

**NUTRITION AND ACTIVE PLAY PRACTICES AND SOURCES OF
INFORMATION AND ADVICE FOR FAMILIES OF YOUNG CHILDREN
LIVING IN TWO DISADVANTAGED AREAS OF AUSTRALIA**

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NOTE

This treatise is presented in the form of a paper written for publication in: *BMC Public Health* with additional appendices. It draws on findings derived from a Health Department funded survey which covered child nutrition, active play and sedentary behaviours. A nutrition needs assessment was undertaken in a disadvantaged area of Melbourne's Western Metropolitan region in 1994/1995 to identify sources of information and gaps in nutrition information and advice for families with young children. Key findings were that families of young children and early childhood practitioners did not have easily accessible high quality, practical guidelines about child nutrition. These research findings provided the basis for early childhood nutrition policy and program development, dissemination of resources and support to practitioners and parents in Victoria, including the 'Filling the Gaps' program between 1996 and 2010. Neither children's physical activity nor obesity issues were considered in the preliminary needs assessment. In 2010, a needs assessment was undertaken again to identify child, family and practitioner nutrition, but with the addition of physical activity and childhood obesity current needs. Comparison of the 1995 and 2010 findings will be made in another paper.

This paper and associated literature review primarily address the child nutrition aspects arising from the 2010 project.

ABSTRACT

Background

Sound nutrition and physical activity in early childhood are fundamental to a healthy start to life. However, for children from socio-economically disadvantaged backgrounds there is greater risk of poorer practices and health outcomes. The ‘Supported Playgroup’ program in Australia promotes improved developmental, health and learning outcomes for children from culturally diverse, immigrant, refugee, Aboriginal and socially disadvantaged families. We believe that within areas of disadvantage, child nutrition and physical activity practices are less optimal for families of children attending Supported Playgroup than among families attending mainstream services. The twofold purpose of this study was (1) to describe current practices in child nutrition and physical activity reported by parents of children attending Supported Playgroups and mainstream services and (2) to understand more about access, knowledge, and application of child health information in families living in disadvantaged communities.

Methods

This is a cross-sectional study design of two groups of parents of young children. Following stratified random sampling of early childhood services, 81 parents / carers of children aged 0 - 4 years attending Supported Playgroups in two municipalities in Victoria, Australia were surveyed about children’s nutrition and physical activity practices, health concerns and access to health information, services and resources. Responses were compared with an age-matched group of 331 children attending mainstream early childhood services (maternal and child health services and childcare centres). Two sample tests of proportions were used to compare frequencies between each group. A series of *t*-tests were used to compare continuous outcome measures.

Results

More children from Supported Playgroups consumed sweet drinks ($p = 0.005$) or ‘packaged’ foods daily (69%, 53%, respectively $p = 0.012$; RR 1.30, (95% CI: 1.08 – 1.57), and tea or coffee regularly (19%, 10%, respectively $p = 0.038$; RR 1.86 (95% CI: 1.04 – 3.33) than children from mainstream services. Supported Playgroup families reported more than twice the rate of food insecurity (13%, 5% respectively, $p = 0.016$; RR 2.45 (95% CI: 1.17 – 5.14). Excessive ‘screen time’ emerged as an issue more frequently

in Supported Playgroup children aged less than 2 years than in children from mainstream services (100%, 83% $p = 0.03$; RR 1.21 (95% CI: 1.12 – 1.31). Both groups reported high rates of access to primary health and support services for young children, but Supported Playgroup parents were less likely to report accessing nutrition and physical activity advice from family members (playgroup 65%, 84% mainstream, $p < 0.001$ RR 0.77 (95% CI: 0.64 – 0.92) and electronic media / internet ((playgroup 54%, mainstream 70%, $p = 0.014$, RR 0.78 (95% CI: 0.62 – 0.98)) than families attending mainstream services. Parents of Supported Playgroup children had greater difficulties accessing health information (playgroup 22%, mainstream 9%, $p < 0.001$, RR 2.48 (95% CI: 1.44 – 4.27)), understanding information (playgroup 22%, mainstream 9%, $p = 0.002$, RR 2.46 (95% CI: 1.41 – 4.21)) and applying information (playgroup 36%, mainstream 17% $p < 0.001$, RR 2.11 (95% CI: 1.44 – 3.10)).

Conclusion

The evidence of greater disadvantage reported by parents of children from supported playground compared with parents attending mainstream services is compelling and requires new culturally-applicable approaches with an understanding of child health knowledge translation within families from socially-disadvantaged backgrounds.

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
BMI	Body Mass Index
CALD	Culturally and Linguistically Diverse Communities (in this study CALD background was used where parents or carers identified themselves as from a culture where English is not the first language)
DoH	Department of Health (Previously DHS; Department of Human Services, State Government of Victoria)
DoHA	Department of Health and Ageing, Government of Australia
FTG	Filling the Gaps
LGA	Local Government Area
MCH	Maternal and Child Health
NHMRC	National Health and Medical Research Council
SEIFA	Australian Bureau of Statistics Socio-Economic Indexes for Areas
SEP	Socio-economic position
WHO	World Health Organization

GLOSSARY

LOCATION	Urban or rural study location
SETTING	Children's services (Maternal and child health service, childcare centre, supported playgroup)
SERVICE	Individual facilities within each setting

PAPER

**A CROSS-SECTIONAL STUDY OF THE EARLY CHILDHOOD
NUTRITION AND ACTIVE PLAY NEEDS OF FAMILIES LIVING IN
TWO DISADVANTAGED AREAS OF AUSTRALIA**

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Background

Living in social disadvantage places young children under 5 at risk of poor health outcomes [1, 2]. For example children from socially disadvantaged backgrounds are over-represented in the prevalence of obesity from a young age [3-5]. Primary prevention of childhood overweight is a high priority given 20-25% of children aged 2-8 years in Australia are currently overweight [6]. Childhood overweight and obesity increases the chances of adult obesity, with elevated risks of morbidity and mortality especially for children from disadvantaged backgrounds [3, 7]. Associations between poor nutrition and physical activity with socioeconomic disadvantage (e.g. language other than English, low income, low educational attainment) are also well established [8, 9]. For example, individuals of lower socioeconomic position have been reported to consume less fruit and vegetables, and more fat than individuals from higher socioeconomic position [10].

Child health practices within the greatest need sub-groups of populations living in socially disadvantaged areas in Australia are infrequently described. In Australia, health is a state responsibility in which child health services are provided free of charge under a publically funded health system. One of the key child health service providers in the State of Victoria is the Maternal and Child Health Service (MCH) which is a universal primary health care service for all families of children from birth to school age. Aspects of the service include the provision of nutrition and physical activity information and anticipatory guidance about “ages and stages” for all families of young children [11]. Publicly-funded childcare services for children from birth to school age are also subsidised by the government to enable families to work and /or study. The Victorian Government also funds ‘Best Start’ Supported Playgroup programs to provide quality play opportunities at a critical time in a child’s development [12]. Supported Playgroups target children and families from potentially complex backgrounds such as Indigenous, culturally and linguistically diverse (with a particular focus on recently arrived families), and families affected by disability. The initiative aims to reach families with high needs who may not be linked into mainstream early childhood services such as the MCH service.

A nutrition needs assessment was undertaken in a disadvantaged area of Melbourne’s Western Metropolitan region in 1994/1995 to identify sources of information and gaps in nutrition information and advice for families with young children. Key findings were that families of young children and early childhood practitioners did not have easily accessible high quality, practical guidelines about child nutrition. These research findings provided

the basis for early childhood nutrition policy and program development, dissemination of resources and support to practitioners and parents in Victoria, including the 'Filling the Gaps' program between 1996 and 2010 [13-18]. Neither children's physical activity nor obesity issues were considered in the preliminary needs assessment. In 2010, a needs assessment was undertaken again to identify child, family and practitioner nutrition, but with the addition of physical activity and childhood obesity current needs. Comparison of the 1995 and 2010 findings will be made in a subsequent paper.

The overall purpose of the 2010 Needs Assessment was to review family and practitioners' perceptions of child nutrition, physical activity and childhood obesity concerns in Victoria, Australia. This article reports on the child nutrition and physical activity findings from 2010 Needs Assessment for a sub-group of study families with children 0 – 4 years attending Supported Playgroups and mainstream services (families attending Maternal and Child health centres and Childcare centres combined; 50% from each setting). The twofold purpose of this paper is (1) to describe current practices in child nutrition and physical activity reported by parents of children attending Supported Playgroups and mainstream services and (2) to understand more about access, knowledge, and application of child health information in families living in disadvantaged communities.

Methods

Study Design

This is a cross-sectional design including surveys of parents of young children in two groups following stratified random sampling of early childhood services. One group comprised parents of children aged 0 to 4 years recruited from Supported Playgroups and the comparison group comprised children of the same age recruited from publicly provided Maternal and Child Health services and childcare centres. If parents attended more than one setting, they completed a survey only once and were categorized as attending the setting at which they completed the survey. For the purpose of this paper the term 'parents' is inclusive of both parents and carers.

Location and participants

One urban and one rural community with similar demographics of disadvantage were selected. The two locations had comparable proportions of young children, cultural diversity and overall rating of socioeconomic status as denoted by the national statistical

organisation (Australian Bureau of Statistics Socio-Economic Indexes for Areas (SEIFA)) [19]. The selected urban and rural study locations had higher proportion of individuals with very low income (54% urban; 48% rural) and higher rates of unemployment (8% urban; 7% rural) than State averages (46% low income; 5% unemployment). The urban community had more than twice the proportion of people from non-English speaking backgrounds (57%) and the rural community had almost twice the proportion of social housing (7%) compared to State averages (22% non-English speaking background; 4% social housing) [20]. Within these two locations, sub-divisions with lowest SEIFA index (most vulnerable) were identified.

Participants came from Supported Playgroups, Maternal and Child Health Centres and Childcare Centres within each of the two selected locations. Recruitment was setting-based. Individual services from each setting within the highest needs areas of the two locations (urban and rural) were randomly selected. The selected services were invited to participate in the study by researchers. Within each service, parents aged 18 years and above, with children attending the targeted services were invited to complete parent surveys by researchers. Researchers and local interpreters were available to assist parents with survey completion if parents requested this. Participants were recruited until target numbers were reached.

Surveys

A 27 item questionnaire used in the 1995 needs assessment [13] was adapted to include questions about children's physical activity, children's screen time use and parents' perceptions about child obesity. The revised survey comprised 51 questions; combination of yes/no, open-ended, closed and likert) across four main sections: nutrition (17 questions), physical activity (11 questions), general health of child (8 questions), and socioeconomic and demographic characteristics of the participants (15 questions). Surveys were checked for face and content validity by an expert reference group and two local working groups (one rural and one urban) who provided local content expertise. Surveys were then piloted with 16 families in two different locations to the study locations (one urban, one rural with similar demographics) prior to the study. The reference group consisting of eight representatives from the key state government departments with responsibility for children's health, nutrition and physical activity initiatives and managers

of the program areas targeted for the study, also provided overall governance across the research project.

Outcome measures

Parent reports of nutrition practices, outdoor play and screen viewing time on the day prior to the survey were dichotomised according to recommendations for children's nutrition and physical activity practices [6, 21, 22]. For example, parent reports of children's consumption of any takeaway food, any 'packaged' food (defined as crisps, chocolates etc), greater than ½ cup sweet drinks and any tea / coffee each consumed on the day prior to the survey were used as cut-points for these practices [6, 21]. Similarly, estimated consumption of 1 or more 'serves' of fruit and vegetables per day and the introduction of solids at 6 months were used as cut-points [6, 21]. Parent reports of 2 or more hours spent by children in 'outdoor play' were used to describe physical activity because outdoor play offers more opportunity for total body movement and reports are more likely to be of a moderate to vigorous intensity than indoor play [23]. Similarly, hours of children's screen viewing time were reported by parents, with a benchmark of no screen (e.g. television and computers) access for children less than two years and no more than one of screen access for children 2 – 4 years of age [6]. Parents were also asked to identify any concerns about their child's physical activity in the preceding 6 months. Ease of access to early childhood support services and sources of information were reported as 'yes' or 'no' responses by parents. 'Don't know' responses were excluded from the analyses.

Sample size and Statistical Analysis

A sample size of between 70 and 100 participants per group provides a power of 80% to detect a difference in proportion of 20% between the two groups with Type I error of 0.05. As little is known about the differences in nutrition and physical activity needs and practices being considered, this amount of precision was considered sufficient

The study was powered at 80% to detect a difference in proportion of 20% in the nutrition and physical activity markers between each age group at each location. Because the age groups were collapsed into larger groups for this paper, the power to detect a difference in proportion of 20% between the two groups with Type I error of 0.05 will be greater than 80% in the presented analyses.

Based on a predicted 50% response rate from parents, and an average attendance of 30 children in each age group at each service within each setting, eight services for each setting within each location were selected in random order until target numbers were reached (i.e. 8 MCH centres, 8 childcare centres and 8 supported playgroups in each of the 2 locations).

Two sample tests of proportions were used to compare proportions between each group, and 95% confidence intervals for the estimated difference in proportions are constructed from the unpooled standard error of the difference. Dichotomous results were summarised by relative risk and the corresponding 95% confidence interval.

Data were managed using the EpiData program (Odense M, Denmark, Version 3.1, 2006) and analysed using Stata 11 (StataCorp. 2009. Stata: Release 11. Statistical Software. College Station, TX: StataCorp LP.).

Ethics Approval

Application for Ethics Approval to conduct the study was granted by the Human Research and Ethics Committee, Royal Children's Hospital and State Education and Early Childhood authorities.

Results

Response Rate

Responses from settings were as follows: urban MCH (3 services approached and 3 participated), urban childcare (9 approached / 9 participated), supported playgroup (8 approached, 5 participated); rural MCH (7 services approached, 7 participated), rural childcare (11 approached, 9 participated), rural supported playgroup (6 approached, 4 participated). Of the 488 parents of children 0 – 4 years invited to take part across the three early childhood settings (two mainstream services and Supported Playgroups) in the two locations, 410 participated in survey completion (response rate 84%) (Table 1). Time taken for individual survey completion ranged from 5 minutes to 30 minutes (when interpreters were involved). Eight-one children attended Supported Playgroups and 331 children attended mainstream services (maternal and child health centres and childcare centres) with no difference in the response rates (86% versus 84%). Higher response rates overall

were evident in the urban compared to rural settings. Lower response rates were observed in the childcare centres than maternal and child health centres or Supported Playgroups.

Characteristics of children and families

The proportion of rural and urban children, mean age and age range of children participating were similar between groups (Table 2). Sixty-seven percent of mothers of Supported Playgroup children were born overseas from 16 different countries; compared with 42% in mainstream services.

Almost twice as many Supported Playgroup than families from mainstream services were from a non-English speaking background (63% playgroup, 33% mainstream). Concurrently there were 16 different language groups identified by Supported Playgroup families; Vietnamese being the most predominant language other than English. Approximately half as many playgroup mothers had post-secondary education compared with mothers from mainstream services (34% versus 62%). Ten percent of the mothers of Supported Playgroup children reported no formal schooling at all, and 5% completed primary school only.

Nutrition and physical activity practices

Table 3 shows that more families of children from Supported Playgroups than mainstream services reported food insecurity (13%, 5% respectively, $p = 0.016$; RR 2.45 (95% CI: 1.17 – 5.14)). Supported Playgroup families also reported their children consumed more sweet drinks daily compared with families attending mainstream services (39%, 23%, respectively $p = 0.005$; RR 1.68 (95% CI: 1.19 – 2.38)), ‘packaged’ foods such as chocolates and crisps daily (69%, 53%, respectively $p = 0.012$; RR 1.30, (95% CI: 1.08 – 1.57) and tea or coffee regularly (19%, 10%, respectively $p = 0.038$; RR 1.86 (95% CI: 1.04 – 3.33)). Similarities between children attending Supported Playgroup and children attending mainstream services were observed for breastfeeding, fruit intake, takeaway food consumption, and lower than recommended vegetable consumption.

Table 3 shows that all parents of children from Supported Playgroup reported their child less than 2 years watched television the day before the survey (not recommended for children under 2) compared with 83% of families from mainstream services [22]) ($p = 0.03$; RR 1.21 (95% CI: 1.12 – 1.31)). Independent of the group, almost four in five

children aged 2 – 4 years exceeded the recommended one hour of television viewing on weekdays.

Access to child health information, services and advice

Parents in both groups described high rates of access to primary health and support services for young children (Table 4). The most frequently reported sources of health advice for families from mainstream services were family members, friends, electronic/internet and MCH nurses. Differences in sources of information for Supported Playgroup families compared with families from mainstream services were: family members (playgroup 65%, 84% mainstream, $p < 0.001$, RR 0.77 (95% CI: 0.64 – 0.92), and internet/electronic media (playgroup 54%, mainstream 70%, $p = 0.014$, RR 0.78 (95% CI: 0.62 – 0.98). Families of Supported Playgroup children describe greater difficulties accessing information (playgroup 22%, mainstream 9%, $p < 0.001$, RR 2.48 (95% CI: 1.44 – 4.27), understanding the information (playgroup 22%, mainstream 9%, $p = 0.002$, RR 2.46 (95% CI: 1.41 – 4.21) and putting the information into ‘practice’ (playgroup 36%, mainstream 17% $p < 0.001$, RR 2.11 (95% CI: 1.44 – 3.10).

Discussion

This is the first study to compare parent reports of children's nutrition and physical activity practices in Supported Playgroups and mainstream services in one rural and one urban area of social disadvantage in Australia. Within these locations, families with the most significant social disadvantage were recruited. For example, 63% of Supported Playgroup families in the urban area were from non-English speaking backgrounds, compared to 57% in the location and 22% statewide. There were two major findings; (1) children from Supported Playgroups were more likely to exhibit concerning nutrition and physical activity practices than children attending mainstream services and (2) despite universal availability of early childhood health services and resources, these appeared less accessible or useful for families from Supported Playgroups. Overall, differences in markers of social disadvantage confirmed that Supported Playgroups appear to be reaching target families.

Sub-optimal nutrition and physical activity practices in children from Supported Playgroups

Greater reliance on sweet drinks, packaged foods, and tea /coffee, by Supported Playgroup children compared with the mainstream group is concerning. The consumption of sweetened drinks is associated with obesity [24, 25], dental decay [26], displacement of nutritious foods, [27] and with longer-term intake of sweet drinks [28]. Similarly, packaged foods (defined as crisps, chocolates etc) can displace nutritious foods in young children's diets and may contribute to overweight [27]. Likewise, tea and coffee are not recommended for young children due to the possible effect of non-haem iron inhibitors such as tannins which may reduce iron absorption and contribute to development of iron-deficiency anaemia [29]. Caffeine-containing drinks including coffee are not recommended for children due to the potential adverse impact on physiological, behavioural and psychological development [30, 31]. Inappropriate reliance on sweet drinks, tea and /or coffee for young children have been identified in developing countries and may provide an insight into reliance on these drinks within our study group [32, 33].

The rate of food insecurity (defined as running out of food in the previous 12 months, and inability to afford more) for families with children attending Supported Playgroups was 2.5 times higher than for families from mainstream services and the current rate in Victoria of 5% [34, 35]. A high proportion of parents of Supported Playgroup children was born overseas and / or, was newly arrived in Australia. High rates of food insecurity have been

previously reported in a refugee population in Australia [36], asylum seekers in Melbourne [37] and among Indigenous Australians in Victoria [38]. Experiences of families' difficulties accessing foods coupled with prominence of take-away foods have been previously described in a cross sectional study of African migrants living in Australia [39]. Food insecurity is a marker of nutritional vulnerability and has serious implications for short and long-term health as well as social integrity [40, 41]. Causes of food insecurity among the Supported Playgroup families in the current study were not investigated. Strategies to best address food insecurity remain under researched.

