



Auckland UniServices Limited



CENTRE FOR HEALTH SERVICES  
RESEARCH AND POLICY

**Summary Evaluation Report  
Fruit & Vegetable Intervention Study  
(‘Fresh for Less Campaign’)  
- a *Let’s Beat Diabetes* and Foodstuffs Ltd initiative**

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**Prepared by:** Amanda Dunlop and Dr Rob McNeill.

From the full report prepared by Dr Rob McNeill, Dr Janet Clinton, Sarah Appleton and Rosie Dobson entitled “An Evaluation of the Fresh for Less Campaign” (April 2008).

**Prepared for:** Let’s Beat Diabetes, the Food Industry Group, Foodstuffs Ltd, PAK’nSAVE Botany Downs, PAK’nSAVE Manukau, PAK’nSAVE Pukekohe and the Ministry of Health for public dissemination.



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# 1. Introduction

*Let's Beat Diabetes* (LBD) is a five year, district-wide strategy aimed at long-term, sustainable change to prevent or delay the onset of Type 2 Diabetes ('diabetes'), slow disease progression and increase the quality of life for people with the diabetes in Counties Manukau.<sup>1</sup> It recognises the significant activity that already exists to prevent and manage diabetes, and creates a long-term vision to align existing activity and a context for new investment, based on evidence and best practice. Fundamental to the plan is its 'whole society-whole life course-whole family/whanau' approach.

LBD and its activity is organised around ten distinct but interrelated action areas. One of its action areas is "Supporting a Healthy Environment Through a Food Industry Accord" (also known as the Food Industry Action Area). This involves the health and food industry sectors working together in partnership to make the food environment in Counties Manukau healthier, and in doing so help to reduce the rate of obesity.

A key initiative of the Food Industry Action Area in 2007/08 was the Fruit & Vegetable Intervention Study (also known as the 'Fresh for Less campaign'), aimed at increasing fresh fruit and vegetable consumption in Counties Manukau. Foodstuffs Ltd and the three PAK'nSAVE stores in Counties Manukau agreed to be the pilot sites for the intervention.<sup>2</sup> On October 15, 2007, the eight-week Fresh for Less campaign commenced. In this pilot study, marketing fundamentals (Place, Product, Price, Promotions) and public health fundamentals (Health Education/Health Promotion) were applied to develop and implement an intervention aimed at increasing fresh fruit and vegetable consumption. This entailed using the PAK'nSAVE stores as settings for the intervention study, pricing reductions for the featured fresh fruit and vegetables, in-store promotions and in-store cooking demonstrations and give-away recipe cards. The campaign ended December 8, 2007.

This report describes the background to this intervention study and the findings from the process and outcome evaluation that was conducted. Recommendations for future interventions of this nature are also provided.

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<sup>1</sup> Counties Manukau District Health Board (CMDHB) manages LBD and provides the base funding of \$10million over five years to support its implementation. Additional funding and resources is provided by LBD partner organisations. For more information, visit [www.letsbeatdiabetes.org.nz](http://www.letsbeatdiabetes.org.nz)

<sup>2</sup> PAK'nSAVE Botany Downs, PAK'nSAVE Manukau and PAK'nSAVE Pukekohe were the three pilot sites for the intervention study. The remaining store in the district, PAK'nSAVE Mangere, was not included because it only opened on October 24, 2007 when the intervention was already underway. It did, however, implement all intervention components except the health education/health promotion where/when possible.

## 1.2 **Background**

### **Health and Food Industry partnership**

In September 2004, representatives of major food manufacturers, retailers and media in New Zealand signed the Food Industry Accord (FIA) – their commitment to working collaboratively to support the Ministry of Health’s *Healthy Eating Healthy Action Framework* (HEHA) objectives aimed at preventing obesity and creating a healthier nation. The Food Industry also confirmed Counties Manukau would be the pilot site for it to demonstrate this commitment, in partnership with CMDHB and the LBD programme.

In May 2005, the Food Industry Group (FIG), the body responsible for implementing the FIA, confirmed its commitment to working in partnership with CMDHB to meet LBD’s and the FIA’s joint objectives. This commitment included the co-funding of a health/food industry advocacy position to develop and implement agreed annual joint work programmes (LBD Food Industry Action Area). The Fresh for Less campaign was one of the eleven initiatives in the 2007/08 joint work programme.

