to learn and engage with others in a school setting. This paper looks at factors among Asian children that reflect their ability to listen and learn and to engage with teachers and peers at primary school. By reviewing a range of developmental areas from cognitive abilities through to emotional regulation and pro-social behaviour, a greater understanding of the strengths and needs of Pacific children can lead to improved policies for school transition.
Engagement of Asian families in NZ with health services and information in the perinatal period	2017	Growing Up in New Zealand Team	Internal	Active	This paper addresses how Asian families in NZ interact with health information and health services from before the baby is born to when the baby is 9 months old. We'll look at such things as attitudes to health care, the way health care and information is delivered, and the impact of factors like language, migration history, community support and cultural beliefs. We hope to provide a better understanding of the health needs of our rapidly growing and changing Asian population. This paper is planned to be the first in a series, to be expanded on with future longitudinal data sets.
The home environment for Asian children growing up in NZ	2017	Growing Up in New Zealand Team	Internal	Active	The current housing situation in parts of New Zealand has led to a shortage of affordable homes, impacting on many families. Given the significant impact of the housing environment on childhood illnesses and diseases, it is imperative that any evidence on the current housing environment is presented to help inform housing policies in NZ and in turn, reduce the rates of preventable illnesses and diseases among children. This paper describes the housing environment for Asian children and in turn, provides evidence to support both housing policies and healthy environments for families.
Attitudes to child rearing and the caregiver role among Asian families in NZ, antenatal to nine months	2017	Growing Up in New Zealand Team	Internal	Active	NZ has a rapidly changing population, with childcare beliefs influenced by (among others) cultural factors, work and caregiver roles, shifting migration patterns and intercultural partnerships. This paper attempts to tease out some of these complexities and provide a snapshot of Asian families in New Zealand. We hope to provide a better understanding of how Asian families approach child rearing in New Zealand in the birth to 9 month period. Doing so will allow policy makers to better support these families in achieving the best outcome for their children in this critical period of child development.
The role of Asian fathers in a contemporary setting	2017	Growing Up in New Zealand Team	Internal	Active	Fathers play a significant role in the lives of children. With a significant percentage of Asian fathers being migrants, further attention needs to be given to the challenges and strengths of fathers in NZ and what policies and services would best respond to the needs of a diverse mix of fathers in NZ. Parenting practices, the amount and quality of time spent with their child and the expectations and hopes for their children are all important indicators of healthy and positive engagement and experiences. There are implications for a range of settings beyond the family, including community and workplace.
Child health and development in the Asian cohort, birth to 2 years and the influence of parental beliefs	2017	Growing Up in New Zealand Team	Internal	Active	This paper looks at the health and development of Asian children growing up in NZ, birth- two years. Using a combined health and socioeconomic approach, we'll use the Growing Up In NZ data to answer the following questions: How healthy are Asian children in NZ?, how do health beliefs of parents and families impact their health, is there a difference between children living in NZ-born and migrant Asian families? This paper is intended to be the first in a series looking at the longitudinal data from GUNZ with implications for health policy and practice.
Moving home in the first 5 years of life: evidence from Growing Up in New Zealand	2017	Growing Up in New Zealand Team	Internal	Active	This research builds on existing Growing Up in New Zealand analyses about residential mobility and focuses on how often the children and their families move house during the preschool period. This research will also determine whether any particular socio-demographic features of families (such as those that change jobs), households (such as their housing tenure and quality), and neighbourhood are associated with cumulative residential mobility up to the age of five years. Further, this research will explore the impact of frequent mobility on child and family outcomes such as timely immunisation, access to health care delivery, and engagement with the early childhood education sector and readiness for school.
Health effects of exposure to environmental hazards in children	2017	Growing Up in New Zealand Team	Internal	Active	This project aims to estimate the spatial and temporal distributions of New Zealand pre-school exposure to environmental hazards (e.g. air pollution, indoor and home neighbourhood environment, traffic-related, extreme climate conditions, chemical and biological exposures) for assessing the short- and long-term health effects, as well as their interactions with socioeconomic status, ethnicity, comorbidity, seasonality, infectious disease episodes and meteorological conditions. Comparable cohort(s) outside New Zealand will be identified for collaborations. The end of this project will assess the burdens and community costs of the health effects related to policies in the context of environmental justice.