There were some similarities regarding feeding practices among both groups. Fruit and vegetable consumption were similar in both groups with the reported intakes lower than recommendations and similar to national survey data [21, 42]. Both groups also reported a similar mean age of introduction of solids at just under the current recommendation of 6 months of age [21] and consistent with national indicators [42], although the range of age of solids introduction among Supported Playgroup infants extended from 3 to 24 months. 'Early' introduction of solids (less than 4 – 6 months) is associated in industrialised populations with reduced duration of breastfeeding [43], increased risk of diarrhoea in infancy [44], a greater risk of wheezing, and increased percentage body fat in childhood [45]. 'Late' introduction of solids (beyond 7 – 9 months) may be associated with nutritional deficiencies such as iron deficiency anaemia [29, 46], growth concerns [47] and difficulties accepting a wide variety of nutritious foods [48]. The number of infants 'ever' breastfed was similar between groups (85% Supported Playgroup versus 86% mainstream) and consistent with current established rates [42, 49]. Less than optimal exclusive breastfeeding, introduction of solids too early or late, and poor intake of fruit and vegetables are concerns for children in Australia irrespective of socio-economic background and despite national recommendations and guidelines for families. Overall results highlight the need for new thinking around engaging parents of young children about early childhood nutrition [6, 27, 42, 50, 51].

Exposure to television viewing was reported in all 0 – 2 year old children attending Supported Playgroups despite national recommendations discouraging any "screen time" for children younger than 2 years of age [22]. Similarly, most parents of 2 – 4 year old children in both groups reportedly watched greater than the recommended 1 hour of screen time daily. In this age group, confusion surrounds the role of television as 'baby-sitter' or

as an educational resource [52]. Limited evidence suggests associations between increased television watching and poor health outcomes in young children, but inactivity is linked with increased overweight and obesity, poor nutrition and less than optimal bone health [53, 54]. Additional associations between screen time and social and behavioural problems, cognitive and sub-optimal language development have been observed [55]. Similarly, most 2 – 4 year old children in both groups experienced less than our benchmark for 2 – 4 year old children accumulating two or more hours of outdoor play on the day prior to survey completion [22]. Deprivation of young children’s outdoor play opportunities can have adverse developmental, learning and health consequences [23].

Establishing and maintaining healthy eating and physical activity patterns among young children are important for supporting learning and development, maintaining optimum health, and preventing obesity and chronic disease later in life [56-59]. Early child health practices are key modifiable determinants of eating habits in infancy and early childhood present a critical opportunity for shaping future taste preferences, appetite regulation and healthy eating patterns [60]. Although child health practices in children from areas of social disadvantage in Australia are infrequently described, some studies have shown association between poor nutrition and markers of socioeconomic disadvantage (e.g. language other than English, low income, low parental educational attainment) [1, 4, 5, 10, 61]. Our study is unique as we have studied groups of children living with the most significant social disadvantage compared with other children living within areas of known socioeconomic disadvantage.

Families from Supported Playgroups faced greater difficulties accessing, understanding and applying early child health information

We believe the difficulties facing Supported Playgroup families’ access, understanding and application of child health information are multiple and complex. Future strategies to address these findings should incorporate health literacy theory to be more effective. Health literacy theory within a health promotion context considers the personal, cognitive and social skills which influence the ability of individuals to gain access, understand and use information to promote and maintain good health. Health literacy theory is also inclusive of aspects of the health care systems and broader determinants of health to translate health knowledge into practice [62-64].

Sources of child health information

Overall access to child health services was high (well above 80%) for all participants with no difference between groups. The most frequently reported sources of information were friends, early childhood nurses, family and internet/ electronic sources. Approximately half of the Supported Playgroup parents reported access to health information from the internet compared to 70% of the families attending mainstream services. Home internet access for families with children under 15 years in Australia in 2010 – 2011 was reportedly 79% [65]. The current trend in Australia to deliver and record health information electronically (<http://www.ehealthinfo.gov.au/> accessed 19/9/12) may further preclude Supported Playgroup families from access to health information and support.

It is common practice for parents of young children to express concerns about their children's health and health behaviour, and to seek advice from a range of sources and services, including family or friends, and health practitioners (including early childhood nurses and doctors) [15-18, 66]. Overall, most people living in Australia have access to high quality health information, with a health status and life expectancy relatively higher than many other countries [31, 67].

Given that a high proportion of Supported Playgroup families were newly arrived in Australia, some elements of cultural applicability of services, [68] or the cultural competence of health providers [69] may preclude active engagement and effective knowledge exchange opportunities.

Social and ecological models suggest that aspects of the home, neighbourhood environment and personal factors, are likely to predict health behaviours [70-72] placing children from more highly socially disadvantaged backgrounds at greater risk. We believe that Supported Playgroup families may be further disadvantaged in child health information and translation through the following domains:

Knowledge translation

Consideration of the complexities associated with 'knowledge to action' by families is also required [73]. Supported Playgroup families more frequently described difficulties 'understanding' and 'putting into practice' child health information than families attending mainstream services. Our findings are consistent with other reports of mothers from socially disadvantaged backgrounds demonstrating reliance mostly on experienced family and friends for advice, or their own 'intuition' to find solutions that work to solve real or

perceived nutrition problems [74, 75]. Other reports suggest that people from socially disadvantaged backgrounds receive less medical attention and are seen for a shorter period of time than those of higher social position [76, 77]. Limited evidence suggests that family, friends and trusted health practitioners are critical in shaping the child health advice and support for families of young children [74, 75, 78].

Cultural, linguistic or education differences

The relationship between educational attainment and health is well established in many countries including Australia. Descriptions of health literacy [79, 80] show a strong correlation between access to education and subsequent literacy levels. Higher levels of maternal education in high income countries are associated with improved child nutrition and decreased obesity [81-85]. For Supported Playgroup mothers in the current study, lower educational outcomes may contribute to children's poorer health practices.

Parenting confidence and self-efficacy

Independent of knowledge and attitudes, parents' priorities and practices may be further confounded by the lack of confidence, capacity and self-efficacy [86]. For example, difficulties providing 'healthy' food were noted by parents and may be reflective of confidence and self-belief in effective parenting skills [87].

Social inclusion and connectedness

Factors including social and community networks and broader socio-cultural and socioeconomic factors contribute to health. In particular, social inclusion, connectedness and community empowerment are predictive of the capacity of families to gain support and assistance to deal with 'every day' issues [88, 89]. Of concern, one in six families in our study (16%), irrespective of group, indicated limited access to other parents with children the same age. In comparison, in 2010 most people living in Australia (97%) had some form of contact with family or friends at least once a week [88]. Despite attending Supported Playgroups with other parents of children the same age, some families did not identify connection to other parents. Complexities among Supported Playgroups include networks that were recently formed and /or transient memberships, which may explain the 'disconnect' experienced by some families at these services.

Strengths and limitations

Our approach delivered good response rates from participants living in highly disadvantaged locations. The recruitment strategy delivered important group demographic differences as planned. Parents proxy reports of children's nutrition, physical activity and screen viewing (parental reports of foods, drinks, outdoor play and TV watching) are not as highly regarded as more objective measures such as weighed food records, food frequency questionnaires and accelerometers [6, 90, 91]. Proxy reports were selected for two reasons. First, the more objective measures were likely to be intrusive for families from socially disadvantaged backgrounds. Second, in this cross-sectional study descriptions of children's health practices were considered supplementary to the findings associated with parents' needs for child health information and services. The limitations of subjective measures are acknowledged, but some useful information about child nutrition, play opportunities and time spent in activity emerged.

The study design is cross-sectional. Understanding the dynamics of family life in areas of social disadvantage would be more informative from longitudinal than cross-sectional data.

Conclusion and recommendations

Parents of children attending Supported Playgroups reported greater consumption of sweet drinks, 'packaged' foods daily and tea or coffee regularly than parents of children attending mainstream services. Supported Playgroup families also reported more than twice the rate of food insecurity and excessive 'screen time' compared with children attending mainstream services. Despite comparable access to local universal child health services, Supported Playgroup families faced greater difficulties understanding and putting child health advice into practice than families from mainstream services living in the same disadvantaged areas. Secondly, we believe that child health information may not be 'reaching', understood or relevant for Supported Playgroup families [76, 78, 86, 87, 92] despite having the highest needs. These findings have implications for program designers and policy makers to provide culturally-relevant knowledge translation opportunities for families from socially disadvantaged backgrounds including:

- Culturally-relevant tailored nutrition and physical activity health promotion intervention delivered within Supported Playgroup environments. Intensive

parenting support and playgroups are associated with positively influencing infant feeding decisions and parenting skills among socially disadvantaged families [61, 93-97], highlighting the importance of social influences on child health decisions and affirming the need for targeted community-based education and support for parents from disadvantaged backgrounds.

- Knowledge translation of evidence-based child nutrition and physical activity guidelines into practical, skills-based and culturally competent experiential opportunities to facilitate confidence in parenting during developmental progressions in nutrition and physical activity for young children [78, 98-101]
- Fostering parents' confidence and self-efficacy using a parenting empowerment approach to build on family strengths and competencies to establish relationships, respond to family needs and prioritises. Sensitivity and specificity is required if translation of knowledge is to be successful and to provide relevant opportunities for families to meet and build supportive networks with other families of young children [78, 86, 102].

Competing interests

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

Authors' contributions

All authors contributed to the study design, data collection and analysis. KG provided project management, GN provided oversight to study methodology. JM, NH and EV assisted with data collection and management. JM coordinated data analysis, interpretation and write up of the publication.

TABLE 1: Number of surveys distributed and returned in urban and rural locations according to setting (% response rate)

	Supported Playgroup		Mainstream settings				TOTALS (% response rate)	
			Maternal and Child Health		Childcare			
	Distributed	Returned	Distributed	Returned	Distributed	Returned	Distributed	Returned
Urban	36	36 (100%)	85	84 (99%)	97	81 (84%)	218	201 (92%)
Rural	58	45 (78%)	92	80 (87%)	120	84 (70%)	270	209 (77%)
TOTAL	94	81 (86%)	177	164 (93%)	217	165 (76%)	488	410 (84%)

TABLE 2 Characteristics of children (0 – 4 years) and families according to setting

	Playgroup (n=81) N (%)	Mainstream combined ¹ (n=331) N (%)
Mean age [years] (range)	2.65 (0.32 – 5.43)	2.04 (0.26 – 4.92)
Urban location	36 (44%)	166 (50%)
Number of boys	37 (47%)	178 (55%)
Indigenous children	3 (4%)	15 (5%)
Number of first born children	33 (42%)	159 (49%)
Parents / carers aged younger than 24 years	9 (12%)	29 (9%)
Mothers born overseas	54 (67%)	138 (42%)
Mothers arrived in Australia after 2005 (% of born overseas)	19 (40%)	37 (34%)
English is main language spoken	30 (37%)	221 (67%)
Mothers with post-secondary education	26 (34%)	200 (62%)

¹ Children attending maternal and child health centres or childcare centres

TABLE 3 Nutrition and physical activity practices of children (0 – 4 years) according to setting

	Playgroup (N=81)	Mainstream ² combined (N=331)	Relative risk ³ (95% CI)	Chi-square t-test P values
Age of introduction solids [months] (range; SD)	5.9 (3 – 24; 2.66)	5.8 (1 – 18; 2.01)	-.1 (-4 to 8)	0.64
Ever breastfed	69 (85%)	282 (86%)	0.99 (0.90 to 1.10)	0.903
Introduction of solids before 6 months	28 (37%)	73 (55%)	0.67 (0.48 to 0.94)	0.012
Introduction of solids before 4 months	4 (5%)	8 (6%)	*	0.822
More than 1 serve vegetable per day	18 (23%)	98 (34%)	0.68 (0.44 to 1.05)	0.064
More than 1 piece of fruit per day	48 (61%)	182 (62%)	0.98 (0.80 to 1.19)	0.826
Takeaway food	11 (14%)	32 (11%)	1.31 (0.69 to 2.48)	0.412
At least 1 packaged food per day	53 (69%)	153 (53%)	1.30 (1.08 to 1.57)	0.012
More than ½ cup sweet drink per day	30 (39%)	71 (23%)	1.68 (1.19 to 2.38)	0.005
Any tea, coffee, herbal tea	14 (19%)	30 (10%)	1.86 (1.04 to 3.33)	0.038
Ran out of food	10 (13%)	17 (5%)	2.45 (1.17 to 5.14)	0.016
‘Any’ TV (children under 2)	23 (100%)	114 (83%)	1.21 (1.12 to 1.31)	0.030
More than 1 hours TV per <i>weekday</i> (children 2 – 4 years)	48 (84%)	117 (74%)	1.14 (0.98 to 1.32)	0.120
More than 1 hour TV per <i>weekend</i> day (children 2 – 4 years)	123 (80%)	38 (67%)	0.83 (0.68 to 1.02)	0.045
2 or more hours outdoor play (children 2 - 4 years)	15 (29%)	31 (22%)	1.33 (0.78 to 2.25)	0.299

² Children attending maternal and child health centres or childcare centres

³ 95% Confidence intervals

* *not enough data to reliably estimate difference in proportions.*

TABLE 4 Access to early childhood support, sources of information and difficulties accessing information on child health according to setting⁴

	Playgroup (N=81)	Mainstream ⁵ combined (N=331)	Relative risk ⁶ (95% CI)	Chi-square t-test P values
<i>Access</i>				
Child Health Nurse	69 (91%)	302 (95%)	0.95 (0.88 to 1.03)	0.127
Dentist	63 (90%)	251 (89%)	1.01 (0.93 to 1.11)	0.755
Play areas	60 (85%)	274 (92%)	0.92 (0.83 to 1.02)	0.068
Other parents	63 (84%)	260 (83%)	1.01 (0.91 to 1.13)	0.846
<i>Sources of information</i>				
Family	44 (65%)	262 (84%)	0.77 (0.64 to 0.92)	< 0.001
Friends	52(78%)	295 (98%)	0.92 (0.80 to 1.06)	0.184
Internet/electronic media	37 (54%)	205 (70%)	0.78 (0.62 to 0.98)	0.014
Child Health Nurse	58 (80%)	275 (88%)	0.90 (0.80 to 1.02)	0.060
<i>Difficulties related to child health information</i>				
accessing	17 (22%)	29 (9%)	2.48 (1.44 to 4.27)	0.001
understanding	16 (22%)	28 (9%)	2.46 (1.41 to 4.31)	0.002
putting into practice	27 (37%)	55 (17%)	2.11 (1.44 to 3.10)	<0.001

⁴ Responses reported as 'yes', 'no' (both included in analysis), or 'don't know' (excluded from analysis)

⁵ Children attending maternal and child health centres or childcare centres

⁶ 95% Confidence intervals

APPENDIX 1 - LITERATURE REVIEW

Nutrition practices and sources of information and advice for families of young children from disadvantaged backgrounds

1. Introduction

Australians overall have access to high quality health and nutrition information with a health status and life expectancy relatively high compared with other countries [31, 67]. As in other high income countries, Australians from lower socioeconomic position have poorer health, according to a socioeconomic gradient with people higher up the socioeconomic position having improved health status [77, 103]. Employment, income, education, cultural influences, lifestyle, language, sex, social or cultural isolation, age and disability, all influence health and nutritional status. Groups at risk of poorer health and nutrition include individuals with lower income, lower education, Aboriginal and Torres Strait Islander, (2.5% of the Australian population) people born overseas (26% of Australia population) and rural and remote Australians (11%) [67] (Australian Bureau of Statistics 2011).

Child health practices in children from areas of social disadvantage in Australia are infrequently described. Parents of young children frequently express concerns about their children's eating patterns and nutrition, seeking advice and support from a range of sources and services [15-18, 66], but for families from disadvantaged backgrounds, there may be greater complexities associated with accessing and understanding information, identifying priorities and translating into practice, thus placing children from disadvantaged backgrounds at further disadvantage. This hypothesis is the basis for the following literature review. Parents need consistent advice, strategies and support to navigate their way through the normal developmental stages of eating development in young children.

A nutrition needs assessment was undertaken in a disadvantaged area of Melbourne's Western Metropolitan region in 1994/1995 to identify sources of information and gaps in nutrition information and advice for families with young children. Results of the study were published by the Department of Human Services, Victoria [13] and in a number of

peer-reviewed publications [14-18]. Key findings were that families of young children and early childhood practitioners did not have easily accessible high quality, practical guidelines about child nutrition. These research findings provided the basis for early childhood nutrition policy and program development, dissemination of resources and support to practitioners and parents in Victoria, largely through the 'Filling the Gaps' program between 1996 and 2010 [13].

The Victorian Department of Health requested revision of the previous needs assessment to review child, family and practitioner nutrition, physical activity and childhood obesity needs. Based on this request a literature review was undertaken. Databases searched were CINAHL, Medline and Cochrane in 2011. Search terms were child nutrition or infant nutrition or child nutritional physiology AND information resources or nutrition education or information needs or needs assessment AND health beliefs or attitude to health or health behaviour or health literacy AND socioeconomic factors or transients and migrants. The literature review yielded 105 references of which 36 were included.

2. Nutrition in early childhood

Nutrition practices in early life appear to influence children's future eating habits, nutrition, health and educational outcomes [56]. Establishing and maintaining healthy eating and physical activity patterns among young children is important for supporting learning and development, maintaining optimum health, preventing obesity and preventing chronic disease later in life [57].

Infants and young children from **disadvantaged** backgrounds are at a greater risk of poor nutrition than other children. A number of studies have shown that poor nutrition is associated with socioeconomic disadvantage (e.g. low income, low educational attainment). For example, individuals of lower socioeconomic position (SEP) have been reported to consume less fruit and vegetables, and more fat than individuals from higher SEP [1–4]. Poor nutrition in childhood is associated with higher body mass index (BMI) and disease, both in childhood and adulthood [5–7]. This places children at greater risk of poorer health and nutrition throughout life [1]. Children from disadvantaged backgrounds are over-represented in the prevalence of obesity from a young age [4, 5]. Primary prevention of childhood overweight is a high priority given 20-25% of Australian 2-8 year

olds are currently overweight [6] and at substantially increased risk of becoming overweight adults, with the associated increased risk of morbidity and mortality [7].

Internationally, a national health and nutrition survey of French children aged 3 – 14 years (n = 1016) described the food consumption, weight, height, physical activity and screen viewing time of children as reported by their parents. Overweight incidence was 15.2% (95% CI: 13.0 – 17.6) and was inversely associated with **socio-economic position (SEP)** [104]. Physical activity was also negatively correlated with overweight among the 3 to 5 year old children. From 6 years on SEP was inversely associated with sedentary behaviour, which consequently may partly mediate the relationship between SEP and overweight. The authors conclude that this study confirms the association between SEP, sedentary behaviour and childhood overweight in France.

An analysis of the Korean National Health and Nutrition Survey and the US National Health Examination Survey showed that household income was negatively associated with risk of overweight in both countries [105]. Two hundred and eleven children aged 7 to 12 years from the Korean National Health and Nutrition Examination Survey between 2001 and 2007 and 3016 children from the US National Health and Nutrition Examination Survey between 2001 and 2006 were included. **Lower household income** significantly increased the risk for overweight in Korean boys, irrespective of adjustments. The negative association between household income and overweight of American boys disappeared after adjusting for the frequency of dining out and TV viewing time. In the present study, higher prevalence of paternal obesity and lower levels of paternal education were consistently found in Korean children with lower household income [106].

Two recent systematic reviews highlighted the critical role of the family and parenting **approaches to early feeding** in shaping children's early eating habits and nutrition particularly with respect to prevention of childhood obesity. A systematic review by Pocock [87] of factors contributing to prevention of children's obesity confirmed that parents recognised the importance of their own behaviours in influencing their children's diets and expressed the belief that it was important for parents to act as positive role models in relation to diet and exercise. Although parents suggested several ideas to promote healthy child weight-related behaviours, many of their views concerned perceived barriers, some of which may be amenable to practical intervention. Furthermore,

intergenerational influences on parental health beliefs and knowledge suggest that health promotion strategies may be more effective if directed at the wider family, rather than parents alone. Significantly, many parents believed strategies to promote healthy weight should start early in a child's life. A recent Cochrane review of interventions for the prevention of childhood obesity confirmed that one of the promising strategies includes parent support for home-based activities that encourage children to be more active, eat more nutritious foods and spend less time in screen-based activities [70]. Authors have noted that more studies in young children were needed to find out more about obesity prevention in this age group. Neither of these systematic reviews specifically considered the needs of families and children from disadvantaged backgrounds.

