



Hunger for Learning

Nutritional barriers
to children's
education

A Child Poverty Action Group Monograph
Donna Wynd

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Preface

Too many New Zealand children start their day without an adequate breakfast. The lack of food at the start of the day affects them at school and is a major barrier to their learning, and social progress and development. Their lives are made worse as a result of starting the day without breakfast and this has consequences for their peers and teachers each day.

While some children may not like breakfast and others may not have breakfast because their parents, for whatever reason, do not provide it, the major cause of the lack of an adequate breakfast for young children is, quite simply, poverty. This is well born out by the international and New Zealand research. Interestingly as this report went to press, a major New Zealand initiative was launched demonstrating the importance of nutrition while the city of Chicago was reported to be establishing a universal breakfast programme for children. At the same time, the Red Cross breakfast in schools programme, discussed in the body of this report, has just announced it will terminate its programme, effective this year, due to the loss of the major sponsor. Irrespective of the cause, children are not responsible for their poverty and there is a collective responsibility for ensuring that all children, regardless of circumstances, have the best possible opportunity at school. As the example of the Red Cross and Countdown shows, collective responsibility cannot be met by private providers.

Hunger for Learning reports on an important piece of work undertaken by the Child Poverty Action Group. It provides significant data about the experiences of schools which have provided breakfast programmes and about what is required to run these programmes effectively to meet the needs of their students and school communities. It identifies both the advantages of those programmes and the requirements to ensure that all children start the school day adequately nourished. On the basis of the data gathered and the experiences of the national and international initiatives, CPAG is recommending here that breakfast programmes be started in all decile 1 and 2 primary and intermediate schools, supported by a dedicated budget allocation and local business and community partnerships.

Such an initiative would represent an important contribution to the wellbeing of children, would help ensure that they get the best possible start to their learning and their lives. and would make an important contribution to their longer term health by ensuring that they what they eat is healthy.

Executive summary

In 2005 the Child Poverty Action Group published *Hard to Swallow* (Wynd, 2005), which sounded the alarm about increasing numbers of families resorting to using foodbanks at a time of strong economic growth. Now, in 2011, it is clear that what CPAG observed then was a trend of increasing food insecurity for households using foodbanks, even as the economy enjoyed its longest stretch of economic growth in 50 years.

For most families, inadequate income remains the central issue contributing to food insecurity. For households with budgets already stretched by rent and power, food remains one of the few expenses where savings can be made. As the recession drags on and prices for basic household items rise, schools report increasing demand for the breakfasts and/or lunches they provide. In 2005, CPAG found that the greatest users of foodbanks were beneficiaries. In 2011 food insecurity is not just an issue for beneficiary families, with foodbanks and budgeting agencies reporting that although beneficiaries continue to use them, the greatest increase in people seeking assistance is coming from working families.

Since the 1990s, schools have been stepping in to fill the gap in food provision left by inadequate household incomes. To get some understanding of what is driving schools to provide food, the method of delivery and what impact the schools themselves thought their food programmes had, in mid-2010 CPAG conducted a phone survey of 17 randomly selected decile 1 and 2 primary, intermediate and secondary schools in the Auckland region. In early 2011 CPAG conducted in-depth interviews with the principals (and where possible the coordinators of the programme) of five primary and intermediate schools providing regular breakfast programmes.

Schools talked about parents facing multiple stresses, with most trying to do their best under what are often difficult circumstances. Issues highlighted were parents working long hours and/or multiple jobs, low incomes, lack of access to transport, and issues around housing including overcrowding and transience. Schools also talked about a minority of parents failing to cope with the multiple stresses in their lives, up to and including feeding their children. The tension for schools is whether to usurp parental responsibility by stepping in and feeding their children or to make sure the children have eaten sufficient good quality food to learn. On balance most schools opt for the latter, and often provide some social services for families as well.

Two separate but related serious issues emerged for children in low-decile schools: the first is lack of food, with most schools reporting an increase in demand for their existing programmes this year; the second is the poor quality of the food consumed by many children. Consistent with research from overseas, low-income families in New Zealand are more likely to be overweight or obese, and suffer from associated non-communicable diseases such as diabetes as a result. This is in large part because highly processed, poor quality, calorie dense food is relatively satisfying when compared to fresh fruit and vegetables, and relatively cheap when compared to good quality protein. Two New Zealand studies presented in Chapter 3 show it is very difficult for many low-income families to regularly eat meals that meet even minimum Ministry of Health nutrition guidelines for children.

A simple analysis of a pre-packaged dairy lunch also illustrates the nutritional shortcomings of much of the cheap food thousands of children depend on for breakfast, lunch and snacks.

There is now a great deal of research evidence that a good quality breakfast improves children's educational outcomes including test scores, as well as their school attendance and classroom behaviour, which in turn help their learning and those of their class mates. In CPAG interviews, schools reported improvements in children's health, which also feeds back as improved attendance and better learning. Equally important, there is an expanding body of research showing that breakfast can improve nutrient uptake and reduce the risk of children becoming overweight/obese. Schools reported that programmes that focused on good nutrition were also improving the family diets of some children.

Presently, food in schools is provided through a number of private programmes and charities (except for Fruit in Schools, which is administered through the Ministry of Health). There is no audit for quality and no standard method of distribution. Most schools that provide breakfast do so on a universal basis, but other programmes such as KidsCan provide through far more arbitrary methods such as identification of need by teachers.

In May 2011, as this report was being finalised, the Countdown supermarket chain announced it was withdrawing sponsorship from the Red Cross breakfast programme. The loss of sponsorship for the Red Cross programme makes it clear that the present model of charity dependency is risky and uncertain. While the Prime Minister urges business to 'step up to the plate', this provides no certainty of funding. Firms go bust, or they change their priorities. Certainty of funding can be provided only by the state, and CPAG recommends that partial funding of breakfast programmes, sufficient to cover a coordinator and some food where appropriate, be provided to decile 1 and 2 primary, intermediate and primary/intermediate combined schools. Breakfasts should be provided on a universal basis to those that want them in these schools, as is the case with most programmes now, with schools working in partnership with their communities where feasible to make up the balance of funds or food required. CPAG estimates this would cost up to \$7-19 million per annum, depending on the extent of coverage and whether or not food is included as a cost. Given the evident benefits of such a programme, this is remarkable value for money. It would also provide support directly to those most in need.

To date, most public discussion of hungry children in New Zealand has placed a strong emphasis on parental inadequacy as being the fundamental reason children go hungry. The evidence suggests otherwise, and it is time to put the blaming of parents to one side and to focus on improving the educational outcomes of affected children. There are two fundamental reasons for this: the first is that New Zealand is a signatory to the UN Convention on the Rights of the Child. Under the Convention, State parties have an obligation to ensure children receive adequate nutrition *because children have rights on their own account*. The second is more pragmatic and far reaching: New Zealand is facing a massive demographic shift as its population ages and as baby boomers work fewer hours and require more, and more expensive, care. As a nation, New Zealand will need every one of those hungry children to be an educated, well-informed and functioning citizen. Providing breakfasts for them is not a total solution but it is a cost effective step along the way.

Recommendations

- Children need to be fed adequately both because they have intrinsic rights as children, and for a range of nutritional, educational, health and social reasons. While family responsibility is a fundamental dimension of ensuring this happens, children should be fed regardless of their parents' income or status. To this end, breakfast should be made available to children in decile 1 and 2 primary, intermediate and primary/intermediate combined schools.
- Breakfasts should be provided on a universal basis to children attending decile 1 and 2 primary, intermediate primary/intermediate combined schools. Making breakfast available to children in these targets children with the greatest need, and is a direct provision to them.
- Breakfasts should be required to comply with nutritional guidelines to ensure a minimum nutritional standard. Breakfast can be an important meal for improving uptake of nutrients including iron, and regular breakfasts can reduce children's likelihood of being overweight or obese.
- Breakfast programmes need to be resourced properly through regular and secure partial funding from central government. This funding needs to cover most of the cost. The evidence clearly demonstrates that food programmes cannot rely solely on charity, volunteers, and/or donations of food and time from teachers.
- Schools need to be provided with a policy framework that encourages them to develop relationships with their local communities, and to help build capacity within communities. Policy design should require some level of local contribution to ensure acceptance by the community. This should include the development of partnerships with local businesses, parents and suitable NGOs. Subsidies and assistance should be designed to promote these relationships.
- State contributions should be dedicated specifically to programmes, and subject to audit to ensure funds are being used for the purpose for which they were allocated.
- Programmes need to be monitored and evaluated for effectiveness, to ensure objectives are being met, and that an appropriate nutritional standard is maintained.

1. Introduction

In 2005 the Child Poverty Action Group published *Hard to Swallow* (Wynd, 2005), which sounded the alarm about increasing numbers of families resorting to using foodbanks at a time of strong economic growth. Now, in 2011, it is clear that what CPAG observed in 2005 was a trend of increasing food insecurity for households using foodbanks, even as the economy enjoyed its longest stretch of economic growth in 50 years. This trend has become more marked since the onset of the recession in late 2007, and in 2011 thousands of households struggle to meet basic day-to-day costs. For the many households who did not get to share the good years, the subsequent downturn has been difficult indeed.

A key recommendation of the 2005 report was that free, good quality breakfasts should be provided for children in decile 1 and 2 primary and intermediate schools as a means of ensuring that, at a minimum, the most vulnerable children were getting sufficient nourishment to enable them to learn effectively at school. Since *Hard to Swallow* was written, the issue of children coming to school hungry has been reported on consistently. The needs of children in low-income households have not diminished. On the contrary, the evidence suggests the long drawn-out recession has made many low-income families worse off.

This project picks up on the recommendation in *Hard to Swallow*, and expands on it by reviewing the growing body of research linking good quality, adequate food with improved school attendance and performance, and, drawing from Martin Anscombe's (2009) work, addresses the limited support for what should be an obvious policy response to an immediate problem. It considers some current systems of delivery of food to children in low-decile schools and argues schools need a funding model for an in-school food programme that is sustainable, universal, and promotes improved educational achievement of their students.

Once upon a time, New Zealand schools did not have to feed children. The milk in schools scheme that started in 1937 and finished 30 years later was partly about improving children's nutrition, but also about using surplus milk. Yet, following the recession of 1991-2, not only did New Zealand find itself with multiple foodbanks it had never needed before, schools also started reporting children turning up to school having not eaten breakfast, or with no lunch. The story of hungry children in New Zealand is part of the story of our increasing income inequality.

Successive governments have ignored the problem or helped construct the public debate such that the issue has been portrayed as one of parental failure (Anscombe, 2009). Poor quality diet has also been portrayed as a matter of personal preference. The 2000-2008 Labour administration's response to poor diet included social marketing campaigns such as Push-Play that aimed to encourage families to eat healthier food as part of broader strategies to improve people's health and fitness. These campaigns sidestepped the lack of affordability of healthy food for families on low incomes that was, and remains, the central issue. In the early 2000s Treasury found poor child nutrition is a risk factor for children's ability to learn. However it grouped poor nutrition and hunger with a range of other factors that affect children's educational outcomes, concluding the most significant factor was teacher quality (Jacobsen et al., 2002). Effectively this sidelined the role of environmental factors, including diet, in children's education and health outcomes.

Since 2008 the National government has also avoided debate about food insecurity, preferring instead to blame beneficiaries for 'poor choices' (thus equating food insecurity with being on

a benefit) and focusing on getting beneficiaries into work as a general cure-all for the problems associated with poverty. This is despite the fact that 11% of children in households with at least one adult in full time work are in income poverty¹ (Perry, 2010). In addition, the National government has scrapped Labour's public health initiatives around healthy eating and exercise, opening the way for convenience food advertisers to dominate the food messages received by children and their parents.

This project takes as its starting point the principles that underlie the Education (School Meals) (Scotland) Act 2003 as the basis for its key recommendation that New Zealand's decile 1 and 2 primary and intermediate schools provide free breakfast to all enrolled students on a universal basis. These principles are: to give children the right to a free school meal and adequate drink of milk at schools; and to make provision for an inclusive system of nutritional standards, and arrangements for the monitoring and enforcement of nutritional standards (Sheridan, 2001).

To date, policymakers and officials have expressed no intentions to deal directly with providing food for the 43,000 children in decile 1 and 2 primary, intermediate and secondary state schools in the Auckland region alone. Nationally, there are 115,000 children in decile 1 and 2 primary, intermediate and secondary schools, with private charities, and schools and teachers scrambling to fill the nutritional gaps of many of these students. Private charities have a place in this, but to ensure children get adequate, nutritious breakfasts regularly, provision must be put on a formal, secure and sustainable footing in a manner that guarantees fair and equitable access, and is publicly accountable. This investment in our future, CPAG argues, must come from the state as it alone has the capacity to provide such a footing. Making it a state responsibility also acknowledges that all New Zealanders have an interest in helping every New Zealand child reach their potential.

2. The structure of this report

Every day hundreds of children in Auckland's low-income communities arrive at school hungry. Many schools provide food so that each child can learn effectively, with most food being provided through charities and private donations.

This report considers the experiences of low-decile schools providing food programmes to students, in the expectation that such experiences may form the basis for a large-scale, ongoing and sustainable provision of free breakfast or lunch to children in decile 1 and 2 primary schools in Auckland and elsewhere in New Zealand. The problem is not insignificant – in South Auckland, excluding Papakura, 63 % of the schools are decile 1-3 schools.²

There are three parts to this report. The first part describes the context in which food insecurity arises, and includes studies showing how difficult it can be for low-income households to consistently provide a nutritious diet for children.

The second and main part of this report examines in depth the efforts being made by schools to provide food to students. It reviews existing programmes, and a survey of what schools are currently doing. The first part of the survey consists of a random phone survey of 17 decile 1 and 2 schools across the Auckland region completed in mid-2010. The aim of this phone survey was to ascertain the extent of food provision by schools in Auckland, and to get an indication of the type of provision; for example, whether breakfast or lunch were being provided, and the basis upon which food was

1 60% of median income after housing costs.

2 Deciles measure the extent to which a school draws its students from low-socio-economic communities. For example, Decile 1 schools are the 10 percent of school with the highest proportion of students from low-socio-economic communities, whereas Decile 10 schools are the 10 percent of schools with the lowest proportion of these students.

provided. The results are tabulated (Table 1). The second part of the survey is five in-depth semi-structured interviews with principals and, where possible, the staff of five Auckland schools currently providing breakfasts to children. These interviews were conducted in early 2011. The outcome of the interviews is in the section following the table of the phone survey. The aim of these interviews was to find out what the schools were doing and the rationale behind their choices; what effect the programmes had had on the children and their families, the school, and the wider community; and what aspects of the programmes the schools felt were working well. Principals were also asked general questions about the circumstances of their schools' catchments and the families whose children attended the school. The schools interviewed were four primary and one intermediate school. Four were in South Auckland, and the fifth was in the Panmure/Glen Innes area. Secondary schools were omitted from the more in-depth research for two reasons: the first is that younger children are more likely to benefit and/or change behaviour as a result of breakfast provision; the second is that it became apparent from the phone survey that secondary school students are less likely to view breakfast as an incentive to attend school. The five case studies provide the basis for the recommendations of this report. All the schools interviewed are part of the government-funded Fruit in Schools programme, and this is also considered where it overlaps with the other programmes discussed in the interviews.