What are the hopes, dreams and expectations of parents of a 4 ½ year old, and how similar are these beliefs to their Antenatal Hope	2017	Growing Up in New Zealand Team	Internal	Active	This project will use mixed methods to explore the hopes of dreams parents hold for their 4 1/2 year olds. Parents' reported hopes and dreams will be coded using an adapted version of Maslow's (1943) hierarchy of needs, and quantitative analysis will then be used to identify important predictors of these hopes and dream categories. As parents were asked the same hopes and dreams questions at their antenatal interview, we will also explore: how similar these hopes and dreams are over time; if any factors consistently predict parents' hopes and dreams over time; and whether any antenatal hopes and dreams have already become a reality.
Can the modified Stack-and-Topple task predict 4-year-old cognitive, socio-emotional and behavioural outcomes?	2017	Growing Up in New Zealand Team	Internal	Active	The stack-and-topple (S&T) task has been used to measure the development of children's engagement in social games. We, however, modified this task for the GUNZ 2-year data collection wave to provide a fun, quick, and novel measure of six key outcome measures. In this manuscript we will test the relationship between children's performance on S&T with conceptually similar outcome variables at 4 years. This will be the first evidence that our S&T task provides a valid measure of key outcomes in early childhood.
Early self-control: The development of early self-control indexes and an exploration of changes in self-control from birth to 4.5 years	2017	Growing Up in New Zealand Team	Internal	Active	Applying a developmental perspective, we want to understand how the presence of varying risk factors in the first 2 years of life create vulnerability for problematic outcomes at 54 mos and, at the same time, what factors across multiple domains (child, mother, partner, social/community, ethnicity) are associated with resilience in children exposed to high vulnerability, such that they avoid problematic outcomes despite their high risk status. Using GUNZ we can pioneer an understanding of high risk exposure over time in early development and resilience in young children prior to entry into public schooling, and extend that to diverse groups in contemporary New Zealand.
Engagement of Pacific families with health services and information 2 years - 54 months	2017	Growing Up in New Zealand Team	Internal	Active	This paper addresses how Pacific families in NZ interact with health information and health services in the early childhood period (2 years – 54 months). We'll look at such things as attitudes to health care, the way health care and information is delivered, and the impacts of factors like language, migration history, community support and cultural beliefs. We hope to provide a better understanding of the health needs of our rapidly growing and changing Pacific population and comment on whether we can see any early impacts on the children. This paper follows on from the earlier paper covering the perinatal period.
Anti- and postnatal determinants of childhood obesity	2017	Growing Up in New Zealand Team	Internal	Active	This project expands on ongoing work on the epidemiology of childhood obesity at age 4.5 years. It will explore additional factors, such as antenatal exposure to antibiotics and other medications, which may be associated with childhood obesity. Community dispensing data is available from the NZ Pharmaceutical Collection database for cohort mothers who provided consent to external data linkage. Body mass index (BMI) as a continuous and a categorical outcome variable (obesity) will be regressed against the main exposure variables (e.g. antenatal antibiotic exposure), accounting for parental, child and environmental covariates. It will also be examined within ethnic and socioeconomic subgroups.
Life course determinants of sleeping and eating patterns, and their effect on health outcomes.	2017	Growing Up in New Zealand Team	Internal	Active	There appears to be important relationships between sleeping and eating patterns in early childhood and subsequent health. The main aims of this project are to investigate the life course determinants of eating and sleeping patterns and to explore the influence of these two factors (eating and sleeping patterns) on subsequent health and how these vary between population subgroups defined by ethnicity and socioeconomic status.
Vitamin D status at birth and its association with subsequent respiratory and atopic disease	2017	Growing Up in New Zealand Team	Internal	Active	There is growing interest in the non-classical role of vitamin D, particularly role of vitamin D on the immune system and respiratory tract infections. Dried blood samples are collected through heel prick onto absorbent cards as soon after 48 hours of birth as possible as part of the national newborn screening programme. The dried blood spot samples of the Growing Up in NZ children will be obtained and tested for vitamin D (25(OH)D) to determine whether vitamin D status at birth is associated with the subsequent risk of acute respiratory infections up to age 5 years and with the development of doctor diagnosed asthma, food allergy and eczema.