Studies specific to Australia show that common nutrition practices of concern for young children in Australia include: early cessation of breastfeeding, prolonged bottle feeding, inappropriate introduction of solid foods in infancy, fussy eating, over-reliance on sweet drinks, poor intake of fruit and vegetables, excessive reliance on 'junk' or takeaway foods [6, 42, 50, 51]. Despite national guidelines for children's nutrition, some studies show that there are gaps between the recommended and apparent intake for children.

Infant feeding

Even though the current Australian guidelines recommend exclusive breastfeeding for around six months, with complementary foods introduced between 22 – 26 weeks of age [57], currently more than one-third of infants in Australia have commenced solids by 4 months, rising to most (92%) of infants by 6 months [42].

Fussy eating

One of the most common nutrition concerns of parents are their young child's fussy eating. Typical eating patterns associated with toddlers and young children include picky or fussy eating and food neophobia, or avoidance of 'new' foods [107]. Almost one in two parents express concern about these eating patterns [13, 66], despite this being a normal phase of eating development suggesting that parents do not have enough information about normal toddler's eating development nor how to respond to this phase of their young child's eating.

Intake of fruit and vegetables:

Characteristically, young children show a low preference for fruit and vegetables despite known health benefits associated with fruit and vegetable consumption [108]. In the Australian children's nutrition and physical activity survey, 68% of all children consumed more than one piece of fruit (excluding juice) and 14% more than two serves of vegetables (including potatoes) [6].

National guidelines for fruit and vegetable consumption for 2 -3 year old children are 1 piece of fruit and 2 ½ serves of vegetables per day [96].

'Extra foods'

The need for dietary guidance for parents of children regarding non-core 'extra' foods has been shown in some studies in Australia as young children appear to rely on 'extra' foods such as fast-foods, snack foods and confectionary [109]. 'Extra' foods have been shown to contribute up to 41% of total energy, 19% protein, 47% total fat, 47% saturated fat, 54% sugar, and approximately 20–25% of selected micronutrients to the diet. From this analysis, 'extra' foods were over-consumed at two to four times the recommended limits and contribute excessively to the energy, fat and sugar intakes of Australian children, while providing relatively few micronutrients. This is of concern in terms of children's weight and nutrient status [109]. In an analysis of the contribution of energy-dense and nutrient-poor 'extra' foods to the diets of 429 children aged 16 – 24 months old from Sydney, Australia [27] the mean consumption of 'extra' foods was 150 g per day and contributed 25 – 30% of total energy, fat, carbohydrate and sodium to the diets of the study children. The intake of most micronutrients was also significantly lower among children in the highest quintile of 'extra' foods consumption. The intake of 'extra' foods was inversely associated with the intake of core foods. Authors concluded that the high percentage of energy contributed by 'extra' foods and their negative association with nutrient density emphasise the need for dietary guidance for parents of children aged 1–2 years.

These Australian findings are consistent with an international longitudinal cohort of a sample of twins aged 11 years (n=342) in the UK. Modeling indicated that a higher intake of core foods by the child was associated with a higher preference for core foods by the child and the mother, a greater availability of core foods in the home, a higher intake of core foods by the mother and a more encouraging parental feeding style. After adjusting for child's sex, age, and BMI standard deviation score, maternal education and parental

weight group, estimates remained similar for the effect of food preferences, maternal core food intake and an encouraging feeding style [110].

In a systematic review of parental perceptions about health behaviours to preventing obesity in young children, some parents described reliance on ‘fast foods’ because they were concerned that their children would eat nothing else [87].

Sweet drinks

Current nutrition guidelines recommend limiting sweet drinks including fruit juices, soft drinks, cordials and flavoured milks to occasional consumption only [67]. For children reluctant to eat fruit and vegetables, parents may rely on sweet drinks to satisfy their appetite [5, 111]. Consumption of regular and excessive sweet drinks by children has been reported [13, 51]. and has been associated with weight gain and obesity and continued consumption of sweet drinks into later life [26]. In particular, the prolonged use of a bottle is also associated with dental concerns as well as iron-deficiency anemia, and possible increased risk of overweight and obesity [46]. This finding suggests a need for more effective guidelines about the role of sweet drinks in young children’s diets.

3. Sources of nutrition advice and support for families from disadvantaged backgrounds.

Parents seek information about parenting, child feeding and nutrition from a range of sources. Findings from a nutrition needs assessment in 1995 from a disadvantaged area of Victoria identified that family and friends were the most frequent sources of advice about infant feeding, followed by health practitioners including early childhood nurses and doctors [15-18]. Paper-based resources and pamphlets were popular at this time as electronic sources of information were not available in 1995. Books and leaflets were the most frequently accessed paper-based sources of information by 40% and 30% of parents respectively [13]. This survey did not identify whether parents understood the information or followed the advice provided.

Two more recent studies in the US identified the sources of information and acceptability for high need families. Heinig identified the sources and acceptability of infant-feeding advice through focus groups with 65 participants of the US based special supplemental nutrition program for Women, Infants and Children (WIC) [74]. The most frequently

identified sources of information for mothers were experienced family and friends for advice. Mothers also frequently used their own intuition to find solutions that work to solve real or perceived infant-feeding problems. Professional advice was perceived as credible when caregivers exhibited characteristics similar to those of experienced family and friends: confidence, empathy, respect, and calm.

To examine infant-feeding practices of Vietnamese WIC participants, (over 18 years of age, non-pregnant and less than 28 months post-partum), Vietnamese breastfeeding peer counselors surveyed 133 mothers using a structured questionnaire about their intentions and attitudes towards breastfeeding [75]. Most of the feeding advice was provided from friends, WIC staff and doctors who supported breastfeeding.

This limited evidence suggests that family, friends and trusted health practitioners are critical in shaping the advice and support for families of young children and their feeding advice. For new immigrant or refugee families, and other families disconnected from early childhood health services, this may contribute to further disadvantage.

4. Factors influencing the capacity of families from disadvantaged backgrounds to influence their young children's nutrition

A key prerequisite to promoting good nutrition among children living in socially disadvantaged areas is to better understand the mechanisms underlying healthy eating behaviours among these groups.

Low income and SES gradient

Marmot first described a 'gradient' of health experiences and health outcomes linked to social position in society in developed countries [112]. Marmot also describes 'the gross inequalities in health that we see within and between countries present a challenge to the world...that there should be a spread of life expectancy of 48 years among countries and 20 years or more within countries is not inevitable'. Early life is recognised as one of the social determinants of health [80].

Power's review of socio-economic gradients in diet in Canada, suggests that gradients of health and nutrition experiences have been documented in a number of studies across

Europe, US and Australia such that those who from higher SES groups consume better diets than those from lower SES groups [1]. The available evidence suggests that income affects food intake both directly and indirectly through the ‘dispositions’ associated with particular social position.

Food insecurity

Food insecurity is described as the inability to access affordable, nutritious foods. There are various dimensions to food insecurity including: quality of food, shortage of food, experiences of hunger, anxiety about food intake and risk of food insecurity among special groups [113]. The extent of food insecurity in Victoria has been reported by the VicHealth from data derived from the 1995 National Nutrition Survey. One question in the national survey found that 5% of the 11,219 respondents had run out of food and had no money to buy more at some time in the past twelve months. More recently, 53 of Victoria’s 79 local government areas reported that 5% of their residents ran out of food in the last 12 months and could not afford to buy more [35].

Food insecurity directly contributes to poorer nutrition of socially disadvantaged children. High rates of food insecurity have been previously reported in a refugee population in Australia [36] and among Indigenous Australians in Victoria [38]. Young children are particularly vulnerable to the short and longer-term effects of food insecurity as it impacts on growth, physical and socio-emotional development and learning potential. Experiences of families’ difficulties accessing foods coupled with prominence of take-away foods have been previously described in a cross sectional study of African migrants living in Victoria [39]. A summary of the most recent surveys in Australia estimated that 5 – 8% of the population had run out of food and were unable to buy more at least one time in the 12 months before the survey [114].

Among other higher income countries, an analysis of a cross-sectional survey of a nationally representative sample of 8424 school children (aged 10 – 17 years) in Ireland, demonstrated children reporting food insecurity were less likely to eat fruits, vegetables and brown bread, odds ratio (OR) from 0.66 (95% confidence interval (CI) 0.45–0.87) to 0.81 (95% CI 0.63–0.99); more likely to eat crisps, fried potatoes and hamburgers, OR from 1.20 (95% CI 1.00–1.40) to 1.62 (95% CI 1.39–1.85); and more likely to miss breakfast on weekdays, OR from 1.29 (95% CI 0.33–1.59) to 1.72 (95% CI 1.50–1.95)

[115] . Food insecurity was found to be around 15% of families. Food insecurity was not restricted to those from lower social position families, and was associated with a substantial risk to physical and mental health and well-being.

In a cross-sectional study of a convenience sample of households (n=142) with children aged 2 – 5 years in Vancouver, Canada, [41] the association between environmental predictors and household food security status, adjusted for household income was assessed. Indicators of children's nutrition were compared between categories of household food security. Household food insecurity was associated with indicators of suboptimal health status in preschoolers. After controlling for household income, parents with less access to good quality food, fewer kitchen appliances and a lower rating of their cooking skills had greater odds of experiencing household food insecurity.

Authors conclude that these results support the need for multiple measures, including opportunities to gain practical food skills and household resources that enable convenient preparation of nutrient-dense foods be examined.

Immigration / Culture

The relationship of acculturation and breast-feeding initiation and duration was assessed among a sample of predominantly Latina, low-income women in the US [116]. Measures of acculturation included: mother's nativity (foreign born vs US born), mother's parents' nativity (foreign born vs US born), years of US residence (<8 years vs \geq 8 years) and a dichotomous measure of language acculturation (preferred language spoken at home, reading language and writing language). Final multivariable models showed that mothers who exclusively used their native language were more likely to initiate breast-feeding as well as breast-feed for longer duration compared with mothers with non-exclusive use, whereas years of US residence and mother's nativity were not significantly associated with breast-feeding initiation or duration. Mother's parents' nativity also emerged as a significant predictor of breast-feeding duration, both within final models for immigrants and across study participants.

Authors recommend that programs providing nutrition education to low-income women may wish to consider the role of language as an important determinant of breast-feeding.

Role of maternal / parental education

Four studies in high income countries and two in low income countries examined the role of maternal and /or parental education in child nutrition.

Higher levels of maternal education have been associated with improved child nutrition. A cohort study of 5012 babies and 2732 toddlers investigated the changes in breast feeding uptake and retention among young children in Scotland [81]. Mothers from higher socio-economic position and those with more educational qualifications were more likely to breastfeed. The study suggests that the importance of maternal education in influencing breast-feeding has been somewhat overlooked in research based in more developed countries.

The relationship between socio-demographic factors, maternal characteristics, and intention to breastfeed among 2690 low-income, inner-city pregnant women in the US were investigated using surveys [82]. About half (53%) of the respondents reported they intended to breastfeed their infant. Lower maternal education, was negatively and independently associated with the intention to breastfeed.

One-hundred and eighty mothers in the UK completed a questionnaire about parenting and feeding ‘style’ including control of feeding, emotional feeding and prompting to eat [83]. Mothers with higher education had significantly higher scores on ‘control’ over their child’s feeding [$F(1,177)=8.79$; $P=0.003$] and significantly lower emotional feeding scores [$F(1,177)=7.26$; $P=0.008$] than those with lower education. This study suggests the link between maternal education and feeding style; the authors hypothesising ‘should these feeding characteristics prove salient to childhood diet and weight, this could inform appropriately targeted parental feeding advice’.

Poor diet was associated with low parental education and low equivalent income in a prospective birth cohort study of 2637 children aged 2 years old in 4 German cities [84]. Information about children’s diets was obtained using a semi-quantitative food frequency questionnaire. Children with lower intakes of fresh fruit, cooked vegetables and olive oil, and a higher intake of canned vegetables and /or fruit, margarine, mayonnaise and processed salad dressing in children were more likely to have parents with low education.

In one of two studies in low income countries, the association between mother's education, complementary feeding practices and malnutrition amongst mothers attending outpatient clinics in Islamabad was assessed [117]. Mothers of 500 Pakistani infants attending a hospital outpatient clinic completed questionnaires about their educational status and complementary feeding practices. A positive relationship was found between the nutritional status of infants and educational status of mothers ($P < 0.001$). A similar relationship was observed between the educational status of respondents and the introduction of complementary foods at an appropriate age (6 months) of infants ($P < 0.001$). These authors concluded that mother's education plays a vital role in increased receptivity to knowledge and awareness related to nutritional requirements of their infants.

A cross-sectional analysis of a demographic healthy survey in central Asia investigated the effect of social, economic, health and environmental characteristics on the nutritional status of children aged 3 years of age [118]. Household wealth and maternal education were two of the strong predictors of child nutritional status in these countries.

Parenting / Home environment

Social and ecological models suggest that aspects of the home or neighbourhood environment, and personal factors, are likely to predict health behaviours such as healthy eating in children [70-72].

Parenting style and early feeding practices are key modifiable determinants of eating habits in infancy and childhood and present a critical opportunity for prevention of obesity and related chronic disease [119]. Infant feeding practices shape future taste preferences, texture tolerance and appetite regulation [60] and infancy is a critical period for the foundation of life-long healthy eating patterns.

Self-efficacy

Even if parents recognise the health issues relating to nutrition and physical activity, their actions do not always reflect this. This encompasses the theory of 'self-efficacy' by Bandura [86] in which parental beliefs about their influence on their children's weight-related behaviours are described. For example, insufficient time to encourage child exercise and provide a healthy diet was the most commonly occurring theme in Pocock's systematic review of parent's perceptions influencing childhood weight [87]. Lack of time is often cited as a reason why parents did not encourage their children to walk to school or

attend organised exercise programs. Because many parents were concerned about the safety aspects of walking to school, both factors acted together as disincentives. Being busy with work inside and outside the home was seen by a number of parents as a barrier to preparing 'healthy' food [87].

Despite varying levels of disadvantage, some families appear to do better than others. Williams reviewed the family and environmental factors underlying resilience to poor nutrition among 38 mother-child pairs from disadvantaged areas in rural areas in Victoria using semi-structured interviews [10]. Children were selected if they were a healthy weight, consumed adequate intakes of fruit and vegetables and were physically active. Two key themes emerged from the interviews: active strategies from parents to promote healthy eating and external barriers and supports to healthy eating. Mothers believed that exercising control over access to unhealthy food, providing education and encouragement for consumption of healthy food and enabling healthy food options aided their child to eat well, confirming that parents need confidence and self-efficacy to enact healthy nutrition/feeding decisions even when they are well informed.

Another factor influencing capacity of parents to implement nutrition advice is their readiness for change. Two hundred and thirty-eight low-income parents from rural and urban areas in the US who were enrolled in nutrition education sessions were surveyed about 'stage of change' readiness using the Trans-theoretical Model of Behavior Change [120] for increasing the accessibility of fruits and vegetables to their preschool child. In a cross-sectional, quantitative survey design consisting of a staging algorithm, construct scales, and food frequency questionnaire 43% of parents were in a 'pre-contemplation' or 'contemplation' stage, and 29% were in the preparation stage for increasing fruit and vegetables offered to their preschool child [121]. Parents in the action/maintenance stages displayed more evidence of behavioural approaches, and had higher self-efficacy scores compared to parents in the pre-contemplation / contemplation and preparation stages. Authors conclude that interventions should be targeted to meet parent's stage of change. Learning formats providing social support may prove effective in prevention of behavior relapse for parents in action/maintenance stages.

Another aspect of self-efficacy is level of self-motivation. In-depth interviews were conducted with 44 low-income breastfeeding women to explore the incentives and

disincentives to breastfeeding within 6 months postpartum [122]. Self-motivated women valued breastfeeding but often required information and instruction to reach breastfeeding goals. Women who were motivated by others were least likely to continue breastfeeding even with support and instruction. Authors suggest that health providers can screen women to ascertain their level of motivation and tailor education interventions appropriately.

Theory of planned behaviour

Behavior change can be achieved through influencing a person's intention, which in turn, may be influenced through a range of beliefs. A study with pregnant teenagers [123] showed that "moral norms," "sexuality of the breast," and "self-esteem," were concerns relating to breastfeeding in public cutting across all themes. Results showed that teenagers were four times as likely to intend to formula feed their first infant than women aged 20 years and older (32.4% vs 7.8%).

A mail survey of 773 post-partum women was conducted in Mississippi, US in 2000 investigating factors associated with breast-feeding initiation in low-income women [124]. Attitudes about the benefits and barriers to breast-feeding, as well as health care system and social support were associated with breast-feeding initiation. Adding the health care system support variables to the regression model, and specifically support from lactation specialists and hospital nurses, explained the association between breast-feeding initiation and women's perceived control over the time and social constraints barriers to breast-feeding. The findings support the need for health care system interventions, family interventions, and public health education campaigns to promote breast-feeding in low-income women.

Behaviour-change can be achieved through influencing a person's health beliefs. A study with 114 children aged 11 – 12 years in a local school with low socio-economic status and a high proportion of immigrants and refugees in Sweden [125] showed that only about half of the children believed that their life-style could affect their health. Researchers concluded that obesity, unhealthy living and a low awareness of relations between life-style and health justify call for action, for culturally sensitive prevention and treatment approaches.

Social connectedness

The ways in which disadvantaged families socially ‘connect’ and are supported in their parenting and feeding decisions was demonstrated among low-income women’s breastfeeding and infant feeding decision in a cross-sectional convenience sample study of 109 black pregnant women, ages 18 to 45, regularly attending Women, Infant, and Children (WIC) clinics and associated programs in the US [93]. Women completed a structured questionnaire about their breastfeeding beliefs and intentions. Multivariable logistic regression was used to explore participant’s intentions to breastfeed. After adjusting for confounding factors, results showed that women who attended support groups were more than twice as likely to intend to breastfeed compared with women who did not. These results highlight the importance of social influences on the decision to breastfeed and affirmed the need for broad community-based education and support for parents from disadvantaged backgrounds.

‘Healthism’ and health priorities

There are significant restrictions on the ability of any one individual to be responsible for their own health (and nutrition) due to the impacts of social, cultural, economic, environmental and political forces which require collective rather than individual action. Effective health care systems are contingent on both appropriate health education and health policy to exist against a backdrop of equity and justice. Such policies should not only ensure adequate and appropriate health services but also have a substantial focus on the prevention of ill health and to provide for peoples essential needs [76, 92].

Many people from disadvantaged backgrounds (refugees, Indigenous, low income) have experienced tragedy, oppression and historically different health expectations. Health ‘need’ and expectations differ between the acute (treatment) needs and the preventive approaches of contemporary Australian ‘healthist’ society. For example the health (nutrition) need of a refugee mother differs from the construct of health and health care of the ‘worried well’ and ‘healthist’ society [92].

The relationship between educational status and health is long established in many countries including Australia. Nutbeam’s research and descriptions of health ‘literacy’ [79] shows strong correlation between access to education and subsequent literacy levels, and other social development indicators including health and nutrition.

Structure and agency

‘Agency’ or the ability of people, individually and collectively to influence their own lives and the society in which they live [126] can be contrasted with the structures and systems established and imposed ‘on’ people. If good health and nutrition is to be achieved through individual responsibility and modification of lifestyle, what does this mean for people who continue their previous lifestyle practices? A false assumption is that individual health promotion is all that’s needed, and that people continuing such (unhealthy) practices assumes they have the power to change their circumstances (or ‘agency’) [126]. In relation to illness and health, individuals are frequently seen as interchangeable across different social structures (such as social class), different cultures, social histories, and across race or ethnicity [127].

Accessibility to services and information

Access to, and availability of health information and resources are limited, and this eventually becomes reflected in health statistics. Previous reports have shown that doctors treat patients in ways that reflect the social standing of the patients. Those of lower position or status are given less medical attention and seen for a shorter period of time than those of higher social position [76, 77].

People from socially disadvantaged backgrounds may experience powerlessness, lacking ‘agency’, but may also be disconnected from the supportive structures of well-developed health systems. Part of the explanation for individual’s powerlessness may stem from their lack of overall ‘life opportunities’ afforded individuals without the same privileges of contemporary Australian society [128].