Notes were taken during interviews. Direct quotes from interviewees are used throughout this report and are shown as *"italics in direct quote marks"*. Schools have not been identified in order to protect the privacy of the schools and their students.

The third part of the report reviews the importance of nutrition for children's physical and mental development, and considers the link between socio-economic status, poor nutrition and obesity. In New Zealand and overseas, paediatricians are reporting an increase in obesity-related disorders, including type II diabetes, sleep disorders and joint pains (Harris, 2004). The effects of obesity often last into adulthood, and disproportionately affect low-income households that are more likely to eat cheap, often unhealthy food. There is now a significant body of literature dealing with children's breakfasts and nutrition, including their impact on weight and obesity, and some of this is reviewed here.

This section also considers the evidence from Scotland, which has a well-researched history of breakfast clubs and has recently resolved to implement universal free school meals for year 1 to 3 pupils at primary schools. Finally, this section provides an estimate of the cost and benefits of a universal programme, with schools being given the choice to opt in, and ends with a discussion and conclusion.

Drawing on this research, a proposal for providing breakfasts to children in decile 1-2 primary and intermediate schools will be put forward that is sustainable, is appropriate for individual schools, and promotes improved educational achievements of pupils attending schools in low-income communities. Although this report is focused on the Auckland region, and the schools who took part in the research were all in Auckland, CPAG recommends that the provision of breakfast to children in decile 1 and 2 schools be rolled out nationally in order to improve the educational chances of thousands of New Zealand children living in restricted circumstances.

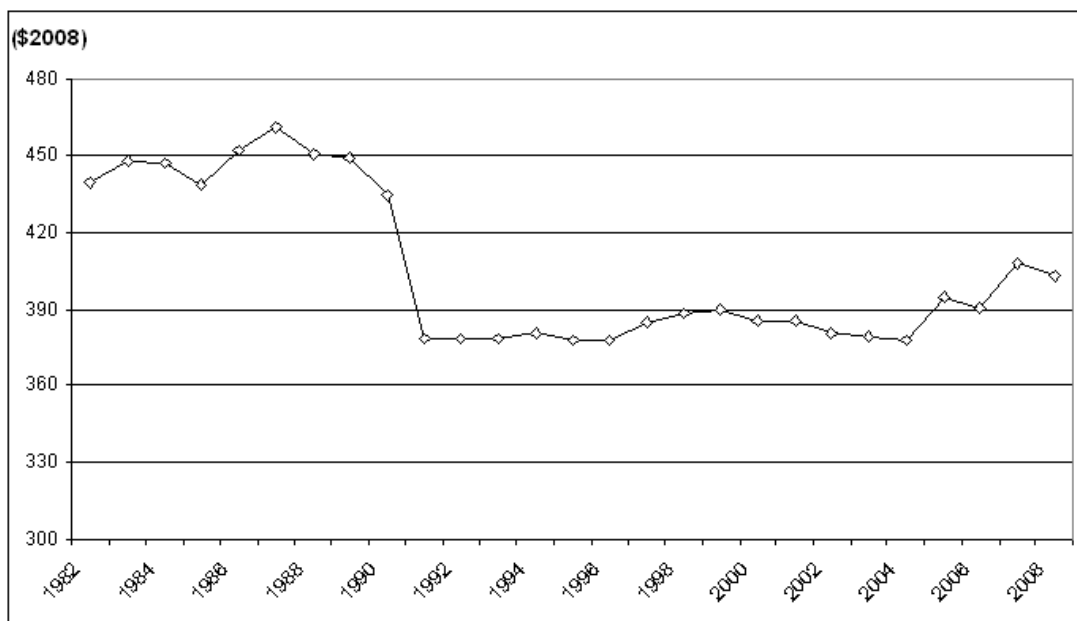
3. The context of food insecurity

Background

Reports of children arriving at school not having eaten breakfast started appearing in the mainstream media in the 1990s. During the 2000s, despite the longest economic boom since the Second World War, these reports not only kept appearing, but increasing in frequency (Bay of Plenty Times, 2011; Collins, 2011; TVNZ, 2010). As a result, the reality that every day thousands of New Zealand children go to school hungry has come to public attention. The response has been the piecemeal emergence of local and national charities: KidsCan, the Red Cross, and KickStart all provide food (mainly breakfasts) to low-decile schools, with demand reported to be increasing (New Zealand Red Cross, 2010. See also <http://www.kidscan.org.nz/latest-news>). For most of the families low income remains the central issue. As the recession has persisted through 2009 and into 2011 rising unemployment and rising living costs have resulted in food insecurity becoming a pressing issue for more families. In 2005 CPAG found that the greatest users of foodbanks were beneficiaries. However, in 2011 food insecurity is not just an issue for beneficiary families. Agencies report that although beneficiaries continue to use them, foodbanks indicate that the greatest increase in the number of people seeking budgeting assistance and assistance from foodbanks is coming from working families and even high-income earners, especially as jobs have vanished, or families find their hours have been cut back (for example Taylor, 2011; The Salvation Army Social Policy and Parliamentary Unit, 2010; Evans, pers comm).

Food insecurity arises for a number of reasons, but the underlying issue is inadequate income. While there are always exceptions, New Zealand's foodbank story and the emergence of food programmes in schools have coincided with largely stagnant or falling real incomes for beneficiaries and low-wage workers over the last 20 years. Real benefit levels remain well below what they were prior to the benefit cuts of 1991 (see Figure 1).

Figure 1: Benefits, real \$2008 1981-2008, DPB with 2 children, including Family Tax Credit.



Source: Ministry of Social Development

Many working families also struggle to make ends meet. Families on or even slightly above the minimum wage may work well in excess of the standard working week to cover basic housing, food and utilities costs. Several of the schools interviewed identified parents' long working hours as a factor in children requiring school breakfasts. Since late 2008, a lacklustre economy has translated into unemployment for some and reduced hours for others (Child Poverty Action Group, 2011), further eroding many families' incomes. Dual-income households cut back to one low or middle income find they are not eligible for social assistance including the In-Work Tax Credit, hence the loss of the second income can cause significant hardship. In Auckland, housing continues to be a major expense with rents rising even as the property market remains flat. The flat real estate market has made housing slightly more affordable for those in a position to buy, but this group is far outnumbered by those seeking rental accommodation (NZPA, 2011). As well, unexpected expenses can result in borrowing on top of any existing credit obligations, adding to financial distress. This is reflected in family budgeting services reporting record demand for their services (Collins, 2011; Downtown Community Ministry, 2010; King, 2010; Knight, 2011; Pokoney, 2010).

Clearly the provision of a consistently nutritious diet is beyond the means of many low-income families. The 2003 *Children's Nutrition Survey* (Ministry of Health, 2003b) found that low income was a significant factor in food insecurity. The food commonly available from stopgaps such as foodbanks is often poor quality (fruit and vegetables do not travel or keep well), and the food available through schools can play a critical role in improving children's diets. Yet shortly after it was elected in 2008 the National government was announced the withdrawal of food guidelines for schools, further threatening many children's nutrition (Thomas, 2009). Although also initially threatened, the government agreed to extend the extremely modest Fruit in Schools programme on the advice of officials who argued that Fruit in Schools "has the potential to make a positive difference to longer term health and education outcomes for young people" (Fisher, 2010; Ministry of Health, 2010).

- As part of the interviews undertaken for this report, principals were asked about the general conditions in their schools' communities. The dominant narrative was one of tough economic conditions overlaid onto what had already been struggling neighbourhoods: *"Things are pretty desperate out there"*;
- *"The economic boom didn't matter here. Here it's always been about getting and keeping work"*;
- *"The situation has got worse over the last five years. Easing back to income-related rents [in 2001] hasn't made it easier. There is chronic overcrowding...and many [families] are reconstituted families with grandparents looking after children full time"*;
- *"This is a neighbourhood with high unemployment...and there are no services...we have a huge problem with teenage parents"*;
- *"Parents are working 2-3 part-time jobs"*.

In these communities low household incomes are the norm, even in families with two working parents.

The phone survey of schools done for this project found that all but one school provided food for students who did not have breakfast or lunch or both, suggesting that the problem of hungry children is common in low-decile schools. Principals also flagged income as a key issue for families:

- *"In most cases parents are trying to do the right thing but they just don't have the money"*; and *"the kids that bring lunch just about get it snatched off them"* (comment from teacher aide).

The overall picture that emerged from this research is one of inadequate food, and often cheap, insubstantial junk food to fill what is a very large gap.

Other factors identified by principals are parents working long hours, often with multiple jobs, and insecure and/or overcrowded housing. All the five schools interviewed plus a number who took part in the phone survey referred to children turning up to school at 7- 7.30 in the morning, usually (although not always) because parents were at work. While work appeared to be perceived as preferable to being on a benefit, work has its own costs, including long hours, meaning children did not always have somewhere safe to go before or after school, lack of parent volunteers for programmes (*“parents are too tired”*), and parents working multiple jobs passing each other *“like ships in the night...This adds to stress in the household.”*

Housing was identified as impacting on children through two main pathways. The first was overcrowding. This often meant children had nowhere to read or do homework at home, and a common theme from the interviews was that breakfast programmes provide space to read or study. In some cases school is seen as a safer environment than the home. Overcrowding was also seen as being detrimental to children’s health, with one principal reporting *“high rates of rheumatic fever”* in the neighbourhood around her school.

The second pathway through which housing impacts on children’s education is transience. Two South Auckland schools in particular reported high rates of transience amongst students. These students were less likely to make use of breakfasts but were seen as being the group at greatest risk of poor diet and low educational attainment. One principal observed that the high levels of transience in her school made it difficult to sustain volunteers. In 2003 CPAG research calculated that up to one third of children on South Auckland school rolls were transient in the course of the school year (Johnson, 2003). This calculation is some years old, but since then housing pressures have become worse so this estimate of transience probably remains reasonably accurate. Transience interrupts children’s schooling, and contributes to low levels of social cohesion within schools and neighbourhoods. While a discussion of housing and transience is outside the scope of this report, the interviews done here suggest that transience remains a significant problem for low-decile schools, and that greater efforts need to be made to provide stable, secure accommodation for low-income families with children.

There is little apparent public willingness to deal directly with hungry children in New Zealand. Rather, most discussion centres on the culpability of parents, and their failure to adequately discharge their responsibilities to their children (see Anscombe, 2009). Successive governments’ focus on addressing poverty as a matter of getting sole parent beneficiaries into paid work has fed not only into the idea that it is parents’ personal failings that is at the heart of the problem, but, further, that the problem is confined to sole parent beneficiary households. In recent months being on a benefit has been described by the Minister of Social Development, Paula Bennett, as a “way of life” (Hartvelt, 2010), and by Prime Minister John Key as a “lifestyle choice”, who went on to say that beneficiaries who use foodbanks made “poor choices” (Trevett, 2011). These stereotypes are the outcome of a discourse that has attributed food choices to individuals, independent of social or environmental context. (A discussion of this can be found in Burrows, Wright, & Jungersen-Smith, 2000, pp. 7-19).

These stereotypes both feed into and draw upon myths that create very real obstacles to addressing the problem in terms of children’s needs. Common myths include that parents are ‘too lazy’, they ‘can’t cook’, they can’t budget, and so on.³ There is little doubt that in a small number of cases one

3 These views are commonly expressed through mass media forums such as talkback radio, letters to newspapers, and online discussion forums.

or some of these is true, with two principals commenting that in some cases children “*got themselves to school*” or came to school early because their caregiver/s were “*sleeping*”. However, research published by the Families Commission found: “The low income group [in the survey] did not differ from others in terms of behaviour such as budgeting for food, planning and eating meals as a family... The factor with the most impact on food security for New Zealand families included in this survey was economic” (C. Smith, Parnell, & Brown, 2010, p. 5). When asked, the schools interviewed did not flag parental neglect or incompetence as the main issue. Although all the schools acknowledged problem parents, they stated that this group was a small minority. Principals also noted this often pointed to deeper issues such as a lack of jobs, lack of transport, and poor living conditions. In response some schools have adopted a whole whanau approach, so if children arrive to school hungry regularly, a social worker will visit, and where possible parents are given whatever assistance is appropriate, or possible. Schools have had to move beyond blame to directly address the nutritional and other needs of their students and families.

How much does it cost to provide a healthy diet?

In preparing this report it became clear families and schools are dealing with two distinct but related issues. The first is food insecurity, that is, inadequate food in the household. The other is food quality. Families on low incomes are more likely to eat cheap, highly processed, poor quality, energy dense food (Drewnowski & Darmon, 2005; Drewnowski & Specter, 2004; Wilson & Mansoor, 2005). The issue of poor nutrition figures as much in schools’ decisions to run programmes as lack of food does. For low-income families maintaining a healthy diet can be very difficult. There are a number of obstacles to providing a balanced nutritious diet, and caregivers who may need support and assistance with basic household budgeting and food skills. However, these environmental obstacles remain secondary to the difficulty of providing an adequate and nutritious diet on the low income of beneficiary and low wage families. This section considers the barriers to providing an adequate, nutritious diet.

Low-income families faced with high food costs often purchase cheap processed food that is high in fat, salt and/or sugar. Thus, in New Zealand and other developed countries – especially countries such as New Zealand with large income gaps – obesity is concentrated in low-income populations, as people substitute food quality for calories density (Dixon & Broom, 2007; Drewnowski & Darmon, 2005; Ministry of Health, 2006; Wang & Baydoun, 2007; World Health Organisation, 2004; Wynd & Familton, 2010). An extensive Australian study of Community Food Programmes found that while the majority of participants were suffering from weight problems, they were also malnourished (Lindberg, 2011, p. 3). One principal surveyed by CPAG stated their school started their programme when they discovered the “*kids hadn’t eaten [breakfast] or had eaten a pie.*” Another said that when shopping at the local supermarket he sees parents and the trolleys have “*a lot of starch, very little protein – cheese is expensive, meat is expensive – and few fruit and vegetables.*” Good quality protein appears to be the big gap in the diets of low-income households: although mince provides value for money, many other staples such as dairy products recommended by the Ministry of Health’s nutrition guidelines are expensive, whereas sugary, fatty starch-based foods can be purchased relatively cheaply (Rush, Paniani, Snowling, & Paterson, 2007). All the principals spoken to commented on the predominance of sugary drinks in their students’ diets, and several had banned them from the school. Lower income New Zealanders bear a disproportionate burden of diet-related ill-health, including obesity, cancer, heart disease and diabetes (Ministry of Health, 2003a). This is also consistent with *Children’s Nutrition* Survey findings that children in low-income households, particularly Pasifika,

are more likely to be overweight (Ministry of Health, 2003b; see also Rush, Paniani, Snowling, & Paterson, 2007).