Prevalence of Foetal Alcohol Spectrum Disorders	2017	Growing Up in New Zealand Team	Internal	Active	Exposure to alcohol during pregnancy is one of the prenatal risk factors that can negatively influence child development. This study will estimate the prevalence of Foetal Alcohol Spectrum Disorders (FASD) as defined by the modified Canadian FASD diagnostic guidelines where the simultaneous presentation of the three characteristic facial features: short palpebral fissures, indistinct philtrum and thin upper lip will be used to identify children with FASD. The digital photographs will be taken of the Growing Up children during the face-to-face interview and analysed by an expert using the FAS Facial Photographic Analysis software.
Determinants of BASC completeness	2017	Growing Up in New Zealand Team	Internal	Active	The B4 school check is a nationwide programme offering free health checks in 4 year olds and aims to identify and address any health, behavioural, social or developmental concerns that could affect a child's ability to benefit from school. The B4 School check was implemented in 2008 and has not been evaluated. The study will determine the completeness and effectiveness of the B4 school check programme and identify factors associated with not having the B4 School Check and with having an incomplete B4 School Check.
Vaccine Preventable Respiratory Disease in New Zealand	2017	Growing Up in New Zealand Team	Internal	Active	New Zealand experiences a large disease burden from respiratory tract infections. Hospitalisation at <2 years of age with pneumonia and bronchiolitis leads to persistence of respiratory symptoms 1 year later in at least one-third of children. Bronchiolitis, which results from recurrent childhood respiratory infections, remains a significant cause of premature death in New Zealand. The potential for this to be prevented by timely immunisation has not been studied. The study will determine the timeliness and completeness of preschool immunisation in NZ, describe recurrent and chronic respiratory disease up to 5 years of age and whether delayed or incomplete immunisations increase the risk of recurrent and chronic respiratory disease.
Life course determinants of serious infection in childhood	2017	Growing Up in New Zealand Team	Internal	Active	There is a high burden of hospitalisations from infectious diseases in New Zealand. This project will build upon the work that has already been completed describing serious infection in the first year of life. The current study will quantify the burden of infectious disease hospitalisations up to five years of age in an ethnically diverse Growing Up in NZ cohort. The study will examine the effect of ethnicity on infectious disease hospitalisations while adjusting for established risk factors and will further examine the effects of access to primary healthcare on infectious disease hospitalisation rates.
Host and microbiome contributions to skin infections	2017	Growing Up in New Zealand Team	Internal	Active	Compared to other developed countries, New Zealand has one of the highest rates of serious skin infections, particularly among children. Childhood skin infection hospitalisation rates have doubled since 1990. The reasons for this and the mechanisms by which environmental exposures lead to increased rates of skin infection remain unknown. The study will describe rates of <i>Staphylococcus Aureus</i> and <i>Streptococcus Pyogenes</i> colonisation and skin infections at 5 years of age. Comparisons will be made between colonised and non-colonised children with and without infection to determine if there are (i) host genetic, and (ii) microbiome differences, associated with colonisation of infection.
Resilience: what works and what works for whom?	2017	Growing Up in New Zealand Team	Internal	Active	This project builds upon the work that has already been completed on child vulnerability and summarized in the Growing Up in New Zealand vulnerability reports. The current study will define resilience and how measurement of this evolves during childhood. Proximal and distal determinants of resilience will be identified and how these vary between population subgroups defined by ethnicity and socioeconomic status.
Demographic differences in parental decision-making about early childhood education during the preschool years: Barriers and enab	2017	Growing Up in New Zealand Team	Internal	Active	This project aims to update our current understanding of the enablers and barriers to early childhood education (ECE) uptake, and the relationship between uptake and demographic factors such as socio-economic status, ethnicity and location (e.g. urban / rural), through to age 4.5, as well as patterns of difference in parental satisfaction with ECE providers. This research will help to guide policy decisions via an improved understanding of parents' decisions and overall satisfaction with respect to early childcare and ECE, and the role of cost, quality and parental work.
The relationship between the home environment, eczema and serious skin infection in young children in New Zealand.	2017	Growing Up in New Zealand Team	Internal	Active	The home environment is an important risk factor for eczema, a common childhood disease and serious skin infection. New Zealand experiences a high rate of hospital admissions for serious skin infection, especially for children. This study is the first study in New Zealand looking at the relationship between the home environment, eczema and serious skin infection in young children. This study will utilise Growing Up in New Zealand data to examine whether the home environment increases the risk of developing eczema in young children, and in those with eczema, it is associated with an increased risk of serious skin infection. The results will help guide future efforts to improve household environment to reduce the burden of eczema and serious skin infection in New Zealand children.