5. Rationale for current study

A nutrition needs assessment was undertaken in Melbourne’s Western Metropolitan region local government area of Brimbank in 1994/1995 to identify sources of information and gaps in nutrition information and advice for families with young children. Results of the study were published by the Department of Human Services, Victoria [13] and in a number of peer-reviewed publications [14-18]. Key findings were that families of young children and early childhood practitioners did not have easily accessible high quality, practical guidelines about child nutrition. These research findings provided the basis for early childhood nutrition policy and program development, dissemination of resources and

support to practitioners and parents in Victoria, largely through the ‘Filling the Gaps’ program between 1996 and 2010 [13].

Findings from the current literature review confirm this knowledge gap providing justification for a review of the nutrition needs of families with young children particularly from disadvantaged areas. In 2009, the Victorian Department of Health requested revision of the needs assessment to review child, family and practitioner nutrition, physical activity and childhood obesity needs. The results from the Needs Assessment 2010 will be valuable to the Department of Health, the Department of Education and Early Childhood Development, and organisations working with children and families to assist regional and state, policy and program planning as well as a useful source of information for practitioners [50]. The Needs Assessment 2010 was funded by the Prevention and Population Health Branch, Department of Health, Victoria.

APPENDIX 2 - Parent survey

Survey for Parents About Your Child 0-4 years

Please read the following instructions before answering the questions:

1. Each question has been selected specifically to measure the needs for nutrition and physical activity, active play services and resources in your area
2. We estimate the survey should take approximately 10-15 minutes to complete.
3. Please complete all the questions in this survey relevant to your child. Please note if you have more than one child between 0 - 4 years of age, please select one child when answering this survey.
4. This survey has 4 sections:
 - A. Nutrition and your child 0-4 years**
 - B. Physical activity and your child**
 - C. General health and your child**
 - D. About your child**
5. Your answers will remain strictly confidential.
6. If you have any problems completing the survey please contact Natasha Hampson on phone: (03) 9345 4384 or email: natasha.hampson@rch.org.au

- I have received information regarding this research and had an opportunity to ask questions.
I believe I understand the purpose, extent and possible effects of my involvement in this project and I voluntarily consent to take part.**

THANK YOU FOR YOUR COOPERATION

**Office use only:
Date of survey:
Site:
Researcher:**

A Nutrition and your child 0 – 4 years

Please complete all the questions in this survey relevant to your child. If you have more than one child between 0 - 4 years of age, please select only one child when answering the survey.

1. Date of birth of the child: _____ / _____ / _____

2. Age of child today: _____ years and _____ months

3. Was your child ever breastfed? Yes No

4. a) If your baby is less than 4 months today: (please tick all that apply)

Did your child receive **only** breast milk yesterday? Yes No

Did your child receive **any** breast milk yesterday? Yes No

Did your child drink from a **bottle** yesterday? Yes No

Did your child receive or eat any **solid** foods yesterday? Yes No

b) If your baby is 4 months or more but under 6 months today: (please tick all that apply)

Did your child receive **only** breast milk yesterday? Yes No

Did your child receive **any** breast milk yesterday? Yes No

Did your child drink from a **bottle** yesterday? Yes No

Did your child receive or eat any **solid** foods yesterday? Yes No

c) If your baby is 6 months or more but under 12 months old today: (please tick all that apply)

Did your child receive **any** breast milk yesterday? Yes No

Did your child drink from a **bottle** yesterday? Yes No

Did your child receive or eat any **solid** foods yesterday? Yes No

d) If your child is 12 months or more but under 2 years today: (please tick all that apply)

Did your child receive **any** breast milk yesterday? Yes No

Did your child drink from a **bottle** yesterday? Yes No

e) If your child is 2 years or more but under 4 years today: (please tick all that apply)

Did your child drink from a **bottle** yesterday? Yes No

5. My child now mainly drinks from:

Cup / training cup

bottle

breast

both cup and bottle equally

don't know

6. Apart from milk, at what age did your child begin drinking:

Water _____ months

Juice _____ months

Other _____ months

Not yet started on other fluids

7. If your child is eating solid foods at what age were they first introduced?

_____ months

Not yet eating solid foods - Go to Question 14

8. With solid food my child...(please tick one box in each row)

	YES	NO	Don't know
Always needs feeding by an adult			
Needs help with feeding some of the time			
Can feed self completely			

9. Did your child eat breakfast yesterday?

Yes No

10. How many cups of vegetables did your child eat yesterday? (consider salad, cooked and raw vegetables)

Less than ½ cup
 ½ cup to less than 1 cup
 1 cup to less than 2 cups
 2 cups or more
 No vegetables
 Don't know

11. How much fruit did your child eat yesterday? (An average piece of fruit is 1 medium piece or 2 small pieces or 1 cup of diced pieces)

Less than ½ piece
 ½ a piece to less than 1 piece
 1 piece to less than 2 pieces
 2 pieces or more
 No fruit
 Don't know

12. How many packaged foods did your child eat yesterday? (e.g. muesli bar, crisps, fruit bar, chocolate/lollies, etc)

1-2
 3-4
 More than 4
 None
 Don't know

13. Did your child eat takeaway/fast food yesterday?

Yes No

14. How often does your child have the following drinks? (Please tick all that apply).

	None or rarely	1-2 times a week	3-4 times a week	½ cup to less than 1 cup per day (125-249 mls)	1 cup to less than 3 cups per day (250-749 mls)	3 or more cups per day (more than 750mls)
Water						
Infant formula						
Toddler formula						
Full cream milk, other milk eg Soy						
Reduced or low fat milk						
Sweet Drinks (fruit juice, cordial, Ribena, soft drink, flavoured milk, energy drink, sports drink)						
Tea or coffee						

15. Thinking about your child's eating, are most foods: (please tick all that apply)

	Agree	Disagree	Don't know
The same foods as family eats			
Foods prepared especially for your child			
Packaged foods			
Eaten at the same time as other family members			

16. In the last 12 months, were there any times that you ran out of food and couldn't afford to buy more?

Yes No

17. If yes, how often did this happen?

Once a week or more Once every two weeks Once a month
 Less than once a month Don't know

B. Physical activity and your child

If your child is under 2 years please answer questions 18-19 before completing the rest of the survey from question 27.
 If your child is aged between 2-4 years please go to question 20 before completing the rest of the survey.

Under 2 years only:

Physical activity for infants and toddlers includes time to move their bodies throughout the day.

18. Please respond to the statements below indicating if you agree, disagree or don't know in the table below. (please tick all that apply)

	Agree	Disagree	Don't know
Spending time playing on their tummy is important for babies less than six months			
Allowing children less than two years to watch educational television improves learning			
Spending time in structured classes with an instructor (e.g. swimming lessons) is important for babies less than six months			

19. How long did your 0-2 year old spend on the following activities yesterday? (please tick all that apply)

	Less than 1 hour	1 hour to less than 2 hours	2 hours or more	Don't know	Not applicable
Playing actively or moving freely (not in a stroller, high chair, car seat)?					
In restraints such as strollers, car seats, or high chairs?					
Watching electronic screens , such as a TV or computer screen?					

2 - 4 years only:

Physical activity for young children can involve playing in outdoor or indoor areas, alone or with others. It includes participating in sport and organised activities; unplanned spontaneous games and activities made up by the child themselves; walking, cycling, using scooters for transport; helping with indoor or outdoor chores; backyard or playground games.

20. Did your child actively play yesterday?

- Yes go to next question No go to **Question 23**

21. If yes, how much time did your 2-4 year old spend being active? (please tick all that apply)

	None	Less than 1 hour	1 hour to less than 2 hours	2 hours or more	Don't know
Indoors					
Outdoors					

22. Where did they play: (please tick all that apply)

Place	Yes	No	Don't know
Backyard /balcony or other outdoor play space in your home			
Nearby outdoor play space			
Organised activity/sporting clubs			
Indoors			

23. How much time each day does your child spend on the following activities on weekdays (Monday – Friday)? (please tick all that apply)

	None – does not apply to my child	Less than 1 hour	1 hour to less than 2 hours	2 hours to less than 3 hours	3 hours or more	Don't know
Watching TV						
Using a computer						

24. How much time each day does your child spend on the following activities on weekends (Saturday - Sunday)? (please tick all that apply)

	None – does not apply to my child	Less than 1 hour	1 hour to less than 2 hours	2 hours to less than 3 hours	3 hours or more	Don't know
Watching TV						
Using a computer						

25. Compared with other children that are the same age as your child, would you consider your child to be:

- More active
- Less active
- About as active as other children the same age

26. Does your child do any organised activity programs, such as swimming lessons, sport or dance classes?

- Yes if yes, go to next question No...go to **Question 28**

27. If yes, how many minutes per week?

- up to 30 minutes per week
 30 – 60 minutes per week
 More than 60 minutes per week

0-4 years:

28. The following statements are reasons why children are not physically active. Please tick all that apply to your child.

	True	False	Don't know
My child doesn't like to be active			
My child has no-one to play with			
My child has poor health			
There is lack of adult time to play with my child			
There is lack of transport to take my child to activities			
The cost of activities is too high			
There is lack of suitable opportunities for activity			
I am concerned about neighbourhood safety for my child			
Nothing stops my child being physically active			
Other (please list issues that limit or stop your child from being physically active)			

C. General health and your child

29. Do you consider your child to be

- A healthy weight Underweight Overweight Don't know

30. In the last 6 months, has your child had the following? (please tick all that apply)

	Yes	No	Don't know
Constipation			
Iron deficiency anaemia			
Poor weight gain			
Poor growth			
Overweight			
Food Allergies/Intolerances			
Diarrhoea			
Other conditions: (please list)			

31. In the past 6 months, have you had any concerns for your child about the following? (please tick all that apply)

	YES	NO	Don't Know
Poor appetite			
Appetite not satisfied			
Growth (height)			
Underweight			
Overweight			
Limited food variety			
Snacking on unhealthy foods			
Fruit and vegetable intake			
Dental health			
Sleeping habits			
Too much physical activity			
Too little physical activity			
Movement skills such as running and throwing			
Television viewing/ computers/ electronic games			
Other concerns : (please list)			

32. Do you have easy access to the following? (please tick all that apply)

	Yes	No	Don't know	Not applicable
Maternal and Child Health Nurse				
Doctor				
Chemist				
Dentist				
Safe outdoor play areas				
Local transport or private car				
Parents with children of the same age that you talk to regularly				

33. Where do you usually get information/advice about healthy eating or physical activity for your child? (please tick all that apply)

	YES	NO
Family		
Friends		
Electronic resources e.g. Internet, TV		
Paper based resources e.g. Books, newspapers, leaflets		
Doctor		
Maternal Child Health Nurse		
Library		
Own knowledge		
Parents with children of the same age		
Other professionals e.g. Dietitian, teacher, chemist		

34. What would make it easier for you to access, understand and use information and services about healthy eating and physical activity? (please tick all that apply)

	Yes	No	Don't Know
I need information in my own language			
I need more practical advice			
I need simpler information			
I need information in a range of different ways (e.g. DVD, internet, recipes, parenting classes, cooking classes, shopping lists,)			
List			
I need easier access to good quality healthy foods			
I need access to lower cost healthy foods			
I need reliable transport to get to the shops			
I need easier access to food from my culture (eg Kosher, Halal)			
I need my child to eat the suggested foods			
I need more time to prepare healthy foods			
I need better access to outdoor areas			
I need more time to play with my child			
I need a list of suggested activities to do with my child			
I need access to lower cost physical activities			
I need my child to like physical activity			
I have no difficulties at the moment accessing healthy eating and physical activity information for my child			
I have no difficulties at the moment understanding healthy eating and physical activity information for my child			
I have no difficulties at the moment using healthy eating and physical activity information for my child			
Other			

35. What information or services would you like to have available about food and healthy eating?

36. What information or services would you like to have available about physical activity?

D. About your Child

37. Sex of child Male Female

38. Does your family identify as being from an Aboriginal and Torres Strait Islander background?

Yes No

39. Country of Birth of the child _____

40. If born overseas, what year did the child migrate to Australia _____

41. County of Birth of mother _____ and father _____

42. If born overseas,

What year did the mother migrate to Australia? _____

What year did the father migrate to Australia? _____

43. Home Postcode _____

44. Main language(s) spoken at home _____

45. Relationship of person filling out this form to the child:

Mother Father Grandparent Other _____

46. Age of main person caring for this child at home

15-24 25-34 35-44 45-54 55+

47. Where does this child come in the family:

1st born 2nd 3rd 4th 5th 6th or more

48. Number of other adults living in your home? _____

49. Number of other children living in your home? _____

50. What is the child's mothers' highest level of schooling attended?

- Completed Primary school (or equivalent)
- Some Secondary school (or equivalent)
- Completed Secondary school Year 12 (or equivalent)
- Trade qualification or apprenticeship
- Certificate or diploma (TAFE or business college)
- University degree

51. What is the child's fathers' highest level of schooling attended?

- Completed Primary school (or equivalent)
- Some Secondary school (or equivalent)
- Completed Secondary school Year 12 (or equivalent)
- Trade qualification or apprenticeship
- Certificate or diploma (TAFE or business college)
- University degree

Thank you for completing this survey.

APPENDIX 3 Ethics application

MODULE ONE:

CORE APPLICATION FORM AND CHECKLIST



BEFORE YOU BEGIN

This Application Form is for use by researchers proposing to conduct a research project involving humans. **All researchers must complete Module 1** and may have to complete other Modules (see checklist at Question 1.6).

Before you start this application, please read the **Module One: Core Application Guidelines** and the National Health & Medical Research Council's *National Statement on Ethical Conduct in Human Research* (2007) [NS].

Please do not delete the version date in the footer e.g. January 2008.

Office Use Only:

HREC Ref. No. _____	Date of Approval: / /
Approval Period:	
Approval signature: _____	

SECTION A: PROJECT OVERVIEW

1.1 Application date: February 2010

1.2 Full project title

A nutrition and physical activity needs assessment in 2 Victorian municipalities. Including Pilot of Needs Assessment tools.

FOR CLINICAL TRIALS ONLY:

Company/Sponsor Protocol Number (if applicable):

Version:

Date:

1.3 Brief lay summary of the project

Briefly describe the project. Refer to the Guidelines for the type of information and level of detail required. **Note that this summary may be published** [NS 2.3.8].

This project will identify nutrition and physical activity issues and needs for young children and families living in two high needs local government areas in Victoria. Gaps in nutrition and physical activity resources available for practitioners working with families in those areas will also be identified. Data will be sourced within the City of Brimbank and the City of Greater Shepparton; parents and carers of children 0-8 years using age-related child services will complete surveys and additionally, practitioners working with children 0-8 years will be consulted by surveys and interviews. Piloting of the needs assessment surveys to be used with practitioners and parents and carers will occur prior to commencement of the project. The aim of the pilot is to assess suitability of the wording, flow and meaning of the questions to be used in the needs assessment. This needs assessment project will include a comparison to findings and recommendations from the 1994/1995 nutrition needs assessment previously conducted in the City of Brimbank (under the project name 'Filling the Gaps').

The findings from this project will assist to inform planning for future nutrition and physical activity information and resources to young children, their families and practitioners. Information from this project will be provided to key stakeholders in early childhood, including the Department of Health, Department of Education and Early Childhood Development, and Catholic Education Department for use in state-wide policy and program development.

1.4 Relationship to other projects

Indicate whether the project is:

- a new stand-alone project
- a sub-component of a previously approved project
- related to other previously approved projects (e.g. a follow-up study)

If the project is a sub-component of, or in some other way related to, a previously approved project, provide project numbers for the other project(s). Also indicate which Human Research Ethics Committee(s) (HREC(s)) approved the other project(s).

The Needs Assessment Project is related to previous projects conducted by the Victorian Government funded 'Filling the Gaps' project, including the earlier needs assessment. Recent projects from the current 'Filling the Gaps' team were approved by the Australian Catholic University (ACU) Human Research Ethics Committee and further approval was granted from the Department of Education and Early Childhood Development Early Childhood Research Committee.

Approved projects include: 'Forming new parent resource recommendations

targeting nutrition and active play issues', ACU approval number V200708 92.

'Focus Group Testing of Nutrition and Physical Activity Resources for Families', and 'Evaluation of Nutrition and Physical Activity Resources for Families'. ACU approval number V200708 91.

Evaluation

1.5 Broad category of research

Tick the category which best fits the application:

- Social Science Clinical Research
- Psychological Clinical Drug or Device Trial ⇒ CTN or CTX
- Public Health Other (please specify)

1.6 Project summary

Does the project involve

- Collection, use or disclosure of information? Yes No
If yes, please complete section E of Module 1
- Drug or device trial? Yes No
If yes, please complete Module 2
- Use of human tissues? Yes No
If yes, please complete Module 3
- Human genetic research? Yes No
If yes, please complete Module 3
- Use of radiation? Yes No
If yes, please complete Module 4

1.7 Multi-site projects

Is the project a multi-site project? That is, does the project involve recruitment of participants at more than one site and/or collection of information from more than one organisation?

Yes No

Does the project have to be reviewed by other HRECs?

Yes No

Name **all Australian HRECs** to which this project has been or will be submitted. For each HREC, list all Australian sites involved in this project that are covered by the application to that HREC. If the number of sites for a particular HREC is very large (or unknown), such that listing individual sites is not feasible, indicate the number of sites covered by that HREC (e.g. *50 primary schools or 20 out of 60 child care centres, etc.*). Indicate the status of the application to other HRECs.

HREC	Site	Status of application <i>(e.g. not yet applied/approved/rejected/pending)</i>
1. Department of Education and Early Childhood	Up to 8 schools in the City of Brimbank and up to 8 Primary Schools in the City of Greater Shepparton	Pending RCH Ethics approval
2. Catholic Diocese of Melbourne	Up to 4 Catholic Primary schools in City of Brimbank	Approved
3. Catholic Diocese of Sandhurst	Up to 4 Catholic Primary Schools in the City of Greater Shepparton	Approved

If you are submitting to the Department of Human Services (DHS) HREC, state which criterion for referral to the DHS HREC applies (see <http://www.health.vic.gov.au/ethics/single/criteria.htm>).

N/A

Criterion 1 Criterion 2 Criterion 3 Criterion 4

SECTION B: RESEARCHERS AND CONTACT INFORMATION

1.8 List all researchers involved in this project

Copy this table and repeat for each **Principal Researcher**.

Title and Name	Kay Gibbons
Appointment	Manager, Nutrition & Food Services
Department	Nutrition & Food Services
Institution	The Royal Children's Hospital and Murdoch Childrens Research Institute
Mailing address	Flemington Road Parkville, VIC, 3052
Describe what this researcher will do in the context of this project	Ms Kay Gibbons will oversee the management of the project and provide nutrition leadership.
Include a brief summary of relevant experience for this project	<p>Kay is the Manager of the Nutrition and Food Services Department RCH, Fellow of the Dietitians Association of Australia. She holds dual appointments at 2 universities: as Clinical Associate Professor Australian Catholic University, Clinical Senior Lecturer University of Melbourne and is an Hon. Research Fellow, The Murdoch Children's Research Institute.</p> <p>Kay has been Project Manager for the <i>Filling the Gaps</i> program for over 10 years, and has been involved in research around parents' and carers' knowledge of nutrition and understanding of children's eating behaviours. She was involved in the earlier nutrition needs assessment (1994/1995) and has overseen nutrition content integrity for the Victorian Government <i>Kids-go for your life</i> program and the delivery of professional development to carers across the early years sector. She was content manager for the recently-completed Australian Government 'Get up & Grow', National Guidelines for healthy eating and physical activity in early childhood settings (Department of Health and Ageing 2009).</p> <p>Kay has been a Chief Investigator in several intervention programs for childhood overweight and obesity delivered through primary care (LEAP) and is currently involved in a shared-care trial for intervention in childhood obesity (hopSCOTCH).</p>
Phone	61) 3 9345 5636
Fax	61) 3 9345 6496
Mobile/pager	
email	kay.gibbons@rch.org.au

Copy this table and repeat for each **Associate Researcher**.