There is little information based on New Zealand data on what is a reasonable amount for a family to spend on food as a proportion of income. An Australian study found households could spend up to 25% of their income on food before they started experiencing “food stress” (an acceptable proportion of disposable income for a low income family to budget on food) (Kettings & Sinclair, 2009).⁴ In 2010 New Zealand households on average spent 17% of their income on food (Statistics New Zealand, 2010), with households on benefits other than New Zealand Superannuation spending an average of 20% or \$110 per week on food. This figure is an average across all benefit types so at best can provide only a low estimate of what beneficiary families with children spend on food.

A study by Greater Wellington Regional Public Health in 2010 found that providing a basic healthy diet for two adults and two children (aged 10 and 13) cost \$251 per week (including GST of 15%). For such a family on a single minimum wage, plus tax credits and accommodation supplement, this came to just under 50% of disposable income after rent, leaving the other \$251 to cover utilities, school, transport, and medical costs. For a family of four on a couple’s unemployment benefit in a Housing New Zealand house the figure was 66% of after-housing disposable income, leaving \$128 for all other costs. A sole parent on the DPB with two children aged 4 and 5 years needs to spend \$126 for a basic healthy diet, leaving \$173 for all other costs (Greater Wellington Regional Public Health, 2010). The study notes that the calculations do not include access to facilities such as supermarkets, and that in some cases getting to and from shops may incur additional costs, for example for people living in suburbs with limited local food outlets, or rural residents.

A more detailed study (Hopgood et al., 2010) found that providing a basic healthy diet for a 13-14 year old cost an average of \$72 per week, or most of the \$86 weekly family tax credit available to low wage and beneficiary households at the time (2008-9). Younger children cost less to feed, but feeding two children aged 5-10 years still costs an average of \$77 per week (Hopgood et al., 2010).

The study notes that the cost estimates in these scenarios are ‘conservative’. This means that there is little left over for other needs such as clothes and medical care, and in most cases no reserves for unanticipated major expenditure such as car or appliance repairs, or funeral costs. Working families are entitled to a further \$60 per week from the In-Work Tax Credit for up to three children, with a further \$15 per week per child thereafter, yet even this leaves little for unbudgeted additional costs.

In general, the diets of low-wage and beneficiary families are less likely to meet basic nutritional guidelines, and this can affect children’s mental and physical development (Hopgood et al., 2010; Ministry of Health, 2003a), particularly that of very young children. Potentially, providing a nutritious breakfast to low-income school children could improve their nutrient uptake, reduce their fat and sugar intake, and free up some household monies for other food or expenses.

4 This figure is somewhat dated, and needs to be updated for contemporary New Zealand conditions.

How great is the need?

In the Auckland region there are approximately 43,000 children in decile 1 and 2 state schools, including high schools. Of these 4% are European, 30% are Maori, and 57% are Pasifika. The remaining 9% are Asian/Middle Eastern and other ethnic groups. Maori and Pasifika have disproportionately high rates of unemployment and reliance on benefit income, while low-income Asian and Middle Eastern families also have higher than average rates of unemployment. The Ministry of Health advised the Minister in 2009 that “decile one and two schools draw their students from our most vulnerable communities and cope with multiple issues related to poverty” (Ministry of Health, 2010, p. 17).

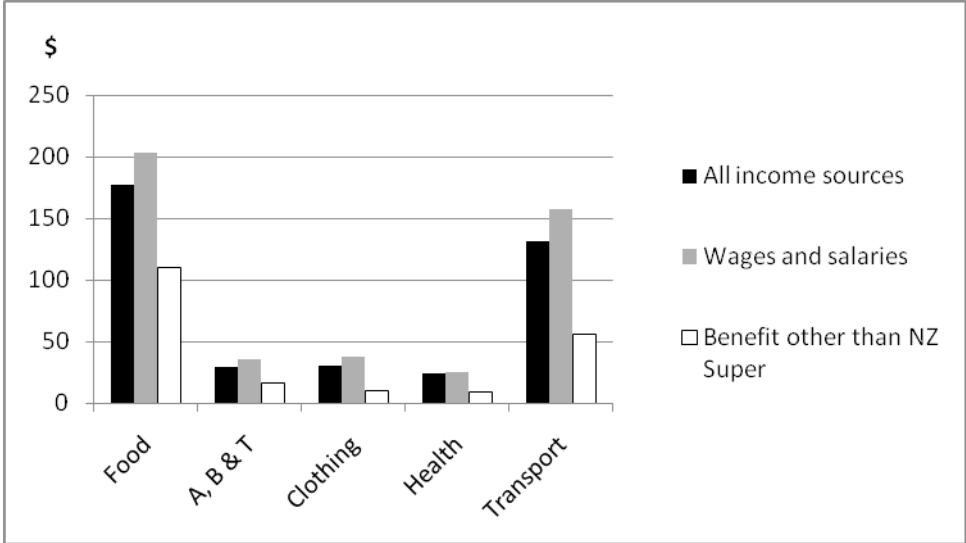
The very high proportion of decile 1 and 2 schools providing food to students, and the proliferation of charities to support them suggests there is a pressing need for food to be made available on a sustained and secure basis to students in low-decile schools. Charities such as KidsCan have a waiting list of schools hoping to get onto the programme (see <http://www.kidscan.org.nz/>). Red Cross and other organisations have identified the number of children going to school hungry as a concerning issue in New Zealand’s low-decile communities. A 2002 Ministry of Health survey found that there was a high percentage of children aged 5-14 who “sometimes or always ate nothing before school” (see New Zealand Red Cross, 2008, p. 3), while the 2006/2007 *New Zealand Health Survey* found around 15% of children leave for school without having eaten breakfast (Ministry of Health, 2008; see also Ni Mhurchu, 2010).

KidsCan provides food to about 7,500 children. As of 2010 the Red Cross provided food to 60 Decile 1 schools nationally (New Zealand Red Cross, 2010), and Fruit in Schools provides daily fruit to approximately 86,000 children. A number of smaller local programmes also provide food to children. It is possible to argue that the presence of these programmes does not reflect overall need, or indicate the extent of need within a school, but like foodbanks they are a relatively recent addition to New Zealand’s social landscape, and were not notably present prior to the mid-1990s.

However, there is little official acknowledgement that there is a problem with child hunger in New Zealand, and no suggestion that the government has a role in tackling the issue of hungry children in a way that respects their rights as children. There have been no official moves to provide food on a consistent, regular basis to schools outside of the Fruit in Schools programme; instead, Prime Minister John Key has suggested it is up to businesses to “step up to the plate” (New Zealand Government, 2009).

Ministry of Social Development figures show the families with the most restricted incomes are those of domestic purposes beneficiaries (Perry, 2007). An approximation of how these families are coping can be inferred from the 2010 *Household Economic Survey* (HES) (Statistics New Zealand, 2010). The HES analyses average household expenditure by source of household income, including income from benefits *other than* New Zealand Superannuation. It also has an overall average of all household types. Figure 2 shows the average overall expenditure on food, alcoholic beverages and tobacco (A, B & T), clothing and footwear, health and transport for beneficiary households, wage income households, and the overall figure. (Figures including average incomes are in Appendix 2). Unfortunately the Household Economic Survey does not break beneficiary households down into benefit type, but if sole parents are spending approximately \$110 per week on food then it is highly unlikely that both parents and child/ren are eating adequate nutritious meals (see also Greater Wellington Regional Public Health, 2010, pp. 8-21).

Figure 2: Weekly household expenditure, overall average, wage and salary income, and benefit income households



Source: Statistics New Zealand (2010).

Households with benefit income spend less in every category, including food than households with wage and salary income. The figures do not support the widely held belief that beneficiaries spend a large proportion of their income on alcohol and tobacco. Figure 2 shows they spend considerably less on these items than other groups. Rather, the figures highlight that food is a significant but discretionary spending item; one of the few items in the household budget that can be cut. This suggests that households reliant on benefits are less likely to be able to afford a nutritious diet – as borne out by the studies cited above. The 2010 HES shows that decile 1 and 2 (the 20% of households in the two lowest income bands) had incomes of less than \$28,900. Of the total 637,300 households with dependent children, 11% have incomes of less than \$28,900. Of the 70,000 households in the bottom two deciles, 40,000 are sole parents with dependent children. At current rates a Domestic Purposes benefit is worth \$16,340 gross, or \$14,460 net. A parent with two children receives a further \$7,760 per year from the Family Tax Credit plus the Accommodation Supplement to cover some portion of their rent/mortgage payments. This leaves little for food after rent and mostly fixed expenses such as energy and transport costs are deducted.

Food insecurity and nutritional inadequacy are also closely linked to housing and neighbourhoods, which in turn reflect broader problems such as housing affordability. A key outcome of New Zealand’s endless economic restructuring has been the spatial and socioeconomic stratification of New Zealand’s urban areas, and of rural areas such as the eastern Bay of Plenty, parts of the Waikato and Northland (Friesen, Murphy, Kearns, & Haverkamp, 2000; Johnson, 2011; Wynd & Johnson, 2008). The resulting stratification within the housing market, combined with the competitive school model set up by *Tomorrow’s Schools* (Langley, 2009), has played a significant role in schools being stratified more intensively along socioeconomic lines. Thus, children from low-income households are more likely to be at school with children from equally poorly resourced households. The provision of food within schools can help offset the lack of resources within these communities (Walton & Signal, 2009).

“One child last year increased on task behaviour and learning. Later found out this [breakfast] was his only certain meal of the day.” Teacher (cited in New Zealand Red Cross, 2010).

Moving to greater equity

If a few children go hungry in the morning then that suggests a temporary or perhaps ongoing problem within individual families. If hundreds of children go hungry morning after morning then the problem is structural, and can be addressed. Yet despite the ubiquity of food insecurity among students at Auckland's decile 1 and 2 schools, children's hunger is often portrayed as one of individual moral failure and stigmatised accordingly. In response, parents sometimes do not send hungry children to school, so as not to draw attention to their hardship, and to avoid stigmatisation. This issue was identified by many of the schools interviewed for this research. Thus, some children's hunger remains unseen. The broader problem is that the blaming of parents and families fails to address the causes of hunger and denies children the assistance they need.

Former school principal Martin Anscombe has written extensively on this. As part of his 2009 Masters thesis he interviewed a range of actors within the school system in order to understand what factors prevent New Zealanders from directly addressing the hunger so well documented in the mainstream media. Anscombe interviewed three school principals, three charity managers, and three government officials. His key findings are worth noting at some length:

The Government ministry participants acknowledged difficulties in assessing the problem and were uncertain whether existing school and charity initiatives were necessary, effective or sustainable. They also suggested that food programmes were a Band-Aid solution, rather than a planned and coordinated response. For the school principals and charity leaders interviewed, feeding hungry children was their first priority. They also saw the problem of hungry children as firmly in their hands because of the absence of alternatives. All of the participants agreed that hungry children were a problem for the whole of society and that government, social services, communities and schools should work more closely together to solve it. There were however fundamental differences between interviewees' opinions, and the solutions they offered were generally limited to current institutional realities and organisational practices, rather than advocating radical change. Their informed views and the literature reviewed characterize a stark reality in schools and government. This reality means some New Zealanders favour feeding children in schools and others don't, while many children remain hungry to some degree throughout each school day. The facts surrounding hungry children in New Zealand are surprisingly little publicised; instead it is common for people to blame the parents of these children. Government politicians have pandered to these public attitudes and questioned evidence that hungry children are a serious problem, while at the same time heralding the success of their social and economic policies in reducing inequalities. Noticeably few government departmental reports mention hungry children in schools... As a consequence New Zealand children tend to be punished for their hunger and discriminated against through action, inaction, shame and ignorance (Anscombe, pp ii-iii).

Although there is little official research on hungry children in New Zealand,⁵ researchers including post-graduate students (Anscombe (2009), Bloy (2005), Gerritson (2005)), and the media, have highlighted the fact that in New Zealand hundreds of children go to school hungry every day, with schools and charities reporting increasing demand. Children from lower socioeconomic families, and Maori and Pasifika children, are more likely to come to school hungry, and, as a result, are

5 In 2009 the Clinical Trials Unit at the University of Auckland received a Health Research Council grant to conduct a controlled experiment to "assess the effect of effect of providing a free breakfast in schools programme in decile 1-4 primary schools on a number of outcomes, including school attendance, sense of belonging at school, psychosocial function, academic performance (literacy and numeracy), hunger, dietary habits, and food security." See <http://www.ctr.u.auckland.ac.nz/index.php/research-programmes/nutrition-physical-activity/228-breakfast-in-schools>.

more likely to be lacking important nutrients in their diets, be unable to concentrate at school, and suffer from obesity and being overweight. This disparity increases as children get older (Ministry of Health, 2003b). Lack of breakfast therefore emerges as both a symptom and a cause of the well-documented health, educational and social inequities found among New Zealand's children and young people (Ministry of Health, 2007; OECD, 2007; St John & Wynd, 2008).

In theory New Zealand policymakers aim to create equality of opportunity for children as part of a broader social investment strategy (Ministry of Social Development, 2004). Providing breakfast, free, to all children attending decile 1 and 2 primary and intermediate schools would be one positive way to achieve this stated policy aim, with concomitant health and social benefits that would pay dividends in the long run. It would also help redress the balance in favour of the low-income households – working and beneficiary – that have found themselves left further behind as New Zealand's income inequality has grown over the last thirty years.

4. Existing programmes

Since the early 2000s, when it became apparent that many children were arriving at school with no or inadequate breakfast, a number of school food programmes have been implemented. There is no doubt about the good intentions of the programmes, however with the exception of Fruit in Schools, all are privately funded or sponsored and there is no regularised delivery mechanism, or structure. So some programmes are open to all comers, whereas the selection of recipients for others is less transparent and arbitrary, for example the “*nod and a wink*” used by one school in the phone survey.

Food is distributed by nearly all decile 1 and 2 schools, with almost all having at least a supply of bread and spreads to make lunch for students if required. Higher decile schools may also provide some food, but these were not spoken to as part of this report so the extent of provision in these schools is uncertain. Breakfast clubs are the most popular choice of food delivery and are operated either through an external programme such as the Red Cross or KickStart, or through the school itself. The advantages of breakfast clubs have been recognised by the Manukau District Health Board as part of their *Let's Beat Diabetes* programme. The DHB notes a “whole society [and] whole family” approach is needed to beat diabetes, and school breakfasts are an important part of this (Counties Manukau District Health Board, 2008, p. ii). Breakfast clubs offer students, parents and volunteers the opportunity to engage with each other, the staff, and the wider school community. They can be used by the school to reach out into the community, and help build up social cohesion within low-income communities. Some schools also use the provision of food as a lever to assist parents to learn about eating and cooking nutritious food. Ideally food should be provided through a reliable funding mechanism, but at present many school food programmes are supported by donations from a range of sources. This risks poor quality food and erratic supply, although none of the schools spoken to raised this as an issue.