Parenting practices and styles during the preschool years.	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The aim of this project is to examine parenting at age 4 ½ years. We will validate the brief measure of parenting by conducting a factor analysis and examining associations with other aspects of parenting (9 months and 2 years). We will also conduct multivariable regression analyses to examine associations with key socio-demographic measures, and consider whether any differences remain significant once other potential confounders are included in the model (e.g., maternal mental health, parental conflict and relationship factors, parenting stress, neighbourhood, social support). Evidence from large representative samples is needed in order to unravel the potentially complex associations.
Role of early parents' values and the parent-child environment (including affiliation, engagement) in the development of self-concept	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This research will describe the development of early self-concept in the GUNZ cohort and examine whether there are any socio-demographic differences. It will also investigate the influence that parenting values and practices (e.g., affiliation, engagement, time spent with child etc) relate to the development of self-concept at 2 years of age.
The Effects of Household Early Literacy and Music Exposure on Human Capital Development: Evidence from New Zealand	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	Enhanced human capital leads to increased employment opportunities, higher standards of living, and economic growth. Early music and literacy in the household result in improved knowledge and skills acquisition, pointing to the role they play in human capital development. We will analyse the Growing Up in New Zealand dataset for children from before birth to five years of age using an econometric model incorporating behavioural, environmental, and socioeconomic factors to determine their role in child development outcomes. Our results have implications for education policy makers and the development of early literacy and music programs that can generate long-lasting positive outcomes for children.

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The association of infant temperament and parent-child interaction with early childhood dietary practices	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	Dietary practices established in childhood track into adulthood. Understanding how dietary patterns in childhood become established therefore has implications for dietary intake throughout life. Wide variance exists in patterns of weaning practices and patterns of dietary intake in early childhood. Important factors include the availability of food, the dietary preferences and habits of the parent, the interactions that occur between the child and parent and the child's own innate food preferences. We will determine the association of infant temperament and parent-child interaction with early childhood dietary practices.
Variants in the IFIH1 associated with early life respiratory infections	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	Genetic factors that may influence risk of severe respiratory infections in babies. Around 1-2% of infants are hospitalised with severe viral respiratory infections, and of those, 10% require treatment in a paediatric intensive care unit. Recent work suggests that mutations in the <i>IFIH1</i> gene may contribute towards increased susceptibility to viral infections. In this study, we will test for mutations in the <i>IFIH1</i> genes of GUNZ children who were hospitalised with severe respiratory infections. This research will help us to understand whether testing for mutations of <i>IFIH1</i> is useful for predicting the risk of severe early life respiratory infections or for guiding clinical management of affected children, within the New Zealand setting.
Language development at age two: Role of home literacy environment in relation to home physical environment.	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	The proposed research will assess how the interaction of the home literacy environment and the physical environment of home can affect cognitive development during the first two years of life. The findings will enrich the limited knowledge that exists currently of the influence of this interaction on cognitive development during childhood. Currently, one of the main contributory factors to poor child health in NZ is the unsatisfactory physical state of much of the housing stock. While the effect of housing shortage and limited housing conditions in major cities in NZ is clear, a better understanding in the impact of this on cognitive development will help inform the development of effective interventions to address early child development inequalities.
Health-promoting environments in licensed childcare services and associations with body size at 4 years old: analysis from the Growing Up in New Zealand Study	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This study explores the association between nutrition and physical activity environments (policy and practices) in Early Childhood Education settings with measures of overweight and obesity in 4 year olds. We hypothesise that there is a 'protective' effect of attending a health-promoting ECE service, which can be confirmed by lower BMI outcomes for children, when adjusting for family and home characteristics. This research provides important information for the government's Childhood Obesity Plan, particularly informing health promotion strategies in early childhood education services.
Parents' financial literacy and preschoolers' numeracy skills	2017	Growing Up in New Zealand Team	Internal	Active	Numeracy skills are important for social and academic success in modern society. The foundations of early numeracy learning are likely to include both inbuilt child abilities and the experiences they have within their environment. We focus here on the home environment in understanding early numeracy abilities because, compared to characteristics like intelligence, the environment is amenable to change. We propose that parents' financial literacy, over and above that of standard proxy measures of parental education and SES, might impact on children's early numeracy knowledge.