Title and Name	Professor Geraldine Naughton
Appointment	
Department	Exercise Science
Institution	Australian Catholic University
Mailing address	School of Exercise Science, ACU St. Patrick's Campus, 115 Victoria Parade Fitzroy, VIC, 3065
Describe what this researcher will do in the context of this project	Professor Geraldine Naughton will provide physical activity leadership to this project.
Include a brief summary of relevant experience for this project	<p>Geraldine is the Director of the <i>Centre of Physical Activity Across the Lifespan</i> at the Australian Catholic University (ACU). She is a paediatric exercise scientist with a background of projects aiming at improvements in health and well-being through physical activity.</p> <p>Geraldine has researched a range of young populations from overweight and obese children to intensively training adolescents. Geraldine is the physical activity consultant in the <i>Filling the Gaps</i> program and provides academic expertise in the development of evidence-based resources for the Victorian Government's Initiative <i>Kids-'Go For Your Life'</i>. She led the revision of guidelines for "Safety in Sport and Recreation of Children and Young People", and has written the children, exercise and heat guidelines for Sports Medicine Australia. Geraldine provided physical activity expertise in the recently-completed Australian Government 'Get up & Grow", National Guidelines for healthy eating and physical activity in early childhood settings (Department of Health and Ageing 2009).</p>
Phone	61) 3 9953 3034
Fax	61) 3 9953 3095
Mobile/pager	n/a
email	Geraldine.Naughton@acu.edu.au

Associate Researcher

Title and Name	Judith Myers
Appointment	Dietitian, Filling the Gaps
Department	Nutrition & Food Services

Institution	Royal Children's Hospital
Mailing address	Flemington Road Parkville, VIC 3052
Describe what this researcher will do in the context of this project	Judith will deliver project strategies including coordination of advisory group meetings, working group meetings, participant recruitment, survey distribution, practitioner interviews, data entry, data analysis and reporting.
Include a brief summary of relevant experience for this project	Judith is an Accredited Practising Dietitian and Team Leader for the Filling the Gaps (FTG) project with the Nutrition Department. She is near completion of a Masters of Public Health and has worked with the FTG program in the past, including the original project and has undertaken preparation, development and evaluation of nutrition materials including tip sheets, evidence-based background statements and publications for newsletters for professionals and families. Judith has recently worked as a senior project officer for NATSINSAP and has worked on projects focussing on strengthening the nutrition workforce in the Northern Territory and also in Timor-Leste.
Phone	61) 3 9345 4383
Fax	61) 3 9345 6496
Mobile/pager	n/a
email	judith.myers@rch.org.au

Associate Researcher

Title and Name	Evelyn Volders
Appointment	Dietitian, Filling the Gaps
Department	Nutrition & Food Services
Institution	Royal Children's Hospital
Mailing address	Flemington Road Parkville, VIC 3052
Describe what this researcher will do in the context of this project	Evelyn will deliver project strategies including coordination of advisory group meetings, working group meetings, participant recruitment, survey distribution, practitioner interviews, data entry, data analysis and reporting.
Include a brief summary of relevant experience for this project	Evelyn is an Advanced Accredited Practising Dietitian and Dietitian for the Filling the Gaps (FTG) project with the Nutrition Department. She has worked with the FTG program in the past, assisting in preparation of background statements and tip sheets.

	She holds an honorary position with Monash University and has spent many years teaching into the undergraduate dietetics degree and also co ordinates a post graduate course for paediatric dietitians.
Phone	61) 3 9345 5155
Fax	61) 3 9345 6496
Mobile/pager	n/a
email	evelyn.volders@rch.org.au

Associate Researcher

Title and Name	Natasha Hampson
Appointment	Physical Activity Practitioner
Department	Nutrition & Food Services
Institution	Royal Children's Hospital
Mailing address	Flemington Road Parkville, VIC, 3052
Describe what this researcher will do in the context of this project	Natasha Hampson will assist the research team manage the project, including advisory groups, working groups, participants, and project information. Natasha will assist with recruiting participants, liaising with professionals, distributing surveys, collating the data, and forming the final report and recommendations.
Include a brief summary of relevant experience for this project	<p>Natasha is an honours Graduate in Exercise and Sports Science from Deakin University. Her honours research project investigated the influence of the school canteen on primary school children's eating behaviours within the school environment and was successfully displayed as a poster at the Nutrition Society of Australia Conference in 2007.</p> <p>Natasha has worked as a leader in a number of community based recreation programs, including the development of aquatic programs for parents with young children at the YMCA. She joined the <i>Filling the Gaps</i> (FTG) program in 2007, and has developed evidence-based background statements to guide the development of materials on physical activity themes for workers and carers. This has included tip sheets, newsletter inserts and message strips for community cultural groups.</p> <p>Through the FTG program Natasha has worked on a new state-wide resource for new parents and has facilitated the focus group testing of parent materials across Victoria. She also facilitated in educating primary school nurses in general physical activity issues.</p>

	Australian Government 'Get up & Grow', National Guidelines for healthy eating and physical activity in early childhood settings (Department of Health and Ageing 2009).
Phone	61) 3 9345 4383
Fax	61) 3 9345 6496
Mobile/pager	n/a
email	natasha.hampson@rch.org.au

1.9 Training

Will any of the researchers require extra training to enable their participation in this project?

Yes No

If Yes, list the researchers, describe the training that is required and who will provide this training.

Researcher	Training required	Who will provide training?

1.10 Other personnel

1.10(a) Research Coordinator (if not named as a co-researcher):

Title and Name	
Department	
Institution	
Include a brief summary of relevant experience for this project	
Mailing address	
Phone	
Fax	
Mobile/pager	
email	

1.10(b) Person to whom the HREC should forward correspondence (if not the Principal Researcher)

Title and Name	
----------------	--

Appointment	
Department	
Institution	
Mailing address	
Phone	
Fax	
Mobile/pager	
email	

SECTION C: PROJECT DETAILS

1.11 Anticipated duration of project: 2 years

1.12 Anticipated commencement date at this site: 01 / 06 / 2010

1.13 Anticipated completion date at this site: 30 / 12 / 2012

1.14 Detailed project proposal

If the project is a clinical drug or device trial DO NOT complete question 1.14, but move directly to question 1.15. The detailed project proposal for clinical drug or device trials is completed in Module 2.

(a) Project checklist

Major Proposal Components	Page and /or section number in the proposal	Not Applicable
Literature review		<input checked="" type="checkbox"/>
Rational for project	60	<input type="checkbox"/>
Hypothesis /research questions	61	<input type="checkbox"/>
Aims	61	<input type="checkbox"/>
Methodology	62	<input type="checkbox"/>
Inclusion/exclusion criteria	62	<input type="checkbox"/>
Randomisation procedures	63	<input type="checkbox"/>
Statistical or other analyses	68	<input type="checkbox"/>

(b) Project proposal

Every application must be accompanied by a detailed proposal. You may type (or "paste") your detailed proposal directly into the text box below (including date and version number) and/or you may attach pre-printed document(s). Attachments should include brochures/pamphlets, questionnaires or surveys and any other relevant documents. Please ensure that all attachments are page numbered throughout and given a version number and date where appropriate.

You should consult the Guidelines about the type of information that should be included in the detailed proposal.

Please see attached protocol – '30017A Study ProtocolV5 26May10'

Version Date: <u>May 26 2010</u>	<u>Version Number:5</u>
<p>1. Rationale for project</p> <p>A nutrition needs assessment was undertaken in the Western Metropolitan region in 1994/1995. These research findings provided the basis for policy development, dissemination of resources and support to practitioners and</p>	

parents in Victoria largely through the 'Filling the Gaps' program.

The selection of two areas of low socioeconomic areas (Brimbank and Greater Shepparton) complements the Australian Government's Early Development initiatives in (1) recognising disparities in communities and (2) critically appraising the resources needed to make a difference to child health in poorer communities. A rural and urban area of similar socioeconomic status will provide a strong basis for comparison.

With increasing recognition of the integral relationship between nutrition and physical activity in a lifestyle approach to public health, physical activity has been included within the 'Filling the Gaps' program. This is consistent with the scope of the Victorian program Kids - 'Go for your life'.

The need for updated resources to address current child, family and practitioner issues, including childhood overweight and obesity, drives a review of the original needs assessment, now incorporating physical activity. This research will provide future direction to 'Filling the Gaps', the Department of Health and the Department of Education and Early Childhood Development.

Dissemination of findings will be primarily a report to Department of Health, along with scientific presentations, media and peer-reviewed publications.

2. Hypothesis/research questions

- (a) If questions asked of parents and practitioners on nutrition needs from the 1994/1995 survey are repeated in 2010 then differences in needs will emerge.
- (b) If physical activity needs are elucidated alongside nutrition needs then more valuable lifestyle needs will be evident.
- (c) If metropolitan and regional needs are compared then differences will be found.

3. Aim

To identify nutrition and physical activity needs for children 0-8 years, including gaps in resources and information available for professionals working with families and families with young children in two Victorian high needs local government areas.

Objectives:

- To identify and compare current nutrition and physical activity needs for children 0-8 years within a Victorian rural and a metropolitan region.
- To identify nutrition and physical activity resource gaps and regional differences for practitioners working with children 0-8 years.
- To compare nutrition issues, information and resource gaps (between 1994/1995 and 2009/2010) for parents and practitioners working with children 0-8 years.
- To form recommendations to address identified nutrition and physical activity needs of children 0-8 years, and information and resource gaps for families with young children and childhood practitioners.

4. Key Activities / methodology

The project will be guided by an Advisory Group (Nutrition and Physical Activity Assessment Advisory Group) providing guidance into the assessment direction and by 2 local Working groups, one in City of Brimbank and one in City of Greater Shepparton, to assist with local community consultation. Each working group will consist of Regional Department of Health (DH) and Department of Education and Early Childhood Development (DEECD) representatives. Local stakeholders with direct links to services accessed by families with children 0-8 years, such as maternal and child health nurse regional coordinators, child care and kindergarten early childhood officers, and primary school nurse regional managers, as well as professionals such as, community dietitians and local government community health workers will also be represented in each working group.

- **Parent/carer surveys and information letters can be found in appendices 1, 2, 3, 4.**
- Development of survey instruments – parent/carer and practitioner surveys for each age group and related setting.
- Pilot of practitioner and parent/carer instruments across each age group and related setting.
- Provide information to settings and seek consent for participation.
- Conduct surveys with parents/carers of children 0-8 years attending early childhood settings.
- Conduct on-line survey for early childhood practitioners.
- Preliminary subjective analysis of completed surveys and development interview questions.
- Conduct qualitative interviews with practitioners based on a snapshot of issues raised in the survey responses.
- Undertake data analysis of survey responses and qualitative analysis of practitioner interviews.
- Provide a report to the Department of Health and to Department of Education and Early Childhood Development. Implementation of dissemination strategy.

5. Inclusion/exclusion criteria

Inclusion criteria for the Survey Pilot For the purpose of piloting the practitioner and parent/carers surveys, 3-5 practitioners working with children 0-8 years, located outside of City of Brimbank and City of Greater Shepparton, and otherwise meeting the selection criteria below, will be recruited to complete the survey and give feedback on ease of understanding, readability, and use of the survey. Similarly, 3-5 parents/carers with children of each age group (0-2 years, 2-4 years, 4-6 years and 6-8 years) meeting the criteria below and residing outside City of Brimbank and City of Greater Shepparton will complete and provide feedback on the survey tools. The survey Pilot will take place in the City of Port Philip

and Shire of Gippsland.

Inclusion criteria for practitioners (Main study) in the City of Brimbank and City of Greater Shepparton:

- Maternal and Child Health Nurses, working with children 0-2 years.
- Child Care Directors and Staff, working with children aged 2-4 years.
- Kindergarten Directors and Teachers, working with children aged 4-6 years.
- Primary School Grade 1 teachers and school nurses working with Children 6-8 years.
- Best Start Facilitators, working with children aged 0-4 years. (Best Start is a targeted prevention and early intervention program for families with children 0-4 years).

Inclusion criteria for parents and carers (Main Study) in the City of Brimbank and City of Greater Shepparton:

- Parents/carers aged 18 years and above, with children attending the relevant targeted settings (maternal child health centre, childcare, kindergarten, primary school or supported play group).
- On-site assistance will be offered to parents/carers with poor literacy skills who attend maternal child health centres and early childhood settings.
- Interpreter services will be offered to non English speaking parents and carers attending as above; they will not be excluded.
- For parents and carers of children 6-8 years completion of the survey will require literacy in English language.

6. Randomisation procedures

- City of Brimbank and City of Greater Shepparton have been selected as representative of vulnerable local government areas in Victoria and share similar relevant demographics. Within these two local government areas the lowest SEIFA wards will be targeted. Settings and services within the target areas will be randomly selected and approached with invitations to participate. Settings and services will be selected by successive randomisation until target numbers are reached.

Maternal and Child Health, Childcare, Kindergartens. Publicly available listings of all centres and settings within the target low SEIFA wards will be gained from Local Government and State Government departments with responsibility for these services. This will include government, non-government, community-run and private services/settings. Based on an estimated 50% response rate from parents invited to participate in the study, and an average attendance of 30 children in each age group within each setting, between 8-10 services within each local government area will be randomised for the study to provide responses from the estimated 110 parent/carer participants and 10-12 practitioners within each age group.

Once randomised, the individual settings/services will be invited to

participate and an appointment made for the researchers to attend the setting. Practitioners will invite all parents of all children attending the setting/service on the given day (1 single day) to participate.

Primary Schools. Names of all government and non-government schools within the target low SEIFA wards of the two local government areas will be obtained from the 'My Schools' website. Numbers of Grade 1 children attending each school will be estimated from the total enrolments listed for each school. Based on an estimated average response rate of 33% up to 330 parents of Grade 1 children attending randomly selected schools will be invited to participate in the survey. The random selection of schools will be stratified for type of school to best represent the ration of government to non-government schools in each local government area. Letters inviting individual schools will be sent to the principals of each randomised school. Participating schools will receive information packs to forward to all parents/carers of enrolled Grade 1 children.

Best Start Supported Playgroups. Listings of all supported playgroups within the two local government areas will be obtained from local government early childhood managers. Based on average attendance of 10-15 children per playgroup, and a response rate of 50%, up to 10 supported playgroups will be randomised for inclusion in the study. Playgroup coordinators will be invited to participate and nominate a preferred day/time for the researchers to attend. All parents of children attending playgroup on the nominated day/time will be invited to participate in the survey.

- All practitioners within the selected centres will be invited to take part in the research. This includes maternal and child health nurses, child care directors and staff, kindergarten directors and teachers, primary school teachers, primary school nurses and supported play group facilitators.
- Setting practitioners will assist in selecting parents/carers with children aged 0-6 years, including identification of those requiring assistance or interpreters to understand the purpose of the research.
- Teachers will distribute a package including the participant information sheet, 1 survey (for parents of 6-8 year olds), and 1 envelope to parents/carers of children aged 6-8 years, Parents are asked to return their completed questionnaire in the envelope to their child's teacher at school.
- Best Start staff will distribute invitations for children aged 0-4 years. They will assist in selecting parents/carers on-site requiring assistance or interpreters to participate. Fifty participants only are sought in this setting.

7. Pilot Phase

The pilot phase will involve:

a) Recruitment of practitioners working within one of the following settings and services outside the City of Brimbank and City of Shepparton. The locations selected for the pilot phase are: City of Port Philip and Shire of Gippsland.

- Maternal and Child Health Services

- Long Day Care centres
- Kindergartens
- Primary School, Grade 1 classes
- Supported Playgroups

b) Recruitment of parents of children 0-8 years of age who reside outside the City of Brimbank and City of Greater Shepparton, AND attend one of the following settings or services:

- Maternal and Child Health Services (parents of children 0-2 years)
- Long Day Care centres (parents of children 2-4 years)
- Kindergartens (parents of children 4-6 years)
- Primary School, Grade 1 classes (parents of children 6-8 years)
- Supported Playgroups (parents of children 0-4 years)

Three to 5 parents of each of the age groups will be sourced through services and settings in the City of Port Phillip and the Shire of Central West Gippsland, identified by Department of Health, Department of Education and Early Childhood Development and Community Allied Health representatives that are members of Project Advisory Group.

With the assistance of Advisory Group members, researchers will invite identified services and settings to take part in the pilot phase. Staff from the centre will be asked to complete a practitioner survey, and distribute parent surveys to parents and carers attending their setting or service. Coordinators of the settings or service will be asked to return all completed surveys by an arranged date.

The purpose of the pilot phase is to assess the readability of the surveys and gather any feedback participants have about the questions. Participants will not be recruited via the same method used for the main study, e.g. researchers will be not be present to assist in survey completion.

Participants will be asked to state how long it took them to complete the survey, and to indicate any problems they encountered when completing the survey. Participants will be given researcher's details to follow up with further comments.

8. Recruitment

Needs assessment – main study

Location

The City of Brimbank and The City of Greater Shepparton have been selected as needs assessment communities. The City of Brimbank has been chosen as this was the site for the 1994/1995 needs assessment. The City of Greater Shepparton has been selected as a rural site, based on community locality and similarity to Brimbank in relevant demographics. Within these two local government areas, suburbs with lowest SEIFA index (most vulnerable) have been identified. In the City of Brimbank, St Albans appears to be the most

vulnerable area. In the City of Greater Shepparton, Shepparton North-West is the lowest SEIFA small area.

Recruitment will occur via the following processes:

1. Services and settings within the highest needs areas of Brimbank and Shepparton will be randomly selected
2. Randomly selected services and settings will be invited to participate in the study
3. Working group members will assist researchers to engage randomly selected settings / services
4. Participants will be recruited from these selected services and settings to reach anticipated target numbers.

Greater detail of this recruitment process is provided below.

Settings and services

All settings and services within the lowest SEIFA index (ABS 2006) areas of City of Brimbank (St Albans East, St Albans West, Sunshine North, Sunshine West and Kings Park) and City of Greater Shepparton (Shepparton Central, Shepparton North-West,, Shepparton South-East, Shepparton South, Shepparton Urban and Mooroopna) will be eligible for participation in the study. Working group members will assist researchers to determine the anticipated number of settings and services required to participate to reach target participant numbers. If further services and settings are required, these will continue to be randomly selected until target numbers are reached.

The following services and settings will include:

- Maternal and Child Health Services
- Long Day Care centres
- Kindergartens
- Primary School, Grade 1 classes
- Supported Playgroups

Coordinators / Principals of randomly selected children's settings and services will be invited to participate by a joint letter from the researchers and their local government authority. Working group members will assist in promoting the relevance of the project and encouraging participation. Invitations will be followed up with phone calls from the researchers to ascertain willingness to take part

Randomly selected services and settings will provide researchers with access to staff, parents and carers to complete a survey until target sample numbers are achieved.

Practitioner Participants

All practitioners within the centres agreeing to participate will be invited to take part in an on-line survey. Exact numbers of practitioners will be dependent on the number of sites participating. At the time of completing an on-line survey, practitioners will be directed to another link to indicate their willingness to undertake a qualitative interview at a later time. This ensures that only those

practitioners willing to be involved in qualitative interviews are identified. On-line survey participants will not be identified in any way. Practitioners included:

- Maternal and child health nurses, working with children 0-2 years
- Childcare Coordinators and staff, working with children 2-4 years
- Kindergarten Directors and teachers, working with children 4-6 years
- Primary School nurses, working with children 6-8 years
- Primary School Grade 1 Teachers, working with children 6-8 years
- Best Start Facilitators, working with children 0-4 years

Parent and Carer Participants

Parents and carers will be invited to take part in a survey.

Participants will be parents and carers who have a child:

- 0-2 years of age accessing a Maternal and Child Health centre (complete 'Survey for parents about your child 0-2 years')
- 2-4 years of age attending a Child care centre (complete 'Survey for parents about your child 2-4 years')
- 4-6 years of age attending Kindergarten (complete 'Survey for parents about your child 2-4 years')
- 6-8 years of age attending Primary school (complete 'Survey for parents about your child 6-8 years')
- 0-4 years of age attending a Best Start Supported Playgroup (complete 'Survey for parents about your child 0-4 years')

Recruitment of parents and carers attending maternal and child health centres, childcare centres, kindergartens:

Practitioners from selected services and settings will be asked to provide researchers with the opportunity to invite all families to take part in a survey. Researchers will provide services and settings with posters / flyers about the project and details for seeking further information.