This section reviews what schools are currently providing. It includes five in-depth case studies in order to assess what schools themselves perceive as the gaps and how they have attempted to fill them.

External programmes

KickStart, KidsCan and Red Cross

Currently one of the best financed and structured programmes is the KickStart programme sponsored by Fonterra and Sanitarium.⁶ It was limited to 500 decile 1-4 schools nationwide in 2010, and operates a maximum of two days per week. It is supported by a professional website, and has a celebrity ambassador (Beatrice Faumuina). The aim of the programme is not so much to feed children as to “to educate kiwi kids on the importance of breakfast” (see website). The programme is run in collaboration with school breakfast clubs, managed by volunteers from within the school, and from the local community. The programme appears to be popular in the schools within which it operates, but with only two days funding per week the programme falls far short of meeting the need of many children. In common with many other philanthropic programmes, it views lack of breakfast as an issue of parental choice, ignoring lack of money is often a factor. Thus, the programme aims to “teach kids a breakfast pattern they can replicate at home rather than take over parental responsibility.”⁷

Another formal programme – terminated in early 2011, after the CPAG phone survey and in-depth interviews were conducted – was run by the New Zealand Red Cross, in partnership with Countdown supermarkets. All decile 1 primary schools were eligible to participate, and it offered breakfast every day of the week. By the time it finished, 59 schools were participating nationally, feeding over 1,600 children a day. In contrast with KickStart, the Red Cross programme provided all the equipment and volunteers necessary to run the programme. Recruiting and retaining volunteers was a big issue for the Red Cross, and presumably still is for school food programmes run by other agencies (New Zealand Red Cross, 2008, p. 7). Several of the schools interviewed for this report were recipients of Red Cross breakfasts at the time of interview.

The Red Cross programme provided breakfast universally to children in the schools in which it operated. All decile 1 schools were eligible, and although not all took up breakfasts, the number was increasing (New Zealand Red Cross, 2010). Red Cross drew on its experience in Australia to provide a ‘best practice’ model for New Zealand schools, including feeding as many children as possible in an inclusive environment, and monitoring and evaluating the programme. The Red Cross programme also aimed to educate children about the value of eating a healthy breakfast, and to improve relationships within communities.

Arguably the most widely publicised programme is run by KidsCan. KidsCan is a private charity that provides some food, basic clothing items such as raincoats and shoes, and runs a mentoring programme (StandTall). Currently food is provided to about 17,000 children per week. It is unclear how often the children receive food, with food being distributed to students “identified by teachers as needing food” (New Zealand Government, 2009). The provision of food is thus arbitrary, subjective, and has no public accountability, despite the fact that donations to registered charities such as KidsCan are heavily subsidised by the taxpayer. The programme provides “basic nourishment”, with the website showing muesli bars and a range of sugary snacks. The programme is sponsored by Tasti foods and Sanitarium, and received \$320,000 from the government in 2009. The Prime Minister was enthusiastic about the prospect of other businesses helping out (New Zealand Government, 2009), although there is little evidence of this happening.

6 <http://www.kickstartbreakfast.co.nz/>

7 See <http://www.kickstartbreakfast.co.nz/About.php>.

One further programme has recently been announced. The Food for Thought Trust, in partnership with Foodstuffs and the Heart Foundation “will see schools nationwide implementing new interactive health and nutritional education courses that aim to improve the health of the community” (Food for Thought Trust, 2010). This programme does not provide food, rather it is more in the nature of a private social marketing campaign aimed at ‘improving’ children’s and families’ food purchasing choices and food preparation through school programmes. Reflecting its private-sector grocery chain sponsorship, children will “have the opportunity to visit the supermarket to purchase ingredients...” (Food for Thought Trust, 2010). This private sponsorship raises questions about whether New Zealanders want their schools to serve as platforms for what are, in effect, corporate marketing campaigns (the KickStart programme raises the same questions).

Food for Thought’s press release suggests its working assumption is that poor diet is a “choice” (Food for Thought Trust, 2010), and that improving families’ diets is a matter of educating people about alternatives. This ignores that many families’ limited incomes restrict their food “choice”, and that for many children the problem is arriving at school having eaten nothing at all.

Privately sponsored programmes have two fundamental weaknesses. The first is that they provide no guarantee of food quality or adequacy. The second is that they depend on sponsors’ ongoing solvency and commitment, neither of which are certain – as the termination of the Red Cross programme demonstrates.

Fruit in Schools

Fruit in schools is a government programme that provides free fruit to 120 decile 1 and 2 schools throughout New Zealand. The programme was implemented as part of the government’s Cancer Control Strategy, and schools that are part of the programme are also expected to be Health Promoting Schools. This means taking a “whole school community approach to supporting healthy eating, physical activity, smoke free [sic] and sun protection.”⁸

Though the health promotion aspect of Fruit in Schools is laudable, the programme’s secondary aim – providing a free piece of fruit to each child every day to high-needs children – appears to have assumed greater importance in the minds of teachers and schools. This is for the simple reason that it is providing regular food to students, some of whom may not be getting fresh fruit at home. Most of the schools contacted for this report received Fruit in Schools, and all were positive about it. One teacher described the programme as “brilliant”, another as “great”. One respondent commented: “*Fruit in schools has made a huge difference. [The children have] been getting it about four years and the children’s health and skin has improved. [The children] probably wouldn’t be getting fruit at home but they get it every day at school.*” In the absence of a controlled experiment there is no way of knowing for certain if Fruit in Schools has contributed to the improved health teachers claim to have observed. However, this positive impact was noted by others involved in school food programmes and is consistent with feedback provided from other organisations (see example Red Cross, 2010; Ni Mhurchu, pers comm, 2011).

8 See <http://www.moh.govt.nz/fruitinschools>.

5. Survey results

Phone survey of Auckland schools

As part of the research for this report CPAG conducted a telephone survey of 17 decile 1 and 2 schools in the Auckland region, including primary, intermediate and secondary schools. Tellingly, all but one school surveyed provided some food. The sole exception was a secondary school. Provision ranged from the reasonably comprehensive to selective, and also varied between breakfast and lunch, although some breakfast provision was the most common. Provision also depended on schools' local situations, for example if they had a large catchment area or if they were part of a small community, or received food donations from local businesses. Attitudes to the provision of food also varied from school to school, with some focusing primarily on feeding children, while others were more concerned with not usurping parental responsibility.

Of the schools surveyed all but one reported a need for food provision. Some said the need varied, but most considered the need in their communities to be "high" or even "very high". Two high schools described the need as "great" but admitted the wrong students were getting help. Asked to clarify, the school said even food was not sufficient incentive for the neediest children to come to school. This was a high school, and none of the junior schools reported this. This suggests that the greatest chance for positive intervention is with younger students. It does raise serious questions about who the "neediest" students are, and where they are if they are not at school, and how they and their families are feeding themselves. Almost all the schools mentioned that some students were coming to school without breakfast and/or lunch, and several mentioned this was more common with larger families. This is consistent with the *National Children's Nutrition Survey* (Ministry of Health, 2003b) which found children from large families to be at greater risk of food insecurity.

One common and worrying observation was that parents will keep children home if they did not have food. Some schools have told parents to "*send them [the children] anyway*". For this to work, parents must trust the schools, a point some schools have recognised and worked to address. However, a significant result was the universally positive response to the government's Fruit in Schools programme.

Breakfast is the most common form of food provision. A substantial portion of this food is donated through programmes such as KickStart, and some is donated by local businesses. The gaps are filled by schools and teachers. A variety of reasons were given for providing food:

- Children sometimes eat lunch on the way to school (teacher observations);
- The school includes high-need students, especially children from large families;
- The school has told parents to send the children to school if they don't have food. In these cases the school provides food;
- Family budgets don't stretch far enough to ensure children get breakfast and lunch.

The responses are shown in Table 1. The table shows 13 of the 17 schools surveyed provide breakfast, seven provide lunches, seven are part of the Fruit in Schools programme, and the majority (12) do not charge for food. The school names have been omitted, but are on file with CPAG.

Table 1: Table showing results of random phone survey of decile 1 and 2 schools in the Auckland region.

	Provision	Charge?	Nature of provision
1	Canteen only	Yes	Only decile 1 school spoken to with no programme.
2	Breakfast once a week from Red Cross, snacks from KidsCan. Getting bread donated so often make lunches for the children (they eat lunch on the way to school).	No.	Need varies but in general there is always some need.
3	Yes, lunch.	Yes.	Money from lunches covers other services and school fees.
4	Breakfast three times per week from Red Cross; Fruit in Schools every day.	No.	Described a "high need". Mixed ethnic population with high proportion of immigrants.
5	Yes, breakfast daily.	Yes, nominal if parents can afford it.	Breakfast club.
6	Breakfast club, 3x per week. Red Cross supplies the food, permanent volunteers drawn from local area.	No.	Cereal, toast. Slow to start with, but now the children know what day food is provided and they "head straight down there". Has helped the children with their school work.
7	Not officially. They get Fruit in schools "which is great". Children get food if the school knows they haven't got food.	No.	Small school that knows the parents. Usually know if the children haven't had breakfast as parents will ring.
8	Breakfast, every morning in the marae. KickStart provides some of the food.	No.	Asked how many had breakfast the response was: "Not as many who could or should."
9	Breakfasts very day. Local and corporate donations.	No.	Lunch as well if required. School felt it improved the children's attendance because they know they get fed.
10	Fruit in Schools. KickStart twice per week. If the school is aware of any children who need food, the school makes sandwiches for them.	No.	"High need...could probably do a lot more lunches every day". Fruit in schools "has made a huge difference. Been getting it about four years and the children's health and skin has improved. [The children] probably wouldn't be getting fruit at home but they get it every day at school". Breakfast "definitely" makes a difference to the children's schoolwork.

	Provision	Charge?	Nature of provision
11	Fruit in schools. "The kids love it."	No.	Registered with KidsCan but don't get food. Very high need before but it is changing, partly because the neighbourhood is changing. "The children's learning has improved."
12	Always food available. Lunch if required. "Fruit in schools is fantastic."	No.	Children stay at home if they don't have lunch. School has told parents to send them to school so parents will often ring and say they're a bit short so the school knows to feed the children. School described itself as "pretty high need."
13	Breakfast club 2x per week. If students are hungry they get something, sandwiches etc.	No.	Breakfast partly funded, and donations of milk etc.
14	Breakfast every morning.	Koha	School notes social as well as other benefits of breakfast.
15	Breakfast club every day and a lunch scheme. A lot of children, particularly those from large families, come to school with no lunch and breakfast.	20c for breakfast, none for lunch	Red Cross breakfasts and Fruit in Schools. School reported improved behaviour and learning. The school has "a core group of miscreants, and when they have breakfast they behave better."
16	Breakfast club twice per week provided by KickStart. Senior students help run it.	No.	The "need is great, but the wrong students are getting it". Breakfast is not enough of an incentive for the neediest students to come to school. "They wouldn't come if you paid them."
17	Yes. Fruit in schools. School feeds an average of 6 students per day with lunches. Sponsored breakfast once a week.	No.	Parents keep kids home if there's no food so the school has told parents to send them and the school will feed them. "High needs". Budgeting reported to be a problem for some of the parents.

Interviews

Interviews took place at one South Auckland intermediate school, three South Auckland primary schools, and a Glen Innes primary school on 7, 8, 10, and 15 March 2011. The interviews were semi-structured around a number of pre-set questions, including questions about the school, its community and the general situation of the children, so as to provide information on the context within which the school operates.

All the principals were adamant that their children deserved what children in better resourced schools and communities had available to them, and most recognised that given the disadvantages experienced by many of their students, more effort was needed to ensure they could enjoy equality of opportunity. A small koha was given to each school in appreciation of their time.

Extent of programme coverage

All the schools interviewed in-depth provided breakfast, and four provided lunch as well. Lunch provision was less common, and provisional upon the school being aware that the child had brought no lunch. Coming without lunch was taken in several cases as a sign that all was not well at home, and at least two schools organised for a social worker to visit in instances of repeated failure to bring lunch. One principal noted lunch was a better indicator of whether there were problems at home: it wasn't possible to know if children had already eaten breakfast, but they knew with lunch. This school had detailed records of lunch going back some years, and used it to help monitor how families were coping. It provided services if needed (lunches are also used by another primary school to monitor the wellbeing of families).

In all cases breakfasts were provided on a universal basis to children who turned up, and were signed up to KickStart or the Red Cross programme. All were recipients of Fruit in Schools. One school had "about 10" regulars plus a pool of students who usually brought total numbers up to 20. Others fed about 20 per day; 50-100 children per day; and an average of about 25 per day, five days per week.

How long programmes have been running varied considerably. One school has been feeding the children for 9 years, another has had the Red Cross programme delivering breakfasts for two years, another commenced only in early 2010.

Basis of approach

In all cases breakfasts were provided on a universal basis to all children who wanted one. Principals were very conscious of the stigma attached to targeted provision of meals, even in younger children. For schools working to build trust between themselves and the community principals felt that universal provision sent a message that children and parents would not be judged.

None of the schools required payment. Sometimes payment such as a koha is made but schools leave that up to parents. One principal observed that sometimes "we get \$10 to cover breakfasts when parents get the money."

Food is basic – Weet Bix, porridge in winter in some cases, toast and spreads, and Milo. Milk is an important component of breakfast, and all the schools commented that milk was too expensive for most of the households in their catchment: "Milk is a luxury"; "our families don't drink milk"; "we get through 4 or 5 two litre bottles a day because the children don't get it at home." There was little variation in the choice of food within and between schools: schools maintained a basic level of

nutrition, and as the food is donated only the basics are provided. One school is hoping to be able to offer hot food over winter but this is dependent on donations.

Programmes

As noted above, all schools in the survey are part of the Ministry of Health Fruit in Schools (FiS) programme. Consistent with the obligations that go with that programme, all the schools are health-promoting schools. All the schools stated that they were not only concerned about the quantity of food consumed by the children, and the fact that children were coming to school hungry, but the quality of the food the children were eating. Fruit in Schools goes some way to addressing this, and all the schools run nutrition education. The general response was that it was difficult to tell if this was changing family eating patterns, but there was some evidence that some parents were changing cooking and eating patterns for the better.

One school ran a Garden to Table (G2T) programme. This was initiated by a concern for the quality of food the children were eating. The principal also stated that: *“it’s important the children know where food comes from.”* G2T is popular with the children, and was reported also to be changing habits slowly within the families (another principal confirmed that his school’s healthy eating programme was slowly changing families’ shopping and eating patterns). The school has photos of gardens the children and older relatives have started at home. The principal noted: *“Usually it’s a grandparent because they have the skills.”*

Another school had just started a G2T programme, largely for reasons of concern for the quality of food children were eating, but also because parents were *“fascinated”*, with about a third of respondents to a survey asking what parents most wanted saying they wanted a G2T programme. According to the principal this was among the highest level of support for any programme suggested (other high scorers were a local Plunket and help with budgeting).