Why are our most vulnerable children not taking part in the New Zealand Before School Check?	2017	Growing Up in New Zealand Team	Internal	Active	The Before School Check (BASC) is a nationwide NZ programme offering a free health and development check for 4-year-olds; it is the 12th core contact of the Waiti Child Tamaki Ora Schedule of services. Assessments are carried out on child health, vision, hearing, growth, dental health, immunisation, development and behaviour. The Ministry of Health reports that around 10% of eligible children do not receive a BASC. This project aims to use Growing Up in New Zealand to identify who these children are and determine barriers to and facilitators of access to the BASC.
Family pathways: Evidence from Growing Up in New Zealand	2017	Growing Up in New Zealand Team	Internal	Active	The <i>Growing up in New Zealand</i> (GUNZ) study presents an opportunity to understand IR relevant outcomes for families over time. The longitudinal information available for 6853 children and their families from before birth enables taking an individual family and tracking their pathway through time with respect to their engagement in work, benefit receipt and income changes. Utilising the GUNZ cohort will chart these pathways for families with preschool children over their initial 5-6 years of life in the first instance. This tracking of family status will provide an understanding about the prevalence of the pathways and flux between states of work and income, leave from work (including paid parental leave), benefit receipt, household expenditure (and tenure) and some debt for example for contemporary NZ families with pre-school children. The pathway models will provide opportunities to engage with families fitting particular pathways of interest to understand what that journey means for them and for their interaction with Inland Revenue services.
Ethnic differences in birth outcomes in New Zealand: Role of discrimination	2017	Growing Up in New Zealand Team	Internal (with accredited researcher)	Active	This research focuses on the ethnic identification of the children of <i>Growing Up in New Zealand</i> . Measuring ethnicity clearly and consistently is important in order to make sure that comparisons between groups and across time are clear. In New Zealand, measurement of outcomes by ethnicity is critical for achieving equity. <i>Growing Up in New Zealand</i> collects unique and detailed information about ethnicity from children and their parents, and this research will consider: the ethnic identification of parents and their children (where this matches and where it does not), the different ways of describing ethnic identification, particularly those who identify with more than one ethnicity; how parents prioritise the ethnic identification of their multi-ethnic children; and how ethnic identification changes over time.
Parental ethnic identity attitudes and feelings about diversity in the Growing up in New Zealand Study	2017	Growing Up in New Zealand Team	Internal	Active	A strong ethnic identity can be protective for mental and physical health when individuals experience social disadvantage. Our goal is to understand how important ethnic identity is to the mothers and fathers in the <i>Growing Up in New Zealand</i> study. In addition, we are interested in understanding how strongly parents (across the diverse ethnicities and immigration histories of our current parent generation) view themselves as engaged with "New Zealanders" culture. Finally, we are interested in how ethnic identity relates to feelings about the value of diversity and immigration policy in New Zealand.
The health, well-being, and development of New Zealand children born to teenage mothers compared to those born to older mothers	2017	Growing Up in New Zealand Team	Masters	Active	The evidence that teenage childbearing have negative consequences for mothers and their children is equivocal. Some studies found that young maternal age explain the negative outcomes but others found that these outcomes are more attributable to socioeconomic background than the maternal age per se. Furthermore, most studies found in the databases are from the US and the UK, there are few literature based on New Zealand data. Therefore, this project aims to investigate any potential differences on health, wellbeing and development of children born to teenage mothers and those born to older mothers in New Zealand in the first two years of life and how much of these differences attributable to maternal age. The study will use the <i>Growing Up in New Zealand</i> data to answer the research questions.
Language and Self-concept development	2017	Growing Up in New Zealand Team	Internal	Active	The MacArthur CDI is an internationally validated measure of parental report of preschool children's expressive language development, and was adapted for use in <i>Growing Up in New Zealand</i> at age two. The CDI contains several key categories of language, for example: nouns, verbs, adjectives, emotion and internal (or mental) state terms, and personal pronouns (or self-referential language). This project will examine how children's language development is concurrently associated with their self-concept development at age two. Specifically, we will examine whether children who use more self-referential or self-descriptive language also have a more developed self-concept in other domains at age two.