Researchers will liaise with services and settings to arrange a specific day and time for researchers to administrate surveys to parents. Services and settings will notify parents and carers of the arranged date and time and encourage all to participate.

On the day of the survey researchers will attend the centre where practitioners will assist with introducing parents and carers. Project information will be verbally introduced to parents and carers on site and via an information sheet. Parents and carers agreeing to take part will complete a 'tick box' on the front of the questionnaire to indicate they have read and understand the information letter and consent to taking part in the project.

Discussion with the practitioners in advance will help identify the specific need for interpreting services. On-site assistance with explanation and completing the survey will be provided by researchers as required. Parents will be encouraged

to complete the survey in the centre with an option of returning the completed survey to a researcher, or placing in a secure box at the centre for collection.

Non-identifiable surveys will be given an Epidata and SPSS unique identifier code, for data entry purposes.

If parents decide to complete the survey later they will be asked to return their completed non-identifiable survey to a secure box at the centre for collection.

Recruitment of parents and carers with children 6-8 years at schools:

1. Principals of randomly selected schools will be sent an invitation to participate in the study.
2. Researchers will provide schools with posters / flyers advising of the study, including details for seeking further information.
3. Arrangements will be made for packages comprising of information letters and surveys to be distributed to selected schools for Grade 1 teachers to send home with every Grade 1 student.
4. Teachers will be asked to distribute survey packages to all parents/carers of Grade 1 children.
5. Reminder letters will be distributed via the classroom teachers up to 9 days after the survey was sent home. Researchers will collect returned completed questionnaires from class room teachers at an arranged date and time.
6. Completed questionnaires will be stored securely in locked filing drawers in the Department of Nutrition and Food Services, Royal Children's Hospital.
7. Non-identifiable surveys will be provided with an Epidata and SPSS unique identifier code, for data entry purposes.

Recruitment of parents and carers attending supported playgroups:

On the day of the survey researchers will attend the centre where practitioners will assist with introducing parents and carers. Project information will be verbally introduced to parents and carers on site and via an information sheet. Parents and carers agreeing to take part will complete a 'tick box' on the front of the questionnaire to indicate they have read and understand the information letter and consent to taking part in the project.

Discussion with the practitioners in advance will help identify the specific need for interpreting services. On-site assistance with explanation and completing the survey will be provided by researchers as required. Parents will be encouraged to complete the survey at the playgroup session with an option of returning the completed survey to a researcher, or placing in a secure box at the centre for collection.

Non-identifiable surveys will be given an Epidata and SPSS unique identifier code, for data entry purposes.

9. Statistical or other analysis

Statistically significant numbers are not required for piloting of surveys.

Consultation with the Clinical Epidemiology and Biostatistics Unit (CEBU) has advised between 3-5 practitioners and 3-5 parents and carers will provide feedback saturation to each survey. Depending on the changes to be made to each survey, further pilot feedback will be sought if required.

Based on the advice of Susan Donath (CEBU) a sample size of between 70 and 100 participants per age group will provide a 95% confidence interval width of 10-12% based on a 2-sided interval. As little is known about the nutrition needs and practices being considered, this amount of precision is all that is required. This level of confidence relates to a 'worst case scenario' for a proportionate response of 0.5.(e.g. 50% of responders introduced solids to their baby before 6 months of age and 50% introduced solids after 6 months of age). For higher or lower proportionate responses, the confidence intervals will be much lower.

- All practitioners working with children aged 0-8 years will be recruited to take part in the needs assessment.
- Up to 110 participants will be recruited in each of the age groups (parents and carers of a child in the following age groups: 0-2 years, 2-4 year, 4-6 years and 6-8 years) from each community, the City of Brimbank and City of Greater Shepparton.
- Fifty parents and carers with children aged between 0-4 years will be recruited from Best Start Supported Playgroups.

We will recruit up to 110 parents and carers with a child in each age group as we predict this level of over sampling will balance incomplete surveys and data received. This number will also allow for over-representation of English-speaking responders in the survey population compared with the demographics of the survey area. Should the language and socio-economic backgrounds of participants reflect the general population closely, the numbers may be reduced to between 70 and 100. We understand that the sample size of each age group will only allow detection of large differences between child age groups and between communities.

Data will be entered into the EpiData program using a unique identification code for each survey. Basic analysis will be undertaken with EpiData. Other results will be extracted for statistical analysis with SPSS.

- Primary analysis will centre on descriptive statistics - normal distribution, frequency, relative percentage, chi-square where appropriate)
- Comparison of rural and metropolitan nutrition and physical activity resource and information sources for parents and practitioners.
- Nutrition resource and information comparison between 1994/1995 data and 2009/2010 data.
- For qualitative interviews taped interviews will be analysed using thematic analysis reviewed by (2) researchers. Copies of resource materials provided will be reviewed and grouped according to agreed criteria.

1.15 Registration and reporting

- (a)** If your study is a clinical trial (see 'Module One Guidelines' for definition), is the trial registered with a clinical trials register that fulfils the ICMJE criteria?

Yes No Study not a clinical trial

If Yes, please provide the name of the register, date of the registration and indicate who undertook the registration:

Name of register: _____

Date of registration: _____

Researcher

Sponsor

Other Provide details: _____

Please provide the registration number (if known): _____

If you answered *No* to 1.15(a), please justify your response in detail.

- (b)** Are there any limitations or restrictions on the publication of results by researchers?

Yes No

If Yes, explain the nature of the limitations or restrictions.

- (c)** Will a report of the project outcomes (for example, group data) be publicly accessible at the end of the project?

Yes No

If Yes, give details of the type of report and how it will be made available.

If No, explain why not.

A report of needs will be submitted to the Department of Health, Victoria. Following ministerial acceptance of the report dissemination strategies will proceed.

- (d)** Will a plain English summary of the project outcomes (for example, individual or group data) be made directly available to participants at the end of the project?

Yes No N/A

If Yes, give details of the type of report and how it will be made available.

If *No*, explain why not.

Subsequent reporting will be planned in collaboration with the Department of Health. It is anticipated that plain language reports will be available following that report.

1.16 Adverse or unforeseen events

What procedures are in place to manage, monitor and report adverse and unforeseen events? Consider adverse events in relation to all aspects of the project, including (where applicable) participants, researchers and management of information.

All interviews will be undertaken in settings with staff trained in first-aid and with access to emergency care.

Researchers in the field will all be employees of RCH and will be covered by relevant workcover insurance.

Non-identifiable surveys will be stored in locked filing cabinets, separate to the signed consent forms.

Databases will be password protected and accessed only by the project researchers.

The project report will be reviewed by the Project Advisory group prior to submission. Ministerial sign-off is required prior to distribution of any project findings.

SECTION D: PARTICIPANTS

Researchers should consult the Guidelines under Section D for a definition of "participant" for the purposes of this application.

1.17 Number of participants

- (a) Total number of participants in the project (at all sites combined)

Up to 1065

- (b) Break down the number of participants for each site for which this HREC is responsible

Site	No. of participants
Maternal and child health nurses – pilot sites (City of Port Phillip and Shire of Gippsland)	3-5
Parents and carers with children 0-8 years – pilot sites (City of Port Phillip and Shire of Gippsland)	3-5
Child Care centre coordinators and staff – pilot sites (City of Port Phillip and Shire of Gippsland)	3-5
Kindergarten directors and teachers – pilot sites (City of Port Phillip and Shire of Gippsland)	3-5
Primary school teachers – pilot sites (City of Port Phillip and Shire of Gippsland)	3-5
Primary school nurses – pilot sites (City of Port Phillip and Shire of Gippsland)	3-5
Maternal and child health nurses	10-12
Parents: attending Maternal and Child Health Centres within City of Brimbank	Up to 110
Parents: attending Maternal and Child Health Centres within Greater City of Shepparton	Up to 110
Child Care centre coordinators and staff	10 -12
Parents: attending Child Care Centres within City of Brimbank	Up to 110
Parents: attending Child Care Centres within Greater City of Shepparton	Up to 110
Kindergarten directors and teachers	10-12
Parents: attending Kindergartens within City of Brimbank	Up to 110
Parents: attending Kindergartens within Greater City of Shepparton	Up to 110
Primary school teachers	10-12
Primary school nurses	4-5
Parents: attending Primary Schools within City of Brimbank	Up to 110
Parents: attending Primary Schools within Greater City of Shepparton	Up to 110
Best Start Facilitators	2

Parents: attending Supported Playgroups City of Brimbank	50
Parents: attending Supported Playgroups City of Shepparton	50

- (c) If the project involves more than one participant group (e.g. control and experimental groups, or different focus groups), how many participants will be in each group?

Parents and carers: approx. 985
 Staff and carer (practitioners): approx 60 -80

1.18 Participants - Details

- (a) What categories of people will be involved? (e.g. cancer patients, children, people with learning disabilities, pensioners, etc)

Participants will be practitioners working with children 0-8 years and parents and carers with a child aged 0-8 years.
 Practitioners include maternal and child health nurses, childcare coordinators and staff, kindergarten Directors and teachers, primary school nurses, primary school grade 1 teachers and Best start facilitators.

- (b) Will Aboriginal and Torres Strait Islander people be targeted in this project?

Yes No

If *No*, are people of Aboriginal and Torres Strait Islander origin likely to be significantly represented in the cohort of participants being studied?

Yes No

- (c) Will the researchers from this institution be studying participants in other countries?

No Yes ***If yes, please answer the following questions:***

- (i) Will this project undergo an ethical approval process in that country?

Yes Provide details in accordance with the National Statement on Ethical Conduct in Human Research, Section 4.8.4.

No Provide reasons

(ii) How have local cultural values been acknowledged in the design of the research?

(d) What will be the age range of participants?

Parents and carers and practitioners working with children, all participants will be over 18 years of age.

(e) What ethical issues do the criteria for inclusion or exclusion give rise to?

Non English speaking parent and carer participants in early childhood settings will be offered an interpreter to assist in completing the survey. All parents in early childhood settings will be offered on-site assistance to complete the survey if requested.

1.19 Recruitment of participants

(a) Are participants being recruited?

No *Go to Question 1.23*

Yes

If Yes, describe the recruitment procedure. Include information about

- Source of participants
- Exactly how potential participants will be identified
- Exactly how potential participants will be contacted and by whom, including whether the person making initial contact has any relationship to potential participants
- The method(s) by which information is provided to potential participants (*e.g. verbally, information sheet, fliers, posters, etc*)
- The setting in which information is provided (*e.g. over the telephone, in a clinic or doctor's surgery, through the mail, etc*)

Pilot

The survey Pilot will take place in the City of Port Phillip and Shire of Gippsland. The pilot phase will involve:

a) Recruitment of practitioners who working within one of the following settings and services:

- Maternal and Child Health Services
- Long Day Care centres
- Kindergartens
- Primary School, Grade 1 classes
- Supported Playgroups

b) Recruitment of parents of children 0-8 years of age AND attend one of the following settings or services:

- Maternal and Child Health Services(0-2 year old children)
- Long Day Care centres (2-4 year old children)
- Kindergartens (4-6 year old children)
- Primary School, Grade 1 classes (6-8 year old children)
- Supported Playgroups (0-4 year old children)

Three to 5 parents of each of the age groups will be sourced through services and settings in the City of Port Phillip and the Shire of Central West Gippsland, identified by Department of Health, Department of Education and Early Childhood Development and Community Allied Health representatives that are members of Project Advisory Group.

With the assistance of Advisory Group members, researchers will invite identified

services and settings to take part in the pilot phase. Staff from the centre will be asked to complete a practitioner survey, and distribute parent surveys to parents and carers attending their setting or service. Coordinators of the settings or service will be asked to return all completed surveys by an arranged date.

The purpose of the pilot phase is to assess the readability of the surveys and gather any feedback participants have about the questions. Participants will not be recruited via the same method used for the main study, e.g. researchers will be not be present to assist in survey completion.

Participants will be asked to state how long it took them to complete the survey, and to indicate any problems they encountered when completing the survey. Participants will be given researchers details to follow up with further comments.

Needs assessment – main study

Location

The City of Brimbank and The City of Greater Shepparton have been selected as needs assessment communities. The City of Brimbank has been chosen as this was the site for the 1994/1995 needs assessment. The City of Greater Shepparton has been selected as a rural site, based on community locality and similarity to Brimbank in relevant demographics. Within these two local government areas, suburbs with lowest SEIFA index (most vulnerable) have been identified. In the City of Brimbank, St Albans appears to be the most vulnerable area. In the City of Greater Shepparton, Shepparton North-West is the lowest SEIFA small area.

Recruitment will occur via the following processes:

5. Services and settings within the highest needs areas of Brimbank and Shepparton will be randomly selected
6. Randomly selected services and settings will be invited to participate in the study
7. Working group members will assist researchers to engage randomly selected settings / services
8. Participants will be recruited from these selected services and settings to reach anticipated target numbers.

Greater detail of this recruitment process is provided below.

Settings and services

All settings and services within the lowest SEIFA index (ABS 2006) areas of City of Brimbank (St Albans East, St Albans West, Sunshine North, Sunshine West and Kings Park) and City of Greater Shepparton (Shepparton Central, Shepparton North-West,, Shepparton South-East, Shepparton South, Shepparton Urban and Mooroopna) will be eligible for participation in the study. Working group members will assist researchers to determine the anticipated number of settings and services required to participate to reach target participant numbers. If further services and settings are required, these will continue to be randomly selected until target numbers are reached.

The following services and settings will include:

- Maternal and Child Health Services
- Long Day Care centres

- Kindergartens
- Primary School, Grade 1 classes
- Supported Playgroups

Coordinators / Principals of randomly selected children's settings and services will be invited to participate by a joint letter from the researchers and their local government authority. Working group members will assist in promoting the relevance of the project and encouraging participation. Invitations will be followed up with phone calls from the researchers to ascertain willingness to take part

Randomly selected services and settings will provide researchers with access to staff, parents and carers to complete a survey until target sample numbers are achieved.

Practitioner Participants

All practitioners within the centres agreeing to participate will be invited to take part in an on-line survey. Exact numbers of practitioners will be dependent on the number of sites participating. At the time of completing an on-line survey, practitioners will be directed to another link to indicate their willingness to undertake a qualitative interview at a later time. This ensures that only those practitioners willing to be involved in qualitative interviews are identified. On-line survey participants will not be identified in any way. Practitioners include:

- Maternal and child health nurses, working with children 0-2 years
- Childcare Coordinators and staff, working with children 2-4 years
- Kindergarten Directors and teachers, working with children 4-6 years
- Primary School nurses, working with children 6-8 years
- Primary School Grade 1 Teachers, working with children 6-8 years
- Best Start Facilitators, working with children 0-4 years

Parent and Carer Participants

Parents and carers will be invited to take part in a survey.

Participants will be parents and carers who have a child:

- 0-2 years of age accessing a Maternal and Child Health centre (complete 'Survey for parents about your child 0-2 years')
- 2-4 years of age attending a Child care centre (complete 'Survey for parents about your child 2-4 years')
- 4-6 years of age attending Kindergarten (complete 'Survey for parents about your child 4-6 years')
- 6-8 years of age attending Primary school (complete 'Survey for parents about your child 6-8 years')
- 0-4 years of age attending a Best Start Supported Playgroup (complete 'Survey for parents about your child 0-4 years')

Recruitment of parents and carers attending maternal and child health

centres, childcare centres, kindergartens:

Practitioners from selected services and settings will be asked to provide researchers with the opportunity to invite all families to take part in a survey. Researchers will provide services and settings with posters / flyers about the project and details for seeking further information.

Researchers will liaise with services and settings to arrange a specific day and time for researchers to administrate surveys to parents. Services and settings will notify parents and carers of the arranged date and time and encourage all to participate.

On the day of the survey researchers will attend the centre where practitioners will assist with introducing parents and carers. Project information will be verbally introduced to parents and carers on site and via an information sheet. Parents and carers agreeing to take part will complete a 'tick box' on the front of the questionnaire to indicate they have read and understand the information letter and consent to taking part in the project.

Discussion with the practitioners in advance will help identify the specific need for interpreting services. On-site assistance with explanation and completing the survey will be provided by researchers as required. Parents will be encouraged to complete the survey in the centre with an option of returning the completed survey to a researcher, or placing in a secure box at the centre for collection.

Non-identifiable surveys will be given an Epidata and SPSS unique identifier code, for data entry purposes.

If parents decide to complete the survey later they will be asked to return their completed non-identifiable survey to a secure box at the centre for collection.

Recruitment of parents and carers with children 6-8 years:

8. Principals of randomly selected schools will be sent an invitation to participate in the study.
9. Researchers will provide schools with posters / flyers advising of the study, including details for seeking further information.
10. Arrangements will be made for packages comprising of information letters and surveys to be distributed to selected schools for Grade 1 teachers to send home with every Grade 1 student.
11. Teachers will be asked to distribute survey packages to all parents/carers of Grade 1 children.
12. Reminder letters will be distributed via the classroom teachers up to 9 days after the survey was been sent home. Researchers will collect returned completed questionnaires from class room teachers at an arranged date and time.
13. Completed questionnaires will be stored securely in locked filing drawers in the Department of Nutrition and Food Services, Royal Children's Hospital.
14. Non-identifiable surveys will be provided with an Epidata and SPSS unique identifier code, for data entry purposes.

Recruitment of parents and carers attending Supported Playgroups:

On the day of the survey researchers will attend the centre where practitioners will assist with introducing parents and carers. Project information will be verbally introduced to parents and carers on site and via an information sheet. Parents and carers agreeing to take part will complete a 'tick box' on the front of the questionnaire to indicate they have read and understand the information letter and consent to taking part in the project.

Discussion with the practitioners in advance will help identify the specific need for interpreting services. On-site assistance with explanation and completing the survey will be provided by researchers as required. Parents will be encouraged to complete the survey at the playgroup session with an option of returning the completed survey to a researcher, or placing in a secure box at the centre for collection.

Non-identifiable surveys will be given an Epidata and SPSS unique identifier code, for data entry purposes.

(b) Will any follow-up procedures be used to improve the rate of participation?

Yes No

If Yes, describe the procedures.

A standardised follow up procedure will be implemented to improve participation rates.

- **Practitioners** will be asked to complete the online survey within 5 working days of receiving an email.
- Follow up of **parents and carers** with children in age groups 0-2 years, 2-4 years and 4-6 years: Parents and carers will be encouraged to complete a survey 'on the spot'. If participants elect to take the survey with them they will be asked to return the completed survey to a secure box in the centre within 5 working days, and will also be offered a reply-paid envelope. Centre staff will also remind parents to return surveys.
- Follow up of **parents and carers with children 6-8 years**: Teachers will be asked to distribute survey packages to all parents/carers of Grade 1 children. Teachers will remind children and parents/carers to return the completed survey to the classroom for the next 5 days; noting children who have returned the completed survey to the classroom. Reminder letters will be distributed via the classroom teachers to families who have not returned completed surveys up to 9 days after the first package was sent home.
- Researchers will collect completed questionnaires from class room teachers at an arranged date and time.

Non-identifiable surveys will be provided with an Epidata and SPSS unique identifier code, for data entry purposes.

(c) Will any dependent or unequal relationship exist between anyone involved in the recruitment and the potential participants (e.g. counsellor/client, teacher/student, doctor/patient, warder/prisoner, etc)?

Yes No

If Yes:

(i) What is the nature of the dependent or unequal relationship?

(ii) What measures will be taken to minimise the impact of the participant's dependency so that the voluntariness of their consent is not compromised?

(d) Will any other dual relationship exist between any researcher and participants? For example, will any of the researchers also be:

- colleagues of participants;
- head of the department where it is proposed to recruit participants and carry out the research?

Yes No

(See guidelines for further clarification)

If Yes:

(i) What is the nature of the dual relationship?

(ii) How will ethical issues arising from the dual relationship be addressed?

(e) Will reimbursement, payment or other offers be made to participants?

Yes No

If Yes, provide details.