Purpose of the programme

In general, schools initiated programmes because they were concerned with both the quantity and quality of students’ food and breakfast in particular.

All the schools said the reasons remained relevant: *“more so”*; *“this year we have been busier”* as the recession has hit many low-income families. The outcome of the recession has been variable: one school operates in a low-employment area (*“there are no jobs... or services, [and] 30% of families are sole parent families*); but others stated that most parents worked, albeit two or more jobs and long hours – *“the problem here has always been work – 2-3 part-time jobs which puts stress on relationships...a lot of parents don’t have cars and there’s no public transport so it’s easier to go on a benefit.”*

The Fruit in Schools programme appears to have provided an impetus to shift schools to having a greater focus on the health aspects of food, but the principals spoken to for this study were already very conscious of this, so it is not clear whether Fruit in Schools changed much in this regard or provided additional support to what schools were already doing.

Although programmes were primarily started to meet the needs of students coming to school with no breakfast, in all cases schools have found that the breakfast programmes meet more than just that most basic need. In fact breakfast programmes provide a chance to improve the quality of children’s diets, *“teach basic manners”*, provide a safe environment for children who turned up to school very

early or who preferred to be at school rather than at home; to improve the children's readiness to learn; and, consistent with research from elsewhere, to provide a social setting for children to play, work, and mix with other students and teachers. All the schools spoken to confirmed that for students the social aspect of the breakfast appealed as much as the food – one teacher aide commented that: *“some kids just come for the social side”*.

Funding and costs

All the schools operated their breakfast programmes at little or no cost. Two were part of the Red Cross programme; two were part of the KickStart project; and one programme was run through a local church which operated a programme in several schools in the area. Private donations from local businesses and philanthropic donations from community organisations, parents and teachers offered variety to the basic bread and cereals provided by official programmes and business donations and helped sustain the programme. Schools have different experiences with recruiting and retaining volunteers from within the community: two schools had programmes run by a teacher (*“parents are not sustainable, especially with high levels of transience”*), others were run by volunteers drawn from within the school and parents. The G2T programme was currently funded for a part-time garden coordinator and a part-time cooking coordinator. Funding for these is due to cease later in 2011. In general, most donations were of food rather than money.

Improvements and insights

All the schools were pleased with the outcome of their breakfast programmes for the children. As noted, they talked about the health benefits, including the improvement in general health of participating students over time (this point was also made by a school participating in the Fruit in Schools programme), the students' improved ability to study and improved classroom behaviour, the flow-on effects of improved dietary habits to children's families and the wider community, and the social aspects of the programme. Similarly, all the principals were keen for their schools to be seen as safe places by the children, and over time the universal provision of breakfast had helped achieve this. An unexpected outcome of the social aspect of the programme and the trust schools had managed to build was that pupils *“mind each other”*, or *“self-monitor”* in the sense that they look out for each other. The improved trust and social aspects of the breakfast programme were viewed generally as contributing to a positive atmosphere in the school. In every case schools wanted to continue all their programmes, and said they would do so even if funding was to be withdrawn.

However a note of caution is in order here. The schools found that their food programmes did not catch the hardest-to-reach students. These students were often transient and remain the group most likely to fall through the gaps in school and social programmes. Almost all the principals mentioned the disruption to the school caused by transient students, as well as the disruption to the students themselves: the lack of stable, affordable housing emerged as the key factor affecting children's likely educational and social outcomes.

Alarming, food insecurity in low-income households is seen as so ubiquitous it doesn't engender comment in itself. Almost all the schools spoken to in both the in-depth interviews and the phone survey viewed hunger as part of what they had to deal with as a matter of course. Attitudes varied, from just wanting to feed the children (most principals) to a more cautious approach that argues against the school relieving parents of their responsibility. Balanced against this was a recognition that breakfasts in particular addressed the urgent need to ensure the children were fed, and in

the case of one school contributed to the longer term goal of “*building capacity within families and neighbourhoods*”.

All the schools spoken to said a key improvement for all their food/garden programmes would be greater security of funding. Most were happy with the programmes they were running and the results they had achieved, both expected and unexpected. None mentioned the lack of physical infrastructure. While this may be an issue it would seem that schools are more focused on meeting the needs of students with what they have available.

Future

All the schools wished to continue their programmes, with one looking to expand from the current three days per week for breakfast (lunch is provided every day if required). The single biggest threat identified was the withdrawal of funding and donations. All the schools said they would try to fill any gaps, but acknowledged that some programmes would be severely compromised, and there was an undercurrent of concern that as the recession continues, continuing programmes would become more difficult if donations were to be reduced or perhaps cease altogether.

6. The Scottish experience

Among Auckland schools offering breakfasts there is a variety of models, although there does appear to be convergence towards universal provision where possible. The limiting factors appear to be assistance in the mornings, and cost, with many schools relying on donations from assorted corporates or local businesses and supermarkets. The variation strongly suggests that while standards can and should be set for children’s breakfasts, successful delivery mechanisms will vary from school to school, with relevant factors including the nature of the local community, the size of the school, and the mix of students.

The benefits of breakfast were highlighted in both the in-depth interviews and the phone survey. CMDHB states the benefits of breakfast clubs are:

- providing an opportunity to promote a healthy and nutritious diet;
- providing a time and place to improve social skills and confidence;
- improving behaviour, concentration, attendance and punctuality of members (Counties Manukau District Health Board, 2008, p. 4).

Both the CMDHB and the Scottish government, and the research presented here, show that the social aspects of breakfast can be as beneficial as the food itself. A focus on student engagement and pre-school activity with adults improves student achievement and attendance (Counties Manukau District Health Board, 2008; Sheridan, 2001), and there is evidence that programmes are more sustainable if social aspects of children’s lives are integrated into them (Cassels & Stewart, 2002).

Scotland has implemented a successful model for breakfast clubs, with a particular focus on children with the greatest need. Scotland has made a decision to provide food to children in schools both to improve students’ education and improve their diets, and breakfast clubs have been the chosen vehicle for achieving this. The philosophy behind food in Scottish schools is a ‘whole school’ approach that recognises food sits within children’s social context. The Scottish government also makes funding available for community groups to run community activities such as lessons in basic cooking

skills and improving people's diets.⁹ The contrast with the New Zealand government's reliance on corporate philanthropy and private charity could not be more stark.

Breakfast clubs have been present in Scotland for many years. Glasgow trialed breakfast clubs well before they became national policy. An evaluation of Glasgow's project provides some insight into the variations between schools that make a school-by-school approach more sensible than a one-size-fits-all model (see also Counties Manukau District Health Board, 2008). The evaluation found the factors affecting the likely success and delivery of breakfasts include:

- availability and sustainability of funding;
- availability and sustainability of assistance. Paid staff and volunteers can be difficult to recruit and retain (see Greater Glasgow Health Board & Health Education Board for Scotland, 2000). In Glasgow some payment was made to some volunteers staffing the club;
- local support for the club. Anscombe (2009) notes that in the New Zealand context some schools do not want to be seen as needing to feed children because of the stigma attached to low-decile schools);
- support for the aims of the club, i.e. whether health promotion is included as part of the programme, or whether there is a perception that the programme is a baby-sitting service;
- school catchment and attendance levels. Some schools charged for breakfast, and the evaluation found attendance at breakfast clubs was lower in areas where low-income families are less likely to be able to afford breakfasts;
- operational and logistical issues including food quality and health and safety considerations. This may include the safety of children coming to school early (eg across busy roads with no supervised crossings).

As with New Zealand, funding for school breakfasts in Scotland was provided through devolved funding via education authorities and health boards. In 2001 the Scottish executive made provision for a Breakfast Service Grant which was a £300,000 one-off grant specially targeted to schools with vulnerable children.

The evaluation of the Glasgow scheme identified three main service models (Greater Glasgow Health Board & Health Education Board for Scotland, 2000). The first was just provision of breakfast; the second was a community-supported club; and the last was a coordinated club that incorporated social and health-promoting activities. Due to resource constraints and a lack of working models available for comparison, this paper will not consider the community-supported initiatives.

The first model of provision of breakfast had only parental support prior to setting up, and retained relatively high attendance throughout the year. There was an increase in school attendance, although it is unclear if this was due to the provision of breakfast. Two paid volunteers kept the programme going, and there was evidence that participants opted for healthier lunches as well. The biggest weakness was that as the programme was aimed at breakfast provision only, there was a lack of focus on other activities such as play, and some of the children got bored after breakfast. The lack of emphasis on other activities meant less of a "club" atmosphere developed. Thus, the social aspects identified by the schools as being of benefit to the children were less evident with this model.

⁹ See <http://www.communityfoodandhealth.org.uk/>.

The coordinated club was also supported by parents prior to set up, and also had two paid staff members. This programme also reported increased school attendance, and teachers reported improved behaviour and academic performance in some students. This programme had the advantage of including play activities and developed more of a “club” atmosphere. It was, however, also the most expensive to run.

The programmes where the school took ownership and the perceived need in the community was greater were the more successful. One principal reported that “she now had to deal with fewer disciplinary problems as a result of the improved behaviour of a group of attendees, and her job had been made easier” (Greater Glasgow Health Board & Health Education Board for Scotland, 2000), a result echoed by one of the principals interviewed for this report. The coordinated project that included play attracted the greatest number of vulnerable children. Importantly, the children reportedly “greatly enjoyed” the breakfasts, enjoyed the social experience, and for some children health-promoting behaviours carried through to other aspects of their lives. Although children can resist the health-promotion agenda of adults (Bloy, 2005), using breakfast clubs for general health promotion appears to be successful: “There is evidence...which suggests that breakfasting, oral health and general behaviour improved amongst [breakfast club] attendees (albeit a small number), with a resultant positive impact on health-promoting behaviours in the home and within the classroom” (Greater Glasgow Health Board & Health Education Board for Scotland, 2000).

Overall, the evaluation found sustainability was threatened chiefly by cost, including cost of staff. It also found that the project in the school with the least parental support was the least successful. This suggests that projects need to be implemented with parental support, and in areas with the greatest need where breakfast habits are poor and poor nutrition and oral health are significant issues. Paid staff were necessary for the ongoing success and continuity of programmes although it imposed additional costs. This has the advantage that additional work is not imposed on teachers. Paid staff could work with local volunteers, perhaps offering parents some training and/or nutrition education in the process. Already, this has worked well in some Auckland schools.

However, as noted by several of the high schools in particular spoken to as part of the phone survey, even then the students with the greatest need may not attend. This would mean making a decision about whether to hope for the best or put extra effort into attracting those students. Arguably, as breakfasts become a normal part of the social fabric of schools and communities, the likelihood of the students with the greatest need attending may improve.

The Glasgow programmes required a payment for breakfast, and the research was unable to determine whether this was perceived as a barrier. Indeed, the Scottish research highlighted that there is little agreement whether food should be provided universally or just to children in need – assuming they can be identified adequately, although this issue was relatively uncontroversial among the schools who took part in this research. The key argument against free provision is that it takes away parents’ responsibility to provide basics for children. Yet, as this report makes clear, many families cannot afford to provide adequate nutrition for their children, and also, targeting risks stigmatisation, and it is clear from the interviews conducted for this report that this becomes evident in children well before they leave primary school. Stigmatisation risks missing children that need help (Sheridan, 2001). Other research, however, points to school programmes helping to overcome ever-present and insidious junk food advertising aimed at children, including the use of cartoon characters to encourage children to associate junk food with fun, as well as mounting evidence to

support universal school breakfast provisions (Colquhoun, Wright, Pike, & Gatenby, 2008; Land, 2008; MacLardie, Martin, Murray, & Sewel, 2008).

7. Benefits of breakfast for children

Since the publication of *Hard to Swallow* a great deal of research has been carried out on the effects of food on children's school performance. Breakfast in particular has been found to have a beneficial effect on children's study, behaviour, and attendance, and there is mounting evidence that eating a good quality breakfast reduces the risk of obesity. This section considers evidence for the benefits of providing food to children in schools.

Evidence for the benefits of breakfast for children is mixed. In large part this is due to benefits diminishing as children get older and exercise more control over their food intake, with older children being more likely to skip breakfast altogether (Wilson, Parnell, Wohlers, & Shirley, 2006). However, for younger children the evidence is clear that breakfast provides a number of benefits (Gerritson, 2005).

Breakfast is the meal most likely to be skipped (Affenito, 2007), with only 40% of New Zealand children reporting eating breakfast (Ministry of Health, 2003b). The Ministry of Health reported that found around 15% of children leave for school without having eaten breakfast, and that Maori and Pacific children were less likely to eat breakfast at home every day compared with other groups (Ministry of Health, 2008).

Yet, as discussed below, breakfast can make a positive contribution to children's learning. In addition, anecdotal evidence from existing breakfast clubs suggests shared breakfast has positive social benefits, as well as providing somewhere for children with working parents to go to first thing in the morning. The positive social benefits seen in New Zealand have also been observed overseas (Wahlstrom & Begalle, 1999). In Scotland, teachers report better attendance and better behaviour from children as a consequence of breakfast clubs there (Sheridan, 2001, para 17), and in its 2007 report to the UN Committee on the Rights of the Child (UNCROC), the Scottish government noted that that new universal and subsidised school meal programmes in Scotland were improving children's health and academic outcomes (HM Government, 2007). Independent studies have also shown the effectiveness of Scotland's initiatives in these areas (Shemilt, Harvey et al., 2004; Shemilt, Mugford et al., 2004).

Improved nutrient uptake

Wilson et al (2006) argue that for the children who do not eat breakfast, a significant improvement in their daily nutrient uptake could be achieved if they did so. Consumption of a good-quality breakfast has been shown to be positively correlated with nutrient uptake (Kleinman et al., 2002; Rampersaud, Pereira, Girard, Adams, & Metz, 2005; Wilson, Parnell, Wohlers, & Shirley, 2006). Conversely, skipping breakfast "has also been linked to poorer overall diet" (Giovannini, Agostoni, & Shamir, 2010). Poor nutrient uptake, or "hidden hunger" (van Stuijvenberg, 2005), can have detrimental effects on children's mental and physical development (see Wynd, 2005, pp. 39-41), and "may play an important role in chronic disease risk" (Rampersaud, Pereira, Girard, Adams, & Metz, 2005, p. 744). School breakfasts may be an effective strategy to maintain food security or assure access to sufficient food to be healthy and active among low-income households with [primary] school children (Bartfeld & Ahn, 2011). A New Zealand study based on data from the *Children's Nutrition Survey*

(Ministry of Health, 2003b) found significantly better nutrient uptake for children who reported eating breakfast. “Although breakfast provided only 16.2% of the daily energy intake, it provided a significant proportion of the daily intake of calcium (29.9%), iron (26.9%), zinc (20.2%), thiamin (37.0%), riboflavin (35.1%) and folate (36.8%)” (Wilson, Parnell, Wohlers, & Shirley, 2006). This result held for all ethnic groups. A large study based in Spain also found that one of the factors putting children – especially girls – at risk of poor nutrition was no or a poor quality or no breakfast (Serra-Majem et al., 2002). Other researchers have noted that a nutritionally balanced breakfast can contribute to the “the positive short- and long- term health outcomes now attributable to breakfast” (Agostoni & Brighenti, 2010), and that “school meals programs promoting fruit and vegetable intake...may provide an opportunity to encourage increased fruit and vegetable consumption among low socioeconomic status children, particularly among those with the lowest fruit and vegetable intake” (Robinson-O’Brien, Burgess-Champoux, Haines, Hannan, & Neumark-Sztainer, 2010). In New Zealand, the overwhelming popularity of both Fruit in Schools, and the Garden to Table pilot programmes indicate that is also the case here.