### **Fruit and Vegetables focus**

It is widely accepted that fruit and vegetable consumption is important for weight control, the prevention of chronic disease and the promotion of health and wellbeing (Glanz & Yaroch, 2004). Public health strategies should therefore aim to increase the consumption of healthy food options such as fruit and vegetables. It has been recognised that environmental interventions in communities are successful in terms of promoting the purchase and consumption of healthy food options (French, 2005). Evidence suggests that:

- Incorporating an environmental or policy approach to public health nutrition interventions has the capacity to reach wider populations than interventions based on individual behavioural change (Seymour, Yaroch, Serdula, Blanck, & Khan, 2004).
- Point of purchase promotions have been associated with increased sales of healthy food options (French, 2005; Seymour et al., 2004) and lower intake of unhealthy nutritional components such as fat and salt (Seymour et al., 2004).
- More specifically, lowering the price of fruit has been associated with increased sales of fruit in school settings (French, 2005); and price reductions in workplace settings have been associated with increased sales of healthful food options (French, 2005).

It can be argued that these findings are not directly applicable to the Counties Manukau community environment; however due to the positive nature of the results and potential significance in regards to obesity reduction, it is reasonable that they warrant further investigation. Offering lower prices and point of purchase promotion can therefore be regarded as a potential public health strategy to encourage healthful purchasing behaviour in community settings. These types of interventions require both support and investment from the food industry.

In light of the growing obesity epidemic, developing innovative public health strategies is essential. These strategies are required in order to reverse or curb the increasing trend of obesity and chronic conditions such as Type 2 Diabetes. It is important that these strategies reach the wider community not just people taking part in health promotion programmes. Future initiatives may benefit from incorporating price reductions and point of purchase promotions in order to increase consumption of fresh fruit and vegetables. The Fresh for Less campaign was one such approach.

## 2. The Intervention Study: The Fresh for Less campaign

### 2.1 Background

There is a plethora of national and international research on the barriers to fresh fruit and vegetables consumption. These include a lack of awareness of the need to eat fruit and vegetables, price, time, taste preferences and not knowing how to prepare or cook vegetables.

Only 50% of respondents surveyed in Counties Manukau's district-wide *LBD Baseline Survey* (CMDHB, 2007) reported an awareness of the need to eat fruit and vegetables. Only 45% of respondents reported eating the recommended daily servings of 5 (total) fruit and vegetables. Fifty-five percent (55%) of respondents reported eating less than the recommended daily servings, with 36% of the respondents reporting eating less than 4 servings. Vegetable consumption was significantly lower than fruit consumption. Maori and Pacific peoples' fruit and vegetable consumption rates were considerably lower than New Zealand European. Affordability of healthier foods, knowledge of what was actually a 'healthy food' and limited availability of health options were identified as key barriers to consumption.

In May 2007, representatives from LBD, Foodstuffs Ltd and the FIG began developing a proposal for a fruit and vegetable intervention to pilot in Counties Manukau, based on identified barriers. In July, a draft proposal was presented to Foodstuffs Ltd management for consideration. Management endorsed the proposal subject to individual PAK'nSAVE store operator and/or manager endorsement and support. On August 24, PAK'nSAVE store operator and/or managers endorsed the proposal. On August 25, planning for the Fresh for Less campaign commenced for an October 15 launch.

All key stakeholders<sup>3</sup> recognised a 7 week planning period for a first-off collaborative intervention was very tight. However, the Government was launching its national mass media campaign promoting fruit and vegetable consumption (*Feeding our Futures*) on October 15, and some felt it critical that the Fresh for Less campaign leverage off this, particularly given its limited budget. The desire to get something "up and running" together with the view that this intervention study was only the first step in a long-term partnership relationship meant a piloting and learning approach was adopted, with the evaluation to provide key learnings to inform and strengthen future interventions.

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<sup>3</sup> The term 'stakeholder' is used to refer to the partners of the intervention study and members of the Fresh for Less team, namely: LBD, Foodstuffs Ltd, PAK'nSAVE Botany Downs, PAK'nSAVE Manukau, PAK'nSAVE Pukekohe and University of Auckland School of Population Health (SOPH).