1.20 Information to participants

(a) Does the project design involve deliberate deception of participants?

Yes No

If Yes, explain why the real purpose of the research needs to be concealed.

(b) Will written information about the project be given to participants?

Yes No

If No, give reasons.

(c) Who will i) explain the project to participants and ii) obtain formal consent?

1. All **practitioners** within the centres agreeing to participate will be invited to take part in an on-line survey. Exact numbers of practitioners will be dependent on the number of sites participating. Practitioners will indicate they have read and understand the purpose of the survey before proceeding to complete the survey. At the time of completing the on-line survey, practitioners will be directed to another link to indicate their willingness to undertake a qualitative interview at a later time. This ensures that only those practitioners willing to be involved in qualitative interviews are identified. On-line survey participants will not be identified in any way.

2. **Parents/carers of children 0-6 years.**

Practitioners from selected services and settings will be asked to provide researchers with the opportunity to invite all families to take part in a survey.

Researchers will provide services and settings with posters / flyers about the project and details for seeking further information.

Researchers will liaise with services and settings to arrange a specific day and time for researchers to administrate surveys to parents.

Services and settings will notify parents and carers of the arranged date and time and encourage all to participate.

On the day of the survey researchers will attend the centre where practitioners will assist with introducing parents and carers.

Project information will be verbally introduced to parents and carers on site and via an information sheet.

Parents and carers agreeing to take part will complete a 'tick box' on the front of the questionnaire to indicate they have read and understand the information letter and consent to talking part in the project.

Discussion with the practitioners in advance will help identify the specific need for interpreting services. On-site assistance with explanation and completing the survey will be provided by researchers as required.

Parents will be encouraged to complete the survey in the centre with an option of returning the completed survey to a researcher, or placing in a secure box at the centre for collection.
Non-identifiable surveys will be provided with an Epidata and SPSS unique identifier code, for data entry purposes.

3. **Parents/carers of children 6-8 years**

Principals of randomly selected schools will be sent an invitation letter to participate in the study. Researchers will provide schools with posters / flyers advising of the study, including details for seeking further information.

Arrangements will be made for packages comprising information letters, a survey and an envelope to be distributed to selected schools for Grade 1 teachers to send home with every Grade 1 student.

Teachers will be asked to distribute survey packages to all parents/carers of Grade 1 children.

Teachers will remind children and parents/carers to return completed surveys to the classroom for the next 5 days; noting children who have returned completed surveys to the classroom.

Reminder letters will be distributed via the classroom teachers to families who have not returned completed surveys up to 9 days after the first package was sent home.

Researchers will collect the completed surveys from class room teachers at an arranged date and time.

Non-identifiable surveys will be provided with an Epidata and SPSS unique identifier code, for data entry purposes.

1.21 Consent

- (a) Will any of the participants have the capacity to give voluntary and informed consent? Yes No

If Yes, how will consent be obtained?

- Written consent form
 Verbal – explain below how consent will be recorded

Implied consent (*e.g. by completing a questionnaire*) – give details

Parent participants

On the day of the survey researchers will attend the centre where practitioners will assist with introducing parents and carers. Project information will be verbally introduced to parents and carers on site and via an information sheet. Parents and carers agreeing to take part will complete a 'tick box' on the front of the questionnaire to indicate they have read and understand the information letter and consent to talking part in the project.

Discussion with the practitioners in advance will help identify the specific need for interpreting services. On-site assistance with explanation and completing the survey will be provided by researchers as required. Parents will be encouraged to complete the survey in the centre with an option of returning the completed

survey to a researcher, or placing in a secure box at the centre for collection.

If parents decide to complete the survey later they will be asked to return their completed non-identifiable survey to a secure box at the centre for collection.

Practitioner participants

All **practitioners** within the centres agreeing to participate will be invited to take part in an on-line survey. Exact numbers of practitioners will be dependent on the number of sites participating. Practitioners will indicate they have read and understand the purpose of the survey before proceeding to complete the survey. At the time of completing the on-line survey, practitioners will be directed to another link to indicate their willingness to undertake a qualitative interview at a later time. This ensures that only those practitioners willing to be involved in qualitative interviews are identified. On-line survey participants will not be identified in any way.

Practitioners will complete a 'tick box' to acknowledge they have read and understood the information letter and provide consent to taking part in this project, before they complete and submit the on-line survey.

- (b)** Will there be participants who do **not** have the capacity to give voluntary and informed consent? Yes No

If Yes, who will be asked to provide consent (*tick as many as apply*)?

- Parent/guardian for participants under 18 years of age
- Person responsible (as defined in the *Guardianship and Administration Act 1986*) ***Note:** only applies to **medical research procedures** involving adult participants.
- Procedural authorisation (as defined in the *Guardianship and Administration Act 1986*). **Please make sure you also answer question 1.21d below.**
- Other (e.g. Next-of-kin acknowledgement for adult participants in research that does **not** involve any medical research procedure; where consent will not be obtained under the "Medical Emergency" provisions (Section 42A) of the *Guardianship and Administration Act 1986*) – give details

How will consent be obtained?

- Written consent form
- Verbal – explain below how consent will be recorded

- (c) How will competence to give consent be determined, who will make this determination, and what criteria will be used?

Competence of practitioners will be inferred given work role and completion of the survey.

Community practitioners will assist in identifying parents and carers to participate (those with children in each age group). Practitioner's knowledge of family history will assist with arranging of interpreter or support services for parents and carers as required.

- (d) Describe the ongoing process for reviewing participants' capacity to consent and participate while the research is in progress.

This research involves participant completion of a one-off survey. Consent will be implied through completion of surveys, following explanation of the research project by a researcher, and completion of a 'tick box' by all participants acknowledging that they understand the purpose of the project and have voluntarily consented to take part.

All Participants (parents and practitioners) will be provided with researcher contact details (within the information letter) to follow up should issues with participation later arise.

- (e) If consent is to be sought from the Person Responsible, provide details of the steps to be taken to identify, contact and inform this person.

n/a

- (f) If this research project is likely to involve procedural authorisation, provide details of the following:

- Justify the potential use of procedural authorisation in the research project - that is, provide details regarding how this research project may satisfy the requirements for procedural authorisation;
- Provide details of the steps to be taken to identify and contact a 'person responsible' and/or to obtain continuing participant consent following the use of procedural authorisation.

Note: Researchers should refer to the Module One Guidelines for information on submitting a Section 42T certificate when procedural authorisation is used.

n/a

ATTACH A COPY OF PARTICIPANT INFORMATION AND CONSENT FORM(S) AT THE END OF MODULE ONE. –

REFER TO APPENDIX 5

1.22 Consequences of participation

- (a) What are the potential or actual harms of participation (if any), including their likelihood and severity?

This project will not involve any risk, harm or discomfort to participants.

The time required to complete the survey may cause inconvenience to some participants.

Participants will not be forced to disclose any information they do not wish to share in the survey.

- (b) Is there any possibility of discomfort to participants?

Yes No

If Yes, please describe.

- (c) Is there a need to offer special counselling?

Yes No

If Yes, describe the form of the counselling: how it will be conducted, when and by whom?

- (d) Will participants be denied access to other treatments, therapies or services as a result of participation? Yes No N/A

Give details.

- (e) Are there any potential benefits to the participants?

Involvement in the project may indirectly provide practitioners with opportunity to input into policy and program development to address the nutrition and physical activity issues and needs identified by young families, and offer an opportunity for reflective thinking.

There are unlikely to be any direct benefits for parent and carer participants by taking part in this research; there may be some benefit of reflective thought.

1.23 Other ethical issues

Does the project present any other ethical issues with respect to participation? (*e.g. issues related to illegal activities; indigenous or other special community or cultural groups; risks to third parties; etc*)

Assistance will be offered for parents and carers with poor literacy skills or those from non-English speaking backgrounds. In consultation with host settings support staff, interpreters and the researchers will ensure all procedures are considerate of cultural practices.

SECTION E: COLLECTION/USE/DISCLOSURE OF INFORMATION

Researchers have a legal as well as an ethical obligation to consider privacy issues. The following questions assist the researcher, the HREC and the institution to fulfil their obligations under State and Commonwealth privacy legislation.

You may delete questions or parts of questions that you are not required to answer, in the interests of reducing paper usage.

1.24 Collection of participants' information

(a) Does the project involve collection of information about individuals without their knowledge or consent?

Yes - go to Question 1.25

No - answer the following questions:

(b) What type of information will be collected? (*Tick as many as apply*)

personal information

sensitive information

health information

(c) Will participants' consent be sought to use the collected information for

this research project (specific consent)

future research related to this project (extended consent)

any future research (unspecified consent)

(d) Does the project involve the establishment of a databank?

Yes

No

(e) Does the Participant Information and Consent Form explain the following:

What information is being collected?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
The purposes for which the information is being collected?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
The extent of future use of data (if you are seeking extended or unspecified consent)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	N/A <input type="checkbox"/>	
The wide-ranging implications of unspecified consent (if you are seeking unspecified consent)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	N/A <input checked="" type="checkbox"/>	
A description of the terms of the unspecified consent (if you are seeking unspecified consent)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	N/A <input checked="" type="checkbox"/>	
If permission is being sought to enter the information into a databank?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	N/A <input type="checkbox"/>	
The period for which the records relating to the participant will be kept?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
The form in which the data will be stored (i.e. whether identifiable	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

or not)?

The steps taken to ensure confidentiality and secure storage of data? Yes No

The types of individuals or organisations to which your organisation usually discloses information of this kind? Yes No

How privacy and confidentiality will be protected in any publication of the information? Yes No

The fact that the individual may access that information? Yes No

Any law that requires the particular information to be collected? Yes No

The consequences (if any) for the individual if all or part of the information is not provided? Yes No

The identity of the organisation collecting the information and how to contact it? Yes No

If you answered "No" to any of these questions, give the reasons why this information has not been included in the Participant Information and Consent Form.

Depending on departmental release of results (DoH) participants will have access to a final report in which they or their data will not be able to be identified.

Participants will not be able to access their individual survey data once it is collected by the researchers as all surveys are non-identifiable. When the non-identifiable surveys have been returned they will be coded and entered into SPSS.

Neither participants nor researchers will be able to identify any participants' individual survey and information provided in the survey.

1.25 Do other questions in this section have to be completed?

(a) Does the project involve the collection, use or disclosure of **individually identifiable or re-identifiable** information from sources other than the individual whose information it is? Note that access to identifiable records for the purpose of extracting non-identifiable data constitutes 'use' and 'disclosure' of identifiable data even if such data will not be 'collected'. (see *Module One Guidelines for definitions*)

No – **Go to Question 1.30 and do not answer the remainder of question 1.25, 1.26, 1.27, 1.28 or 1.29**

Yes – **answer the following question**

(b) Does the project involve the collection, use or disclosure of information **without the consent** of the individual whose information it is (or their legal guardian)?

No – **Go to Question 1.30 and do not answer questions 1.26, 1.27, 1.28 or 1.29**

Yes – **answer the following questions**

1.26 Type of activity proposed

Are you seeking approval from this HREC for

(a) collection of information from a third party?

Yes – **answer Question 1.27**

No – **skip Question 1.27**

(b) use of information?

Yes – **answer Question 1.28**

No – **skip Question 1.28**

(c) disclosure of information?

Yes – **answer Question 1.29**

No – **skip Question 1.29**

If you have answered 'No' to all three parts of Question 1.26, then go directly to Question 1.30

1.27 Collection of information from a third party

Only answer this question if the project involves the collection of individually identifiable or re-identifiable information from a source other than the individual (or their legal guardian) without the consent of the individual or their legal guardian.

(a) From which of the following sources will information be collected? (*Tick as many as apply*)

	Source of Information
<input type="checkbox"/>	A Victorian public health service provider
<input type="checkbox"/>	A Victorian private health service provider
<input type="checkbox"/>	An organisation other than a health service provider
<input type="checkbox"/>	A data set under the auspices of the Victorian DHS
<input type="checkbox"/>	A data set under the auspices of another Victorian government department
<input type="checkbox"/>	A data set from another Victorian source
<input type="checkbox"/>	A Commonwealth agency
<input type="checkbox"/>	An agency from another state
<input type="checkbox"/>	An "organisation" as defined in s95A of the Privacy Act
<input type="checkbox"/>	An individual (such as a carer)
<input type="checkbox"/>	Other

List the categories of individuals or organisations from which individually identifiable or re-identifiable information will be collected. If information will be collected from more than one category, indicate clearly what information or records will be collected from each category.

Category	Type of information or records to be collected
<i>e.g. carers; hospitals</i>	<i>e.g. contact information; complete medical history</i>

(b) Have all organisations from which the information is to be collected agreed to provide the information or to allow access to the information?

Yes No

If *Yes*, provide evidence of this agreement. Provide details of any conditions imposed by the organisation(s) concerning the release of the information.

If *No*, explain how and when the agreement of the disclosing organisation will be obtained.

(c) Is any organisation from which the information will be collected seeking separate HREC approval for disclosure of the information? (*See the Module One Guidelines for further explanation of this question. Note: The organisation(s) disclosing the information is not required by law to obtain separate HREC approval to disclose the information.*)

Yes – supply a copy of the decision from the other HREC (when available)

No - a copy of any approval from this HREC will have to be forwarded to the disclosing organisation

(d) Does the person who is collecting the information routinely have access to that information?

Yes No

(e) What information will be collected? (*Tick all boxes that apply*)

	Type of information		Type of organisation(s) involved	Privacy Principle(s)
<input type="checkbox"/>	Health information	<input type="checkbox"/>	Victorian public sector	HPP 1
		<input type="checkbox"/>	Victorian private sector	HPP 1, NPP 1, NPP 10
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 1, NPP 10
<input type="checkbox"/>	Personal information (other than health information)	<input type="checkbox"/>	Victorian public sector	VIPP 1
		<input type="checkbox"/>	Victorian private sector	NPP 1
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 1
<input type="checkbox"/>	Sensitive information	<input type="checkbox"/>	Victorian public sector	VIPP 10
		<input type="checkbox"/>	Victorian private sector	NPP 10
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 10

HPP – Health Privacy Principle, **NPP** – National Privacy Principle, **IPP** – Information Privacy Principle, **VIPP** – Victorian Information Privacy Principle

(f) Will the information be collected for deposit in a databank?

Yes No

(g) Give reasons why information will not be collected in a non-identifiable form.

(h) For what reason(s) will consent not be obtained from the individual(s) whose information will be collected? (*see Guidelines for clarification*)

(i) Give reasons why the proposed collection of information is in the public interest. Note that the public interest in the proposed research must substantially outweigh the public interest in respecting individual privacy.

1.28 Use of information

Only answer this question if the project involves the use of individually identifiable or re-identifiable information without the consent of the individual whose information it is (or their legal guardian).

(a) What information will be used? (Tick all boxes that apply)

	Type of information		Type of organisation(s) involved	Privacy Principle(s)
<input type="checkbox"/>	Health information	<input type="checkbox"/>	Victorian public sector	HPP 2
		<input type="checkbox"/>	Victorian private sector	HPP 2, NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2
<input type="checkbox"/>	Personal information (other than health information)	<input type="checkbox"/>	Victorian public sector	VIPP 2
		<input type="checkbox"/>	Victorian private sector	NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2
<input type="checkbox"/>	Sensitive information	<input type="checkbox"/>	Victorian public sector	VIPP 2
		<input type="checkbox"/>	Victorian private sector	NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2

HPP – Health Privacy Principle, **NPP** – National Privacy Principle, **IPP** – Information Privacy Principle, **VIPP** – Victorian Information Privacy Principle

(b) What are the specific purposes for which the information will be used?

(c) Is the purpose for which the information will be used (the secondary purpose) related to the purpose for which the information was **originally** collected (the primary purpose)?

Yes No

Give details.

(d) Give reasons why information will not be used in a non-identifiable form. (If the answer is the same as for Q1.27 (g), write "as above".)

(e) For what reason(s) will consent not be obtained from the individual(s) whose information will be used? (If the answer is the same as for Q1.27 (h), write "as above".)

- (f) Give reasons why the proposed use of information is in the public interest. Note that the public interest in the proposed research must substantially outweigh the public interest in respecting individual privacy. (If the answer is the same as for Q1.27 (i), write "as above".)

1.29 Disclosure of information

Only answer this question if the project involves the disclosure of individually identifiable or re-identifiable information without the consent of the individual whose information it is (or their legal guardian).

- (a) Will individually identifiable or re-identifiable information be disclosed by an organisation to the researcher?
- No – **Go to question 1.29(b)**
- Yes – answer the following question

What information will be disclosed by the organisation(s) to the researcher? (Tick all boxes that apply)

	Type of information		Type of organisation(s) involved	Privacy Principle(s)
<input type="checkbox"/>	Health information	<input type="checkbox"/>	Victorian public sector	HPP 2
		<input type="checkbox"/>	Victorian private sector	HPP 2, NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2
<input type="checkbox"/>	Personal information (other than health information)	<input type="checkbox"/>	Victorian public sector	VIPP 2
		<input type="checkbox"/>	Victorian private sector	NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2
<input type="checkbox"/>	Sensitive information	<input type="checkbox"/>	Victorian public sector	VIPP 2
		<input type="checkbox"/>	Victorian private sector	NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2

HPP – Health Privacy Principle, **NPP** – National Privacy Principle, **IPP** – Information Privacy Principle, **VIPP** – Victorian Information Privacy Principle

List the organisations that will disclose information to the researcher. If more than one organisation is involved, indicate clearly what information or records will be disclosed by each organisation to the researcher.

- (b) Will individually identifiable or re-identifiable information be disclosed by the researcher to other organisations?

No – **Go to question 1.30**

Yes – answer the following questions

What information will be disclosed by the researcher? *(Tick all boxes that apply)*

	Type of information		Type of organisation(s) involved	Privacy Principle(s)
<input type="checkbox"/>	Health information	<input type="checkbox"/>	Victorian public sector	HPP 2
		<input type="checkbox"/>	Victorian private sector	HPP 2, NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2
<input type="checkbox"/>	Personal information (other than health information)	<input type="checkbox"/>	Victorian public sector	VIPP 2
		<input type="checkbox"/>	Victorian private sector	NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2
<input type="checkbox"/>	Sensitive information	<input type="checkbox"/>	Victorian public sector	VIPP 2
		<input type="checkbox"/>	Victorian private sector	NPP 2
		<input type="checkbox"/>	Commonwealth public sector	IPP 11
		<input type="checkbox"/>	Other	NPP 2

HPP – Health Privacy Principle, **NPP** – National Privacy Principle, **IPP** – Information Privacy Principle, **VIPP** – Victorian Information Privacy Principle

List the organisations to which information will be disclosed. If information will be disclosed to more than one organisation, indicate clearly what information or records will be disclosed in each case.

(c) Give reasons why information will not be disclosed in a non-identifiable form. *(If the answer is the same as for Q1.27 (g) or Q1.28 (d), write "as above".)*

(d) For what reason(s) will consent not be obtained from the individual(s) whose information will be disclosed? *(If the answer is the same as for Q1.27 (h) or Q1.28 (e), write "as above".)*

(e) Give reasons why the proposed disclosure of information is in the public interest. Note that the public interest in the proposed research must substantially outweigh the public interest in respecting individual privacy. *(If the answer is the same as for Q1.27 (i) or Q1.28 (f), write "as above".)*

1.30 General issues

- (a) How many records will be sourced and what is the source (e.g. medical record, participant in person) and the type of information that will be collected, used or disclosed (e.g. date of birth, medical history, number of convictions, etc)
(Repeat for each source)

Source: Survey completed by participant in person

Number of records: 1 survey per participant and 1 interview record for consenting practitioners

Type of information: Key demographics, nutrition and physical activity behaviours, key health issues relevant to their child or to children in their care. For qualitative practitioner interviews opinion will be sought on health issues, sources of information and resources used. All surveys are non-identifiable.

- (b) Does the project involve the adoption of unique identifiers assigned to individuals by **other** agencies or organisations?

Yes No

If Yes, give details of how this will be carried out in accordance with relevant Privacy Principles (e.g. HPP 7, VIPP 7 or NPP 7).

- (c) Does the project involve trans-border (i.e. interstate or overseas) data flow?