Improved academic performance and school attendance

There is now a substantial body of research showing breakfast consumption contributes to students’ academic performance and school attendance (Rampersaud, Pereira, Girard, Adams, & Metz, 2005). Alleviating short-term hunger appears to be one pathway through which this occurs: this is consistent with teachers’ (and parents’) observations that, as might be expected, hungry children do not learn.

Eating a good quality breakfast has been found to slow the rate children’s cognitive performance declines during the morning (Ingwersen, Defeyter, Kennedy, Wesnes, & Scholey, 2006). Here, “good quality” is defined as having a low glycaemic index (GI), that is, foods high in fibre and complex carbohydrates. It has been established clearly that blood sugar improves cognitive performance in children and low GI foods provide a more stable supply of blood sugar over a longer period than foods high in sugar such as soft drinks and high-sugar cereals (Ingwersen, Defeyter, Kennedy, Wesnes, & Scholey, 2006).

A controlled study in Minnesota that provided a nutritious breakfast to primary-aged children found children who participated showed “better concentration, increased alertness and energy, and a decrease in stomach aches and headaches.” Other benefits included “a decrease in discipline problems, and benefits in social behaviour, attendance, and a general increase in math and reading scores” (Wahlstrom & Begalle, 1999). Also, parents were reported as being positive about the programme, with most parents reporting that the breakfasts were “positive for the family.” A Boston study that provided free breakfasts to children in public schools likewise found that among the children who consumed breakfast, there was a significant improvement in maths tests scores and a decrease in the number of days they were absent (Kleinman et al., 2002). Similar results held in studies in Philadelphia and Baltimore (Murphy et al., 1998), Spain (Lo´pez-Sobaler, Ortega, Quintas, Navia, & Requejo, 2003), the UK (Colquhoun, Wright, Pike, & Gatenby, 2008) and elsewhere (Taras, 2005).

The link between breakfast and overweight/obesity

Skipping breakfast has been found to be associated with being overweight for young people both overseas and in New Zealand (Affenito et al., 2005; Rampersaud, Pereira, Girard, Adams, & Metz, 2005; Utter, Scragg, Mhurchu, & Shaaf, 2007). The link between skipping breakfast and increased

body mass index (BMI)¹⁰ is not well understood but there is some evidence of lower percentage of fat intake among children who eat breakfast (Rampersaud, Pereira, Girard, Adams, & Metz, 2005; Wilson, Parnell, Wohlers, & Shirley, 2006), in part because children who skip breakfast may overcompensate by eating calorie-dense snacks during the day (Sjoberg, Hallberg, Høglund, & Hulthen, 2003). In addition, skipping breakfast has been associated with less healthful lifestyles, including poorer food choices and infrequent physical activity – all risk factors for being overweight or obese. Given this association, provision of breakfast can help one aspect of this, and perhaps act as a circuit breaker a range of unhealthy behaviours. One study found children who skip breakfast are 1.5 times more likely than their peers to be overweight (Veugeliers & Fitzgerald, 2005), another that “eating breakfast every day is associated with having a healthy body weight, likely due to a more even distribution of energy intake across meals throughout the day” (Dubois, Girard, Potvin Kent, Farmer, & Tatone-Tokuda, 2009). Studies also suggest eating breakfast encourages more regular eating, and that this too contributes to the lower weight seen in children who eat breakfast regularly (Gleason & Dodd, 2009; Szajewska & Rusczyński, 2010).

In New Zealand there is a clear socioeconomic and ethnic gradient in the consumption of breakfast, with more deprived groups, and Maori and Pasifika children being less likely to eat breakfast (Ministry of Health, 2003b; Utter, Scragg, Mhurchu, & Shaaf, 2007). This reflects the distribution of overweight and obesity within the community, with low-income groups more likely to be overweight, and suffer the consequences of that.

Overweight and obesity contribute to New Zealand’s biggest killers, including heart disease, stroke, cancer and diabetes. The cost to the health system is staggering, with diabetes alone estimated to cost about \$600 million per year, rising to \$1.3 billion by 2016/17 (Ministry of Health, 2009). For this reason alone any move to reduce future health costs must be considered seriously, including the provision of breakfast to children in low-decile schools, which has so many demonstrable educational and physical benefits. Overall, skipping breakfast over a long period may have detrimental effects on health: “Promoting the benefits of eating breakfast could be a simple and important public health message” (K. J. Smith et al., 2010).

How bad can junk food be for children?

As part of the research for this paper, CPAG asked the question: how bad can a breakfast be? This was asked because one of the aims of providing breakfast in schools should be to ensure that children are getting nutritionally sound food, for example low-glycemic index cereals, fresh fruit, milk, and so forth. Food purchased by children on the way to school tends to be high calorie junk food such as soft drinks, chips, pies, and cheap bakery food. Typically, these foods are high in calories, with few nutrients.

Many local dairies sell modestly priced pre-packaged ‘lunches’ for school children. CPAG purchased one of these lunches and completed a simple nutritional analysis of the contents. The lunch cost \$2.50 and is sold from a dairy en route to a high school and a primary school. A photo of the contents of the lunch is shown in Figure 3.

10 BMI expresses the weight-for-height relationship as a ratio, that is, weight (in kilograms)/height (in meters). Experts recommend BMI because it can be obtained easily, is correlated strongly with body fat percentage, is associated only weakly with height, and identifies the most overweight individuals correctly, with acceptable accuracy (Krebs et al., 2007).

Figure 3: Contents of lunch package, purchased July 2010 in Auckland.



Photo © Donna Wynd 2010

A simple nutritional analysis of the lunch was conducted using the labels on the packets (Table 2). Analysed were the sugar, fat, protein, and vitamin content.

Table 2: Nutritional breakdown of the \$2.50 lunch

	Pop Tops' orange cordial (250 ml serving)	30g pkt Oreo cookies	16g packet Jack 'n' Jill cheese flavour corn curls	16g packet Jack 'n' Jill BBQ flavour corn curls	Total	% total daily intake
Energy	472kJ					
Protein	<1g	1g	1g	1g	<4g	Almost none
Fat	<1g	6g**	4.1g	4.1g	14.2g	24%
Sugars	275g*	11g			286g	About 35%
Sodium	28mg	140mg****	Not stated	Not stated		6% daily intake for adult
Vitamin C	40mg					
Carbohydrate		20g***	10.1g	10.0g		7% daily intake for adult
Dietary fibre		1g				
Energy from fat		60kcal	Not stated	Not stated		
Total energy	113kcal	140kcal	82kcal	82kcal	417kcal	About 25%
kcal per \$					167	

For \$2.50 children get almost no dietary fibre, almost no protein, 40mg vitamin C, rather more salt than they need, 35% of their daily requirement for simple sugars, quite a lot of fat, and about 25% of their total daily energy needs. In other words, they get a lot of empty calories. The lack of fibre means that if they eat this for breakfast, the children will be hungry by lunchtime, as well as thirsty from the salt and sugar.

The dairy owner was asked about selling these products and he said he sold the lunches to children because 'it's what they like'. He did, however, admit that he would not give this to his own children because 'they don't like it.' Another dairy claimed to sell 'about 50' of these lunches per week.

The broader issue with these cheap snacks is that, as the table above shows, they provide children with almost no nutrients other than miniscule amounts of vitamin C, but excessive amounts of fats and sugars. Low-income children are more likely than others to be lacking important nutrients, particularly iron, and these snacks play a significant role in this, as well as contributing to future diabetes and heart disease (Grant, Wall, Brunt, Crengle, & Scragg, 2007; Lozoff, 2007). For younger children nutrition is vital to brain development, and there is increasing evidence that poor quality junk food inhibits the growth of children's brains (Harris, 2004).

8. Costs and benefits

For reasons of both food quantity and quality there is a compelling case for the provision of breakfast in at least decile 1 and 2 schools. Although this report has focused on the Auckland region, given the low incomes and high child poverty rates in other areas, particularly Northland, parts of Waikato/Bay of Plenty and the East Coast, there is little doubt that such a scheme could usefully be extended to decile 1 and 2 schools across the country. Programmes such as the Red Cross and KickStart already operate nationally.

The question is how such programmes would be funded and operated. Key items are labour and the food itself. Based on other research and that done for this report the biggest problem is sustaining volunteer labour. Although the schools interviewed here had food donated, there was little or no sense of how sustainable a programme based on donations is in the long term – especially those from small community groups and individuals. In addition, schools in rural areas may not have access to the donations from large local businesses including bakeries that sustain programmes in larger metropolitan areas.

This reports recommends a mix of long-term sustained public funding and donations from corporations and individuals. Successful programmes have regular staff, and these are more easily recruited and retained through payment. While it is possible for schools to run programmes with regular volunteers, this rarely appeared to be the case in Auckland's schools. Public funding should be available for staff, for 2-3 hours of each school day. This money should be tagged so it cannot be used for other purposes. At present schools get food through donations, and this should continue to be the case. If businesses are willing and able to donate food to their local schools then they should be encouraged to do so, within accepted nutritional guidelines. The popular and successful Fruit in Schools programme (Ministry of Health, 2010) should be retained as the interviews suggest that as a perishable item, fruit is the least likely item to be donated, and, as is clear from the schools, it provides the only fresh fruit some children eat.

Public funding of the key labour component of school breakfast programmes is critical to ensuring secure and consistent funding. Schools are either securing funding by apportioning teacher time or rely on outside sources. For one of the schools interviewed this meant finding additional funding to expand the school's programme, for another, the ending of external funding for a much-needed programme. Public funding is also less dependent on the good will and changing priorities of corporate sponsors, and is not concerned with branding and marketing to a very young, captive audience.

Each school is different, as are the communities in which they are situated, and it is unlikely that all schools would opt in even with financial assistance. Any funding model should be sufficiently flexible to allow for funding for food for schools in low-income communities that do not have access to donations from local businesses: small rural schools might be an example. In general, though, this report favours obtaining food through donations, in part because local donations, and donations from parents promote acceptance for the programme from the community, and lessen the risk that the programme will be seen as being imposed from outside.

Certain and external funding would also free up some school funds to implement the social aspect of breakfast programmes that research shows is so important, and was identified in the interviews as being important for children. Food is never solely about eating; it is about appropriate behaviour towards others at mealtimes, cultural expectations, a chance to engage with others over a common activity, and using food as an opportunity to show gratitude and respect to others. All of these emerged as important factors during the interviews, and provided the schools with a powerful incentive to maintain their programmes. In essence, school food programmes can extend both the educational and broader social outcomes for the schools, the children, and their communities. Positive spin-offs include community building, educating parents about nutrition, and in some cases motivating parents to return to education themselves (Neale, 2009).

A funding model should incentivise schools to deliver the programme in a consistent way and should encourage them to use school food programmes to extend both educational and broader social outcomes for the school community. This includes a policy framework that encourages schools to develop relationships with their local communities, and to help build capacity within communities. Policy design should require some level of local contribution to ensure the buy-in of the community. This should include the development of partnerships with local businesses, parents and suitable NGOs. Subsidies and assistance should be designed to leverage these other inputs.

At present the Fruit in Schools programme provides fruit to 86,000 children in 500 low-decile schools every day at a cost of \$12 million per year. It is probable that some of the administrative capability of Fruit in Schools could be extended to the provision of breakfast in low-decile schools with relatively little cost.

The most important component of providing breakfasts is having a paid coordinator, whether this is a teacher, a teacher aide or a member of the local community, and it is this component that most requires funding. Table 3 (below) outlines estimated costs. There are four scenarios considered: decile 1 and 2 primary and intermediate schools with no allowance for food costs (ie assumed all food is donated); decile 1-3 primary and intermediate schools with no allowance for food costs; and the same scenarios repeated, but with an allowance of \$2 per student per day for food. Costs are estimates only, and can be redone in the light of more accurate data, for example for administrative

and audit costs, or costs for food. The costs assume a 90% uptake among the schools, and one programme supervisor for 15 hours per week for 40 weeks per year at \$20 per hour (including holidays, KiwiSaver, etc). Adding overheads brings the total to approximately \$7 million for decile 1 and 2 schools, and \$8 million if decile 3 schools are added. Providing food costs an estimated \$14 million for decile 1 and 2 schools, and \$19 million for decile 1-3. All food costs are based on the upper limit of 25% uptake observed as part of the research for this report. Food has been estimated at \$2 per serving average throughout the year.

The figures suggest the cost of providing a breakfast to children through decile 1 and 2 schools is relatively modest. Whatever the cost there are corresponding benefits that must be taken into account when making any such calculations. In its estimate of the cost of food in schools in Scotland, the Scottish parliament made a number of observations pertinent to New Zealand. Among them were that a deregulated system led to poorer quality food, something the Scottish legislation sought to address; a universal system removes the stigma attached to targeted provision, improves take up and is cheaper to administer; universal provision helps build a healthy nation, and this was viewed as contributing to the economic, social and healthy wellbeing of Scotland as a whole; and nutritious school meals were recognised as lowering Scotland's high rates of coronary heart disease, some cancers, and diabetes, and were seen as being of key importance for development and growth in childhood and adolescence (Sheridan, 2001, pp. 2-3). Other, more direct, savings included teacher time (teachers spend time teaching rather than trying to deal with disruptive behaviour) and savings associated with improved attendance.

A key consideration must be long-term improvements to children's nutritional status, health, and improved diet for them and their families. Like Scotland, New Zealand has very high rates of ischaemic heart disease, diabetes and cancer. These lifestyle diseases are not distributed evenly across the population but, as noted above, are much more likely to occur in low-income households, and among Maori and Pasifika (Ministry of Health, 2005; Utter, Scragg, Mhurchu, & Shaaf, 2007). Given the alarmingly high rates of overweight and obesity in many young people, the provision of good quality breakfasts is less a cost than an investment in the future health and wellbeing of our citizens tomorrow. In the long run, the trade off is a relatively small cost today for greater savings in the future, and at a time when an ageing population will need all the support from its younger workforce that is available.

Table 3: Estimated costs of provision of breakfast to primary and intermediate schools, with and without including costs for food

School	DECILE 1	DECILE 2	DECILE 3
Number of schools	240	223	219
Number of students	41,028	41,662	38,198
	WITHOUT FOOD		WITH FOOD
ASSUMPTIONS			
Take up rate for school in programme	90%		90%
Take up rate for students in programmes	25%		25%
Hours per day for breakfast programme	3		3
Cost per hour (including overheads)	\$20		\$20
Number of school days	200		200
Cost per breakfast serving	-		\$2
Audit and MoE administration costs (per school)	\$1,000		\$1,000
Annual cost per school for programme supervision	\$12,000		\$12,000
Annual cost for food (per student participating)	-		\$400
SCENARIO 1 Decile 1 & 2 schools			
Number of schools participating	514		514
Cost for programme supervision (<i>millions</i>)	\$6.2		\$6.2
Audit & administration costs (<i>millions</i>)	\$0.5		\$0.5
Cost for food (<i>millions</i>)	-		\$7.4
TOTAL (<i>millions</i>)	\$6.7		\$14.1
SCENARIO 2 Decile 1 TO 3 schools			
Number of schools participating	614		614
Cost for supervision (<i>millions</i>)	\$7.4		\$7.4
Cost for food (<i>millions</i>)	-		\$10.9
Audit & administration costs (<i>millions</i>)	\$0.6		\$0.6
TOTAL (<i>millions</i>)	\$8.0		\$18.9

9. Discussion and conclusion

Discussion

At its heart, the problem of hundreds of children turning up to school without breakfast reflects the radically changed social and economic landscape of the last thirty years. Greater poverty, especially among benefit-reliant households, the discriminatory application of family assistance and the replacement of full-time secure work with multiple part-time jobs has been reflected in the re-emergence of foodbanks and childhood hunger since the early 1990s. Added to this is some parents' inability to deal with the multiple stresses in their lives. Regardless of the many reasons for children's hunger, or their parents' role in it, the greater good must be in ensuring that children have the opportunity to have a good quality breakfast. This would be a positive investment in the future of the most disadvantaged children, and make a real contribution to reducing the equity gap that exists between high- and medium-income school students and their peers in low-decile schools.

Given the variation possible in the provision of food in schools, CPAG recommends state-funded breakfast clubs run partly by paid (as an addition to existing budgets) teacher aides or teachers supplemented by local volunteers. Recruiting and retaining volunteers is often difficult, and a small remittance to cover costs would improve the long-term sustainability of programmes. As the recent experience with the Red Cross programme has shown, private philanthropy does not guarantee security of funding; children's needs do not change along with sponsors' priorities. Reliable funding and regulated nutritional guidelines would improve constancy in supply and quality of food. A working model of this is already in place with the Health Promoting Schools criteria attached to the Fruit in Schools programme. Moreover, the success of Fruit in Schools shows this model can work well.

CPAG recommends any funding from the Crown be tagged and audited, in the same way that special education funds are at present, so as to avoid funds being siphoned into other programmes.

Protocols would need to be established to ensure food and occupational safety, food quality, regularity of staffing and monitoring and evaluation, as set out in the CMDHB guidelines (Counties Manukau District Health Board, 2008). The guidelines point out the need to consult with stakeholders, and CPAG would endorse this practice to ensure that appropriate services and delivery mechanisms are established so as to reach those in greatest need. As well, although schools may be well-intended, the lack of regulation and guidelines means programmes may not be evaluated (although the Red Cross did evaluate its own programme), food quality may be inconsistent with children not eating unfamiliar or unpalatable foods, and there may be a mismatch between the goals of those delivering the programme and the needs of the children (Bloy, 2005, p. 162). Different schools have different relationships with their communities, and their children have different levels of need. Many schools interviewed for this paper said they had established a system whereby they ask parents to call if the children haven't been fed rather than have them remain at home; some schools have close relationships with their communities and have established programmes that provide wrap-round services including parental education, while others are sufficiently small that they know the families and contact them directly if something is amiss. A one-size-fits-all model under these circumstances is impractical, especially if it fails to account for existing relationships and practices.

CPAG recommends the Garden to Table programme should be extended where possible and appropriate to all schools as this improves children's nutrition, and teaches them valuable food growing and cooking skills. The nutrition learned is also valuable. According to the principals:

"We wanted the children to understand where food comes from...the Garden to Table is what the children say they love best about school...";

This research shows that successful programmes are those that also incorporate a social aspect, and is consistent with research from overseas. Linked with this are schools' efforts to develop a whole-of-whanau/whole of child approach to help parents with basic food skills, and other skills such as budgeting. A whole of child approach recognises that children have a right to be fed regardless of their parents' circumstances. While ideally breakfast programmes would be a partnership between the government, local community agencies, volunteers and local businesses, and the schools themselves, in practice, as the research for this report shows, many communities do not have the internal resources to participate in such partnerships: lack of technical skills, parents holding down multiple jobs or working unsociable hours, transience, and family instability and household overcrowding all reduce communities' ability to partner with outside agencies (a brief discussion of this can be found in Wynd and Johnson (2008)). Instead, the evidence shows that schools can use programmes to reach out into communities and, over time, strengthen relationships between the school and the community and within the community itself. This is time and resource intensive but can build capacity within communities to assist themselves and their children in the long term.

The breakfasts were viewed favourably by all the principals and other staff that were spoken to as part of the phone survey, with benefits being health-related, educational, social, providing students with a safe and welcoming environment, the opportunity to link with the wider community, and providing skills and social support for both children and parents. The longer-term benefits include a healthier, better-educated population, and reduced risk of diet-related diseases including obesity and diabetes.

"My board complains now that they can't take the children shopping because the children say 'That's not healthy, this isn't healthy'".

There are pitfalls, however, and these have been outlined in Bloy's (2005) research which involved two schools. While noting that there may be definite nutritional benefits from attending programmes such as breakfast clubs, her research argued for a more critical approach to such initiatives. She also argued that the adoption of quality teaching practices by the adults involved with operating breakfast programmes is necessary if positive environments are to be created and fostered within breakfast clubs. The introduction of regulation is one possible way in which the negative aspects that can infiltrate breakfast clubs can be identified and ameliorated. Emerging from this critical exploration of two breakfast clubs is the need for such programmes to be supported not only by the school, but also at a community as well as at the level of central government. The guidelines produced by CMDHB (2008) are helpful in this regard.

The final word must go to a principal who had this to say about providing food to his students despite some of his personal misgivings: *"It works. It really, really works."*

Conclusion

The research presented here shows that an ever-growing number of children turn up to school every day without having eaten breakfast. Almost all decile 1 and 2 primary and intermediate schools in the Auckland region now provide some food to students to ensure that they have some food before school starts, and that the breakfasts meet basic nutritional standards for growing children. Relying on private donations from some mix of charities, local businesses, and individuals and organisations from communities and the schools themselves, supply of food is not guaranteed and faces being cut back in times of greatest need.

Schools and communities face the tension between feeding children and usurping their parents' responsibility to provide them with breakfast. At the same time successive governments have fed public perceptions that childhood hunger in New Zealand is a 'choice', and is a symptom of the personal failings of parents. This has meant that discussions of income adequacy and other stresses faced by families have been largely absent. As New Zealand moves into another phase of punitive welfare reforms and the normalisation of insecurity in the labour market, the tension faced by those feeding children throws into sharp relief the question of whether we are prepared to punish children for what it is imagined is the failure of their parents. Yet in the end, the focus must be on children's education, not on their parents.

Food in schools will not fully address the problems decile 1 and 2 schools and their communities face. Clearly food programmes on their own cannot deal with the issues of transience and inadequate housing that must be urgently addressed through other programmes. It does, however, directly target those with the greatest need, and in so doing can free up household resources

It is time to deal directly with childhood hunger in New Zealand. There are two fundamental reasons for this: the first is that New Zealand is a signatory to the UN Convention on the Rights of the Child. Under the Convention, State parties have an obligation to ensure children receive adequate nutrition *because children have rights on their own account*. The second is more pragmatic and far reaching: New Zealand is facing a massive demographic shift as its population ages and as baby boomers work fewer hours and require more, and more expensive, care. As a nation, New Zealand will need every one of those hungry children to be an educated, well-informed and functioning citizen.

At the 1996 World Food Summit New Zealand signed up to the main goal of halving world hunger by 2015. While New Zealand has also committed to the World Food Summit goals and is a signatory of UN Convention on the Rights of the Child – in which says “States parties shall...take appropriate measures [t]o combat disease and malnutrition...through the provision of adequate nutritious foods (Article 24) – there has been little action taken that would ensure hungry children are fed at schools. It is time New Zealand complied with its international obligations, and prioritised the health of its poorest children. The provision of free breakfasts to children in decile 1 and 2 schools would be step in the right direction, and would show that these children are valued members of society. New Zealand can afford to give these children a hand up if it chooses. It cannot afford to leave them lagging behind. Providing breakfasts for them is not a total solution but it is a cost effective step along the way.

10. References

- Affenito, S. (2007). Breakfast: A Missed Opportunity. *Journal of the American Dietetic Association*, 107(4), 565-569.
- Affenito, S., Thompson, D., Barton, B., Franko, D., Daniels, S., Obarzanek, E., et al. (2005). Breakfast Consumption by African-American and White Adolescent Girls Correlates Positively with Calcium and Fiber Intake and Negatively with Body Mass Index. *Journal of the American Dietetic Association*, 105, 938-945.
- Agostoni, C., & Brighenti, F. (2010). Dietary choices for breakfast in children and adolescents. *Critical reviews in food science and nutrition*, 50(2), 120-128.
- Anscombe, M. (2009). *The Contemporary Political Dynamics of Feeding Hungry Children in New Zealand Schools*. Unpublished thesis, Department of Education, University of Waikato, Hamilton.
- Bartfeld, J. S., & Ahn, H. M. (2011). The School Breakfast Program strengthens Household Food Security Among Low-Income Households with Elementary School Children. *The Journal of Nutrition*, 141(3), 470-475.
- Bay of Plenty Times. (2011). Child Neglect Demands Community Involvement. *Editorial comment, Bay of Plenty Times, Saturday, April 9, 2011*. Available <http://www.bayofplentytimes.co.nz/opinion/news/editorial-child-neglect-demands-community-involvem/3947720/>.
- Bloy, A. (2005). *Food for Thought? Breakfast Clubs as Sites of Learning in Two New Zealand Primary Schools*. Unpublished thesis, Department of Sociology, University of Canterbury, Christchurch.
- Burrows, L., Wright, J., & Jungersen-Smith, J. (2000). *Toward an Understanding of New Zealand Children's Constructions of 'Health' and 'Fitness'*. Dunedin: University of Otago. Probe Study Research Report. Available http://nemp.otago.ac.nz/PDFs/probe_studies/9burrows.pdf.
- Cassels, J., & Stewart, R. (2002). *Breakfast Service Provision for School Aged Children: A Mapping Exercise*. Edinburgh: Health Education Board for Scotland. Available <http://www.scotland.gov.uk/Publications/2003/03/16781/20210>.
- Child Poverty Action Group. (2011). Auckland: Child Poverty Action Group. Available <http://www.cpag.org.nz/assets/HLFS%20Comment%20Dec2010.pdf>.
- Collins, S. (2011). Loan Sharks Leaving Families Unable to Buy Food, say Experts. *New Zealand Herald, Tuesday, April 19, 2011*. Available http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10720285.
- Colquhoun, D., Wright, N., Pike, J., & Gatenby, L. (2008). *Evaluation of Eat Well Do Well Kingston upon Hull's School Meal Initiative*. Hull: Centre for Educational Studies, Institute for Learning, University of Hull.
- Counties Manukau District Health Board. (2008). Best Practice Guidelines for Establishing Breakfast Clubs in Schools. Manukau City: Counties Manukau District Health Board. Available <http://www.betterfuture.co.nz/file/letsbeatdiabetes/BreakfastClub/Templates/Breakfast-Club-Guidelines.pdf>.

- Dixon, J., & Broom, D. (Eds.). (2007). *The Seven Deadly Sins of Obesity : How the Modern World is Making Us Fat*. Sydney: UNSW Press.
- Downtown Community Ministry. (2010). Record Numbers Strip Wellington Foodbank Bare. Wellington: Notice Board – News, Issue: 28 June 2010, available <http://www.community.net.nz/communitycentre/news/national/barefoodbank.htm>.
- Drewnowski, A., & Darmon, N. (2005). The Economics of Obesity: Dietary Energy Density and Energy Cost. *American Journal of Clinical Nutrition*, 82(suppl), 265S-273S.
- Drewnowski, A., & Specter, S. (2004). Poverty and Obesity: The Role of Energy Density and Energy Costs. *American Journal of Clinical Nutrition*, 79, 6-16.
- Dubois, L., Girard, M., Potvin Kent, M., Farmer, A., & Tatone-Tokuda, F. (2009). Breakfast Skipping is Associated with Differences in Meal Patterns, Macronutrient Intakes and Overweight Among Pre-School Children. *Public Health Nutrition*, 12(1), 19-28.
- Fisher, D. (2010). School Fruit Programme Gets Reprieve. *New Zealand Herald*, Sunday December 12, 2010.
- Food for Thought Trust. (2010). Kiwi Kids Top of the Class with Healthy Eating. Scoop Independent Media. Thursday, 9 December 2010. Available <http://www.scoop.co.nz/stories/GE1012/S00044.htm>.
- Friesen, W., Murphy, L., Kearns, R., & Haverkamp, E. (2000). *Mapping Change and Difference: A Social Atlas of Auckland* (No. Occasional publication 42). Auckland: Department of Geography, The University of Auckland.
- Gerritson, S. (2005). *Children, Food and Poverty: Food Insecurity Among Primary School Students in the Wellington Region*. Unpublished thesis, School of Social and Cultural Studies, Victoria University of Wellington, Wellington.
- Giovannini, M., Agostoni, C., & Shamir, R. (2010). Symposium Overview: Do We All Eat Breakfast and Is It Important? *Critical Reviews in Food Science and Nutrition*, 50(2), 97-99.
- Gleason, P. M., & Dodd, A. H. (2009). School Breakfast Program But Not School Lunch Program Participation is Associated with Lower Body Mass Index. *Journal of the American Dietetic Association*, 109(2 Suppl), S118-128.
- Grant, C., Wall, C., Brunt, D., Crengle, S., & Scragg, R. (2007). Population Prevalence and Risk Factors for Iron Deficiency in Auckland, New Zealand. *Journal of Paediatrics & Child Health*, 43, 531-537.
- Greater Glasgow Health Board, & Health Education Board for Scotland. (2000). *Evaluation of Breakfast Club Initiatives in Greater Glasgow: Stages 1 & 2*. Glasgow: Greater Glasgow Health Board. Available <http://www.healthscotland.com/documents/361.aspx>.
- Greater Wellington Regional Public Health. (2010). *Food Costs for Families*. Wellington: Greater Wellington Regional Public Health. Available <http://www.ana.org.nz/documents/FoodCosts.pdf>.
- Harris, R. (2004). Nutrition in the 21st century: What Has Gone Wrong? *Archives of Disease in Childhood*, 89, 154-158.