Yes No

If Yes, give details of how this will be carried out in accordance with relevant Privacy Principles (e.g. HPP 9, VIPP 9 or NPP 9).

- (d) For what period of time will the information be retained? How will the information be disposed of at the end of this period?

Non-identifiable surveys will be coded with a unique identifier to be entered in the EpiData and SPSS programs. Access to this data set will be limited to the project researchers and password protected.

Non-identifiable surveys will be stored in a locked filing cabinet within the Department of nutrition & food services for 10 years accessible only to the project researchers;

Non-identifiable surveys will then be destroyed via a secure document disposal system. SPSS data set will be retained indefinitely.

- (e)** Describe the security arrangements for storage of the information. Where will the information be stored? Who will have access to the information?

The non-identifiable paper based surveys will be stored in a locked filing cabinet within the Nutrition & Food Services Department at The Royal Children's Hospital. Access will be limited to project researchers.

Non-identifiable electronic coded data will be taken from surveys and saved within a data file (Epidata) managed in Nutrition & Food Services Department on the The Royal Children's Hospital secure server. The data will only be accessible to the researchers working on the project. Data will be password-protected.

- (f)** If data is to be stored in a databank for future research, provide details of the following:

- (i) the name of the databank
- (ii) the form in which the data will be stored (identifiable, re-identifiable or non-identifiable) [NS 3.2.9(a)];
- (iii) what the purpose of future use will be [NS 3.2.9(b)];
- (iv) how any restrictions on the use of the data will be recorded to ensure future adherence [NS 3.2.11 & 3.2.12];
- (v) who the custodian of the data will be (include name, position, department and organisation) [NS 3.2.7].

- 1) Data bank name: Filling the Gaps needs assessment 2010.
- 2) The data bank will be an EpiData file that will be stored as non-identifiable records. SPSS data will be non-identifiable.
- 3) An objective of this research is to form recommendations for the Department of Health regarding future resources and information for families with young children and practitioners working with children 0-8 years. The data bank will enable nutrition and physical activity issues and knowledge identified in 2010 to be reviewed and re-interpreted at a later date.
- 4) All data will be non-identifiable; the data file will include acknowledgment of a statement on opening regarding future use of the data being consistent with original objectives of the data collection.
- 5) The custodian of the data will be the principal investigator Kay Gibbons, Manager of Nutrition and Food Services, Royal Children's Hospital

- (g)** How will the privacy of individuals be respected in any publication arising from this project?

Individual information will not be identifiable and therefore not reported in publications.

1.31 Other ethical issues

Discuss any other ethical issues **relevant to the collection, use or disclosure of information** proposed in this project. Explain how these issues have been addressed.

SECTION F: FINANCIAL AND RELATED ISSUES

1.32 Potential conflict of interest

Do any researchers have any financial interests in this research or its outcomes, or any relevant affiliations?

Yes No

If Yes, give details

If you have declared a potential conflict of interest, you should include an appropriate comment on the Participant Information and Consent Form.

1.33 Indirect costs

Will there be payments over and above the direct costs of this project (e.g. conference and travel, recruitment incentives, equipment)?

Yes No

If Yes, please provide details of payments and justification for them.

Possible conference and/or travel costs associated with the dissemination of results and recommendations. This may include costs associated with presentation at conferences, regional seminars.

1.34 Project budget

Attach a detailed project budget to this application.

Have you included:

- Salaries with on-costs
- Administration costs
- Research consumables (for example, bed-day costs)
- Participant reimbursement
- Departmental charges (e.g. Pharmacy, Pathology, Radiology)

If a detailed budget is not being provided, give reasons.

All costs will be met through Department of Health 'Filling the Gaps' project funding. RCH cost centre N2502. The Funding & Service agreement for this grant includes a detailed project plan and outcomes for this research.

1.35 Source of funding

How will this project be funded? List all sources of funds (e.g. commercial sponsorship, grant, departmental funds etc). If funded by the Department of Human Services, please specify the Branch providing the funding.

Source	Amount in \$	Status of Funds	
		Application pending	Funds Available
Department of Health, Public Health	\$130000 (FASA 2009-2010)		yes

1.36 Funds coverage

Do the funds presently available or applied for cover all requirements to conduct the project?

Yes No

If No, explain how the shortfall will be made up or dealt with.

1.37 Claims through Medicare

Will any charges be incurred by Medicare as a result of patient screening or participation?

Yes No N/A

If you require clarification regarding what should or should not be claimed or wish to clarify or confirm a position with regard to such claims, you should contact the Assessing and Benefits Section for each state (Provider Hotline 132 150 or Public Enquiries 132 011).

1.38 Declaration by Researchers and Research Coordinators

Project Title: A nutrition and physical activity needs assessment in 2 Victorian municipalities.

I/WE, the researcher(s) agree:

- To only start this research project after obtaining final approval from the Institution's Human Research Ethics Committee (HREC);
- To conduct this research project in accordance with the protocols and procedures as approved by the HREC;
- To only carry out this research project where adequate funding is available to enable the project to be carried out according to good research practice and in an ethical manner;
- To provide additional information as requested by the HREC;
- To maintain the confidentiality of all data collected from or about project participants;
- To agree to an audit if requested by the HREC;
- To only use data and any tissue samples collected for the study for which approval has been given;
- To only grant access to data to authorised persons; and
- To maintain security procedures for the protection of privacy, including (but not restricted to): removal of identifying information from data collection forms and computer files, storage of linkage codes in a locked cabinet and password control for access to identified data on computer files.

I/we have read the NH&MRC *National Statement on Ethical Conduct in Human Research, 2007* and will observe the principles set out in that document and in the *Declaration of Helsinki*.

Name of Principal researcher: Kay Gibbons

Signature _____ Date _____

Name of Associate researcher: Geraldine Naughton

Signature _____ Date _____

Name of Associate researcher: Evelyn Volders

Signature _____ Date _____

Name of Associate researcher: Judith Myers

Signature _____ Date _____

Name of Associate researcher: Natasha Hampson

Signature _____ Date _____

1.39 Certification by Principal Researcher and Head of Department

Project Title:

Certification by Principal Researcher

I accept responsibility for the conduct of this research project according to the principles of the *National Statement on Ethical Conduct in Human Research, 2007* published by the National Health & Medical Research Council.

I certify that all researchers and other personnel involved in this project are appropriately qualified and experienced or will undergo appropriate training to fulfil their role in this project.

As principal researcher, I will ensure that

- progress reports are provided to the HREC as requested, including a final report and a copy of any published material at the end of the research project;
- the HREC is notified in writing immediately if any change to the project is proposed, and approval is received before proceeding with the proposed change
- the HREC is notified in writing immediately if any adverse event occurs after the approval of the HREC has been obtained.

As principal researcher, I will take responsibility for the confidential maintenance of records for a minimum of 10 years after completion of the project (15 years in the case of drug trials) or as required by the institution/approving HREC.

Name of principal researcher: Kay Gibbons

Signature

Date

Acceptance by Head of Department/Divisional Director/Authorised Institutional Official*

I certify that I have read the research project application named above.

My signature indicates that I support this research project.

Name of Head of Department (or appropriate person):

Name of Department (or relevant section):

Signature

Date

*Where a researcher is also Head of Department, certification must be sought from the person to whom the Head of Department is responsible. Researchers who are also Department Heads or Divisional Directors must not approve their own research on behalf of the Institution.

1.40 Declaration by Head of Supporting Department

This form is to be completed by the Head of any Department that is providing support or services to the research project, but which does not have any member(s) on the research team. Please duplicate if more than one department is providing support.

Project Title: A nutrition and physical activity needs assessment in 2 Victorian municipalities.

Principal Researcher: Kay Gibbons

I have discussed this project with the Principal Researcher and have seen the application and protocol. I am (*tick whichever applies*)

- able to perform the investigations/services indicated, within the present resources of the Department;
- able to perform the investigations/services indicated, if the following financial assistance is provided:

- unable to undertake the investigations/services indicated, on the following grounds:

Name:

Signature:

Date:

Head of the Department of

MODULE ONE: CHECKLIST

Please satisfy each of the following before submitting the application. Failure to do so will delay review of the application.

Include a copy of this checklist (completed & signed) with the application.

Full project title

A nutrition and physical activity needs assessment in 2 Victorian municipalities.
--

Have you answered all relevant questions in Module 1?	<input type="checkbox"/>
Is a staff member from the Institution listed as a researcher?	<input type="checkbox"/>
Have you defined all technical terms and abbreviations used?	<input type="checkbox"/>
Have you included all questionnaires or surveys to be used?	<input type="checkbox"/>
Have you completed all financial details in Module 1, Section F?	<input type="checkbox"/>
Have you included a detailed project budget?	<input type="checkbox"/>
Have you declared all potential conflicts of interest?	<input type="checkbox"/>
Have you included any other site-specific modules or documentation specifically required by the Institution(s) at which you intend to conduct your research?	<input type="checkbox"/>
Do the Participant Information and Consent Form(s) show the name of the Institution, with pages numbered & dated in the footer?	<input type="checkbox"/>
Are all relevant modules stapled separately, in order? <i>Note: Attach attachments for each module at the end of that module</i>	<input type="checkbox"/>
Are all pages (including attachments) numbered in the footer?	<input type="checkbox"/>
Have you provided an original and the required number of copies?	<input type="checkbox"/>
Have you completed the form "Declaration by Researcher(s)?"	<input type="checkbox"/>
Have you completed the form "Certification by Principal Researcher and Head of Department"?	<input type="checkbox"/>
Has a completed "Declaration by Head of Supporting Department" been included for each supporting department (if applicable)?	<input type="checkbox"/>

Name of principal researcher- Kay Gibbons

Signature

Date

APPENDIX 4 Participant information letter and consent

The Royal Children's Hospital, Melbourne



Flemington Road,
Parkville
Victoria, Australia, 3052

Telephone (03) 9345 5522
ISD (+613) 9345 5522
Facsimile (03) 9345 5789
Web www.rch.org.au

PARTICIPANT INFORMATION LETTER - PARENT FOR QUESTIONNAIRE/INTERVIEW-BASED RESEARCH

**HREC Project
Number:** 30017A

**Research Project
Title:** Nutrition and Physical Activity Needs Assessment for Children Birth to
Eight Years in Victoria 2010

Dear Parent

You are invited to take part in a research project to show the nutrition and physical activity needs of families with young children 0-8 years. The results will give information about the gaps in information for staff working with young children and their families. The results will help the Victorian Government plan future research and nutrition and physical activity programs for young children and families.

In 1994-1995 a similar nutrition research project was held in Melbourne's western suburbs. This project will compare nutrition issues over time to decide if new information and resources are needed for parents and practitioners. Physical activity information has been added as well to this project.

Parents and carers with children aged 0-8 years will take part in the project. Up to 1000 parents from the City of Brimbank and the City of Greater Shepparton's maternal and child health services, child care settings, best start Supported Playgroups, kindergartens, and primary schools will be involved.

This research project is supported by the Victorian Department of Health

We would like to invite you to take part in this research project because you have a child aged between 0-8 years. We would like you to complete a survey that you can choose to do now, or take away with you. If you would like to complete the survey in your own time, please return it in the pre-paid envelope we give you within 5 working days. The survey will take about 10-15 minutes to complete. The survey has questions about your child's nutrition and physical activity as well as his/her general health. An interpreter or researcher will help you to complete this survey if needed. We will not pay you for taking part in this research.

We do not expect there to be any direct benefit to you. Many parents feel good about taking part in health research. We hope this project will help the Victorian Government plan future research and nutrition and physical activity programs for young children and families.

There are no risks to you if you take part in this project. We have done our best to make sure that the questions do not cause you any distress. The estimated 10-15 minutes needed to complete the survey may be a little inconvenient. You will not be forced to give any information you do not want to. If you become upset, we can direct you to a counsellor. You can stop the survey at any time.

All the information you give us will stay private. We will only use your information for this research project. We do not need any personal details about you or your child. Your answers from the survey will not identify you in any way. We will keep the surveys in the Nutrition and Food Services Department at The Royal Children's Hospital. The only people who can access your information are the research team. We will keep a database with survey responses. Paper copies of the surveys will be kept in locked files, and then destroyed after 10 years. The results of the project may be shared at conferences and written about in professional journals. The results will not identify you in any way.

At the end of the project, the Department of Human Services will decide if and how results will be released.

You do not have to take part on the project if you do not want to. If you do not take part or withdraw from the project, it will not affect your access to the best available treatment options and care from The Royal Children's Hospital. If you decide to take part and later change your mind, it may not be possible to withdraw your survey information.

We hope that you will take part. If you wish to take part, please complete the questionnaire and return it to us. Please remember to tick the box on the survey that states you have read this information letter and consent to taking part in the project. If you have any questions, or would like further information about this project, please call Ms Kay Gibbons on (03) 9345 5439

Yours sincerely

Ms Kay Gibbons
Principal Researcher
9345 5439

Ms Kay Gibbons
Principal Researcher
Nutrition and Food Services Department

Professor Geraldine Naughton
Associate Researcher
School of Exercise Science
Australia Catholic University

Ms Evelyn Volders
Associate Researcher
Nutrition and Food Services Department

Ms Judith Myers
Associate Researcher
Nutrition and Food Services Department

Ms Natasha Hampson
Associate Researcher
Nutrition and Food Services Department

If you have any concerns about the project, or the way it is being conducted, and would like to speak to someone independent of the project, please contact:

Head of Department
Ethics and Research Department
Human Research Ethics Committee
The Royal Children's Hospital
Telephone: (03) 9345 5044

APPENDIX 5 Ethics committee Certificate of approval

RCH HUMAN RESEARCH ETHICS COMMITTEE APPROVAL

HREC REF. No:	30017 A
PROJECT TITLE:	A nutrition and physical activity needs assessment in 2 Victorian municipalities (including a Pilot of Needs Assessment tools)
DOCUMENTS APPROVED:	Please see reverse for full list of documents
APPROVED PROTOCOL:	Protocol v5 dated 26 May 2010
PRINCIPAL INVESTIGATOR:	Kay Gibbons
DATE OF ORIGINAL APPROVAL:	27 th May 2010
DURATION:	24 months
DATE OF APPROVAL EXPIRY:	27 th May 2012
SIGNED:	 COMMITTEE REPRESENTATIVE
07, 06, 10	
APPROVED SUBJECT TO THE FOLLOWING CONDITIONS:	
ALL PROJECTS	
<ol style="list-style-type: none"> 1. Must comply with the Investigator's Responsibilities in Research available at http://www.rch.org.au/emplibrary/ethics/Investigators_Responsibilities_in_Research.pdf 2. Any proposed change in the protocol or approved documents or the addition of documents (including flyers, brochures, advertising material etc) must be submitted to the Human Research Ethics Committee (HREC) for approval prior to implementation. 3. The Principal Investigator must notify Ethics & Research of: <ul style="list-style-type: none"> - Any serious adverse effects of the study on participants and steps taken to deal with them. - Any unforeseen events (e.g. protocol violations or complaints). - Investigators withdrawing from or joining the project. 4. A progress report must be submitted annually and at the conclusion of the project. 5. RCH HREC approval must remain current for the entire duration of the project. If the project is not completed in the allocated time a renewal request must be submitted to the Ethics & Research Department. Investigators undertaking projects without current HREC approval risk their indemnity, funding and publication rights. 	
CLINICAL TRIALS	
<ol style="list-style-type: none"> 6. Must comply with Good Clinical Practice (GCP) available at http://www.tga.gov.au/docs/pdf/euguide/ich/ich13595.pdf 7. Must report all internal (occurring in RCH participants) Serious Adverse Events (SAE) to the sponsor and the RCH HREC within 72 hours of occurrence. 8. Must report all Suspected Unexpected Serious Adverse Reactions (SUSARS) to the Therapeutic Goods Administration (TGA) (for sponsored studies the sponsor may take this responsibility). 	

APPENDIX 6 Letters of support

Australian Catholic University
Brisbane Sydney Canberra Ballarat Melbourne



September 8, 2011

Chair of the Research and
Higher Degrees Committee,
Charles Darwin University

Australian Catholic University Limited
ABN 15 050 192 660
School of Exercise Science
Melbourne Campus
115 Victoria Parade, FITZROY, Victoria
3065 Australia
Telephone 61 3 9953 3034
Facsimile 61 3 9953 3085
www.acu.edu.au

Dear Sir/ Madame

I write to support the research of a currently enrolled Masters of Public Health student,
Ms Judith Myers.

I had the honour of researching with Judith on the Needs Assessment project in 2010.
Her contribution to the project has been extraordinary. At all times, her leading roles in
ethics, methods, data collection and results analysis have been very much appreciated.
Judith's contribution has been well beyond any paid role on this project.

We look forward to seeing the manuscript being prepared from the project on which
she will be lead author. There are other papers planned

Two conference abstracts have also been submitted to an international nutrition
conference in Sydney next year.

Sincerely

Geraldine Naughton

Geraldine Naughton PhD
Professor in Paediatric Exercise Science
Director of the Centre of Physical Activity Across the Lifespan
School of Exercise Science, Australian Catholic University
115 Victoria Parade, FITZROY, Victoria, 3065, AUSTRALIA
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Department of Nutrition & Food Services
Flemington Road
Parkville VIC 052
Tel: 03 9345 5636
Fax: 03 9345 6496
Email: kay.gibbons@rch.org.au

20th September 2011

Chair of Higher Degree Research Committee
Charles Darwin University

Dear Sir/Madam,

I am writing to confirm that Judith Myers has been engaged in the project 'Nutrition & Physical Activity Needs Assessment in Children aged 0-8 years Metropolitan and Rural Victoria' and as Project Manager I am in agreement with Judith using data from the project as part of her research thesis for completion of the MPH.

Judith joined the project very soon after concept development. She was closely involved in all aspects of the project from that point: modification of the original Ethics Application and steering the application from there, review of the survey tools and planning the details of the methodology.

Judith took an active role in the data collection, has liaised with the statistical consultant and been actively involved in the project report.

A total of 8 papers have been planned by the project group on the findings of the project and Judith is planning to prepare the article: ***Nutrition and physical activity practices and needs of families with young children 0-4 years attending supported playgroups*** for publication.

The project team has so far submitted 2 abstracts from the project to the International Congress of Dietetics, to be held in Sydney, September 2012:

Multiple nutrition and physical activity disadvantage for families with young children attending supported playgroups

Judith Myers¹, Kay Gibbons^{1,2,3}, Natasha Hampson¹, Geraldine Naughton^{2,3}, Evelyn Volders¹

¹ Royal Children's Hospital, Australia

² Murdoch Childrens Research Institute, Australia

³ Australian Catholic University, Australia

Differences between parent and practitioner perceptions of lifestyle factors in young children

Kay Gibbons^{1,2,3}, Judith Myers¹, Natasha Hampson¹, Geraldine Naughton^{2,3}, Evelyn Volders¹

¹ *The Royal Children's Hospital, Australia*

² *Murdoch Childrens Research Institute, Australia*

³ *Australian Catholic University, Australia*

Yours sincerely

A handwritten signature in black ink, appearing to read 'Kay Gibbons', with a stylized flourish extending to the right.

Kay Gibbons BAppSc AIMM FDAA
Manager Nutrition & Food Services

Re: approval for MPH thesis
Kelly.Neville@health.vic.gov.au [Kelly.Neville@health.vic.gov.au]
Sent: Friday, 9 September 2011 12:55 PM
To: Judith Myers

Hi Judith,

Apologies for the name mix-up. To confirm, in writing approval (on 22.06.2011) by the Prevention and Population Health branch for you to use the Filling the Gaps Needs Assessment 2010 research, funded by the Department in your Masters of Public Health research project, as specified in the list you provided.

Kind regards
Kelly

Kelly Neville
Senior Project Officer, Nutrition, APD | Prevention and Population Health
Department of Health | 50 Lonsdale Street, Melbourne, Victoria, 3000
p. 03 9096 5899 | f. 03 9096 9165
e. kelly.neville@health.vic.gov.au

Please consider the environment before printing this email I acknowledge the traditional Aboriginal owners of country throughout Victoria and pay my respect to them, their culture and their Elders past, present and future.

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