- Hartvelt, J. (2010). Welfare Crackdown: Solo Parents Targeted Stuff media, March 23, 2010. Available: <http://www.stuff.co.nz/national/politics/3490767/Welfare-crackdown-Solo-parents-targeted>.
- HM Government. (2007). *The Consolidated 3rd and 4th Periodic Report to the UN Committee on the Rights of the Child*. London: UK Government. Available http://www.ofmdfmi.gov.uk/uk_uncrc-2.pdf.
- Hopgood, T., Asher, I., Wall, C., Grant, C., Stewart, J., Muimuiheata, S., et al. (2010). Crunching the Numbers: The Affordability of Nutritious Food for New Zealand Children. *Nutrition and Dietetics*, 67(4), 251-257.
- Ingwersen, J., Defeyter, M., Kennedy, D., Wesnes, K., & Scholey, A. (2006). A Low Glycaemic Index Breakfast Cereal Preferentially Prevents Children's Cognitive Performance from Declining Throughout the Morning. *Appetite*, 49, 240-244.
- Jacobsen, V., Mays, N., Crawford, R., Annesley, B., Christoffel, P., Johnston, G., et al. (2002). Investing in Well-being: An Analytical Framework. Wellington: The Treasury. Available <http://www.treasury.govt.nz/publications/research-policy/wp/2002/02-23/twp02-23.pdf>.
- Johnson, A. (2003). *Room for Improvement: Current New Zealand Housing Policies and their Implications for our Children*. Auckland: Child Poverty Action Group.
- Johnson, A. (2011). *The Contribution of Housing Policies to Social Polarisation in Auckland*. Paper delivered at Housing Research Conference 2011. Auckland: The Salvation Army Social Policy and Parliamentary Unit.
- Kettings, C., & Sinclair, A. (2009). A Healthy Diet Consistent with Australian Health Recommendations is Too Expensive for Welfare-Dependant Families. *Australian and New Zealand Journal of Public Health*, August 2009, 33(6), 566-572.
- King, A. (2010). Pressure on Foodbank Greater than Ever. *The Daily Post*. 5 May 2010. Available <http://www.rotoruaadailypost.co.nz/local/news/pressure-on-food-bank-greater-than-ever/3913610/>.
- Kleinman, R., Hall, H., Green, H., Korzec-Ramirez, D., Patton, K., Pagano, M., et al. (2002). Diet, Breakfast, and Academic Performance in Children. *Annals of Nutrition and Metabolism*, 46(Supplement 1), 242-230.
- Knight, K. (2011). Hunger Pains. *Sunday Star-Times*, Sunday 20 February, 2011. Available <http://www.stuff.co.nz/sunday-star-times/features/4676276/Hunger-pains>.
- Krebs, N., Himes, J., Jacobson, D., Nicklas, T., Guilday, P., & Styne, D. (2007). Assessment of Child and Adolescent Overweight and Obesity. *Pediatrics*, 120, S193-S228.
- Land, J. (2008). Ministers Trial Free School Meal Plan. 24dash.com. Available <http://www.24dash.com/news/communities/2008-09-24-ministers-trial-free-school-meal-plan>.
- Langley, J. (Ed.). (2009). *Tomorrow's Schools: 20 Years On*. Auckland: Cognition Institute. Available <http://www.cognitioninstitute.org/files/docs/tomorrows-schools-20-years-on.pdf>.
- Lindberg, R. (2011). *Food Rescue – A Fresh Approach. Report 1*. Melbourne: SecondBite.

- Lo'pez-Sobaler, A., Ortega, R., Quintas, M., Navia, B., & Requejo, A. (2003). Relationship Between Habitual Breakfast and Intellectual Performance (logical reasoning) in Well-Nourished Schoolchildren of Madrid (Spain). *European Journal of Clinical Nutrition*, 57(Suppl 1), S49-S53.
- Lozoff, B. (2007). Iron Deficiency and Child Development. *Food & Nutrition Bulletin*, 28(s), 560-571.
- MacLardie, J., Martin, C., Murray, L., & Sewel, K. (2008). Evaluation of the Free School Meals Trial for P1 to P3 Pupils. Edinburgh: Education Analytical Services Scotland.
- Ministry of Health. (2003a). *Nutrition and the Burden of Disease New Zealand 1997 – 2011*. Wellington: Ministry of Health.
- Ministry of Health. (2003b). *NZ Food NZ Children: Key Results of the 2002 National Children's Nutrition Survey*. Wellington: Ministry of Health.
- Ministry of Health. (2005). *Decades of Disparity II: Socioeconomic Mortality Trends in New Zealand, 1981-1999* (No. Public Health Intelligence Occasional Bulletin Number 25). Wellington: Ministry of Health.
- Ministry of Health. (2006). *Embodying Social Rank: How Body Fat Varies with Social Status, Gender and Ethnicity in New Zealand*. Public Health Intelligence Occasional Bulletin No. 34. Wellington: Ministry of Health.
- Ministry of Health. (2007). *Tackling Disparity: Trends in Ethnic and Socioeconomic Inequalities in Mortality, 1981-2004* (No. Public Health Intelligence Occasional Bulletin Number 25). Wellington: Ministry of Health.
- Ministry of Health. (2008). *A Portrait of Health-Key Results of the 2006/07 New Zealand Health Survey*. Wellington.
- Ministry of Health. (2009). *Report on New Zealand Cost-of-Illness Studies on Long-Term Conditions*. Wellington: Ministry of Health.
- Ministry of Health. (2010). *Health Report Number: 20080889*. Wellington: Ministry of Health. Available <http://media.nzherald.co.nz/webcontent/document/pdf/healthresearchreport1.pdf> (Warning: this is a 7Mb file).
- Ministry of Social Development. (2004). *Opportunity for All New Zealanders*. Wellington: Ministry of Social Development.
- Murphy, J., Pagano, M., Nachmani, J., Sperling, P., Kane, S., & Kleinman, R. (1998). The Relationship of School Breakfast to Psychosocial and Academic Functioning: Cross-Sectional and Longitudinal Observations in an Inner-City School Sample. *Archives of Pediatrics and Adolescent Medicine*, 152, 899-907.
- Neale, I. (2009). Hungry for Helpers. *Manukau Courier*, Tuesday, July 21, 2009.
- New Zealand Government. (2009). Govt Gets Behind Food for Kids Programme. Wellington: New Zealand Government. Available http://www.kidscan.org.nz/uploads/Documents/Govt_gets_behind_Food_for_Kids_programme.pdf.
- New Zealand Red Cross. (2008). *Red Cross Breakfast in Schools: National Evaluation*. Wellington: New Zealand Red Cross.

- New Zealand Red Cross. (2010). *New Zealand Red Cross Breakfast in Schools*. Wellington: New Zealand Red Cross. Available http://www.redcross.org.nz/cms_show_download.php?id=253.
- Ni Mhurchu, C. (2010). The New Zealand Breakfast in Schools Intervention Trial. Auckland: University of Auckland, Clinical Trials Research Unit. Available <http://www.ctru.auckland.ac.nz/images/ctru/news/ANA%20BISKIT%20presentation.pdf>.
- NZPA. (2011). Rent Rising in Auckland Auckland Stuff, Thursday, February 3, 2011. Available: <http://www.stuff.co.nz/auckland/4614249/Rent-rising-in-Auckland>.
- OECD. (2007). *Quality and Equity in the Performance of Students and Schools*. Paris: OECD.
- Perry, B. (2007). *Pockets of Significant Hardship and Poverty*. Wellington: Ministry of Social Development.
- Perry, B. (2010). *Household Incomes in New Zealand: Trends in Indicators of Inequality and Hardship 1982 to 2009*. Wellington: Ministry of Social Development. Available <http://www.msd.govt.nz/about-msd-and-our-work/publications-resources/monitoring/household-incomes/index.html>.
- Pokoney, C. (2010). Foodbank Busy Despite Recession Ending. *The Southland Times*. 4 May 2010. Available <http://www.stuff.co.nz/southland-times/news/3653032/Foodbank-busy-despite-recession-ending>.
- Rampersaud, G., Pereira, M., Girard, B., Adams, J., & Metz, J. (2005). Breakfast Habits, Nutritional Status, Body Weight, and Academic Performance in Children and Adolescents. *Journal of the American Dietetic Association*, 105, 743-760.
- Robinson-O'Brien, R., Burgess-Champoux, T., Haines, J., Hannan, P. J., & Neumark-Sztainer, D. (2010). Associations Between School Meals Offered Through the National School Lunch Program and the School Breakfast Program and Fruit and Vegetable Intake Among Ethnically Diverse, Low-Income Children. *The Journal of School Health*, 80(10), 487-492.
- Rush, E., Paniani, N., Snowling, N., & Paterson, J. (2007). Food Security, Selection, and Healthy Eating in a Pacific Community in Auckland New Zealand. *Asia Pacific Journal of Clinical Nutrition*, 16(3), 448-454.
- Serra-Majema, L., Lourdes, R., Pérez-Rodrigo, C., Garcia-Closas, R., Peña-Quintana, L., & Aranceta, J. (2002). Determinants of Nutrient Intake among Children and Adolescents: Results from the enKid Study. *Annals of Nutrition and Metabolism*, 46(Supplement 1), 31-38.
- Shemilt, I., Harvey, I., Shepstone, L., Swift, L., Reading, R., Mugford, M., et al. (2004). A National Evaluation of School Breakfast Clubs: Evidence from a Cluster Randomized Controlled Trial and an Observational Analysis. *Child: Care, Health and Development*, 30(5), 413-427.
- Shemilt, I., Mugford, M., Moffatt, P., Harvey, I., Reading, R., & Shepstone, L. (2004). A National Evaluation of School Breakfast Clubs: Where Does Economics Fit In? *Child: Care, Health and Development*, 30(5), 429-437.
- Sheridan, T. (2001). School Meals (Scotland) Bill: Financial Memorandum (and Presiding Officer's Statement on Legislative Competence). Glasgow: Scottish Parliament. Available <http://www.govanlc.com/memo140901.pdf>.

- Sjoberg, A., Hallberg, L., Hoglund, D., & Hulthen, L. (2003). Meal Pattern, Food Choice, Nutrient Intake, and Lifestyle Factors in The Goteborg Adolescence Study. *European Journal of Clinical Nutrition*, 57, 1569-1578.
- Smith, C., Parnell, W., & Brown, R. (2010). *Family Food Environment: Barriers to Acquiring Affordable and Nutritious Food in New Zealand Households*. Wellington: Families Commission Blue Skies Report 32/10.
- Smith, K. J., Gall, S. L., McNaughton, S. A., Blizzard, L., Dwyer, T., & Venn, A. J. (2010). Skipping breakfast: longitudinal associations with cardiometabolic risk factors in the Childhood Determinants of Adult Health Study. *The American journal of clinical nutrition*, 92(6), 1316-1325.
- St John, S., & Wynd, D. (2008). *Left Behind: How Social and Income Inequalities Damage New Zealand Children*. Auckland: Child Poverty Action Group.
- Statistics New Zealand. (2010). Household Economic Survey. Wellington: Statistics New Zealand. Available http://www.stats.govt.nz/tools_and_services/tools/TableBuilder/household-economic-statistics.aspx.
- Szajewska, H., & Ruszczyński, M. (2010). Systematic Review Demonstrating that Breakfast Consumption Influences Body Weight Outcomes in Children and Adolescents in Europe. *Critical Reviews in Food Science and Nutrition*, 50(2), 113-119.
- Taras, H. (2005). Nutrition and Student Performance at School. *Journal of School Health*, 75(6), 199-213.
- Taylor, C. (2011). Rotorua Families Turning to Foodbank. *The Daily Post, Sunday, March 27, 2011*, pp. Available <http://www.rotorudailypost.co.nz/local/news/rotorua-families-turning-to-foodbank/3945960/>.
- The Salvation Army Social Policy and Parliamentary Unit. (2010). *Stalled: A State of the Nation Report from the Salvation Army*. Manukau City: Salvation Army Social Policy and Parliamentary Unit.
- Thomas, K. (2009). Alarm Over Rise in Junk Food Options. Stuff media, April 17, 2009. Available <http://www.stuff.co.nz/national/health/2340789/Alarm-over-rise-in-junk-food-options>.
- Trevett, C. (2011). Food parcel families made poor choices, says Key. *New Zealand Herald, February 17, 2011*. Available http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10706851.
- TVNZ. (2010). Recession Leaving Children Poverty Stricken. Available at TVNZ, <http://tvnz.co.nz/health-news/recession-leaving-children-poverty-stricken-3967753>.
- Utter, J., Scragg, R., Mhurchu, C., & Shaaf, D. (2007). At-Home Breakfast Consumption Among New Zealand Children: Associations with Body Mass Index and Related Nutrition Behaviors. *Journal of American Dietetic Association*, 107(4), 570-576.
- van Stuijvenberg, M. (2005). Using the School Feeding System as a Vehicle for Micronutrient Fortification: Experience from South Africa. *Food and Nutrition Bulletin*, 26(2, Supplement 2), S213-S219.

- Veugelers, P., & Fitzgerald, A. (2005). Effectiveness of School Programs in Preventing Childhood Obesity: A Multilevel Comparison. *American Journal of Public Health, 95*(3), 432-435.
- Wahlstrom, K., & Begalle, M. (1999). More Than Test Scores: Results of the Universal School Breakfast Pilot in Minnesota. *Topics in Clinical Nutrition, 15*(1), 17-29.
- Walton, M., & Signal, L. (2009). Household Economic Resources as a Determinant of Childhood Nutrition: Policy Responses for New Zealand. *Social Policy Journal of New Zealand*(36), 194-207.
- Wang, Y., & Baydoun, M. (2007). The Obesity Epidemic in the United States—Gender, Age, Socioeconomic, Racial/Ethnic, and Geographic Characteristics: A Systematic Review and Meta-Regression Analysis *Epidemiologic Reviews, 29*(1), 6-28.
- Wilson, N., & Mansoor, O. (2005). Food Pricing Favours Saturated Fat Consumption: Supermarket Data. *New Zealand Medical Journal, 118*(1210).
- Wilson, N., Parnell, W., Wohlers, M., & Shirley, P. (2006). Eating Breakfast and its Impact on Children's Daily Diet. *Nutrition and Dietetics, 63*, 15-20.
- World Health Organisation. (2004). *Obesity: Preventing and Managing the Global Epidemic (Report of a WHO Consultation)*. Geneva: World Health Organisation.
- Wynd, D. (2005). *Hard to Swallow: Foodbank Use in New Zealand*. Auckland: Child Poverty Action Group.
- Wynd, D., & Familton, A. (2010). Will Removing GST on Fresh Fruit and Vegetables Achieve its Stated Aim? CPAG Backgrounder 01/10. Auckland: Child Poverty Action Group.
- Wynd, D., & Johnson, A. (2008). A Geography of Poverty: Housing and Neighbourhoods in New Zealand. In S. St John & D. Wynd (Eds.), *Left Behind: How Social and Income Inequalities damage New Zealand Children*. Auckland: Child Poverty Action Group. Available www.cpag.org.nz.

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