A Fresh for Less campaign team was established comprising representatives from LBD, Foodstuffs Ltd, FIG and the three participating PAK'nSAVE stores (intervention stores).<sup>4</sup> Its purpose was to further develop and finalise the study design, and manage its implementation. PAK'nSAVE Mangere was also invited to be part of the campaign team despite not being an intervention store, as it was deemed important for future collaborative efforts.

The campaign team met on a fortnightly basis prior to the launch. Weekly emails kept the campaign team and the health providers providing delivering the health education/promotion components (in-store cooking demonstrations) informed on progress and issues during and post-intervention.

## **2.2 Intervention components**

The aim of the Fresh for Less campaign was to increase fresh fruit and vegetables consumption in Counties Manukau. Foodstuffs Ltd and the three PAK'nSAVE stores in the Counties Manukau district agreed to be the pilot sites for the intervention study. The intervention was developed specifically to address identified barriers to fresh fruit and vegetable consumption, namely awareness of the need to eat fresh fruit and vegetables, price, time, taste preference and not knowing how to prepare or cook vegetables. The key components or elements for the intervention were:

- **Place:** Traditionally, health promotion and health education activity has been delivered in primary care and community settings, somewhat removed from where and when people purchase their foods and open to influence. This intervention looked to explore whether stores were a viable setting for health education and health promotion activity, and whether people ('consumers') could be encouraged to choose healthier options at point of purchase. The PAK'nSAVE chain was selected as a partner for this intervention study because it is renowned for its cheaper pricing.
- **Product:** The intervention and its activities were focused on and based around fresh fruit and vegetables. Three vegetables and two fruit 'featured' for a two-week cycle per cycle (in total there were four, two-week cycles). Greater emphasis was given to vegetables because of the district's lower vegetable intake (CMDHB, 2007).
- **Price:** The prices for the featured fresh fruit and vegetables were significantly reduced for the full two-week cycle.
- **Promotions:** The intervention was branded "Fresh for Less." Because of the limited budget, a decision was made to focus on in-store promotions with branded banners, posters, price tags and point of sales materials. The rationale behind this was to catch consumer attention and influence their choices once in store. External promotions were limited to four (4) fortnightly advertisements in local newspapers.

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<sup>4</sup> PAK'nSAVE Botany Downs, PAK'nSAVE Manukau and PAK'nSAVE Pukekohe were the intervention stores.

- **Health Education/Health Promotion:** Cooking demonstrations using recipes based on the featured vegetables were conducted in-store by health providers three days a week for the entirety of the eight-week intervention study. Recipe cards based on the recipes used in the cooking demonstrations were also available for consumers to take home and try.

The following table (Table 1) shows the fresh fruit and vegetables that were discounted and promoted during each of the four, two-week cycles.

**Table 1: Schedule of the Featured Fresh Fruit & Vegetables for Fresh for Less**

Period	Week Commencing	Product
1	15/22 Oct	Kiwifruit green
		NZ rose apple
		Broccoli
		Cauliflower
		Nature's Offer rua potatoes
2	29 Oct / 5 Nov	Bosc pears
		Tropical Gold Pineapples
		NZ Beans 250g pack
		Red kumara
		Freshcut Silverbeet
3	12/19 Nov	Red globe grapes
		NZ Navel Oranges
		Capsicum
		White button mushrooms
		Spring carrots
4	26 Nov / 3 Dec	Fresh Strawberries
		Dole Bananas
		Freshcut Lettuce
		NZ Tomatoes
		Telegraph Cucumber

### **Alignment to LBD and Healthy Eating Healthy Action (HEHA)**

The aims and outcomes of LBD and the Fresh for Less campaign specifically align with several of the stated actions and outcomes identified in the Government's *Healthy Eating Healthy Action* (HEHA) strategy. Specifically, the desire to work collaboratively across sectors (HEHA Outcome 1); creating environments that support and promote healthy eating; and innovative collaboration with the food industry to provide nutrition choices to consumers at competitive prices (HEHA outcome 9.2). In addition, commissioning the independent evaluation supports the notion of evaluation expressed in Outcome 23 of the HEHA framework (MOH, 2004).

### **3. The Evaluation**

#### **3.1 *Aims and Objectives***

A process and outcomes evaluation of the Fresh for Less campaign was conducted.

The aims of the process evaluation were:

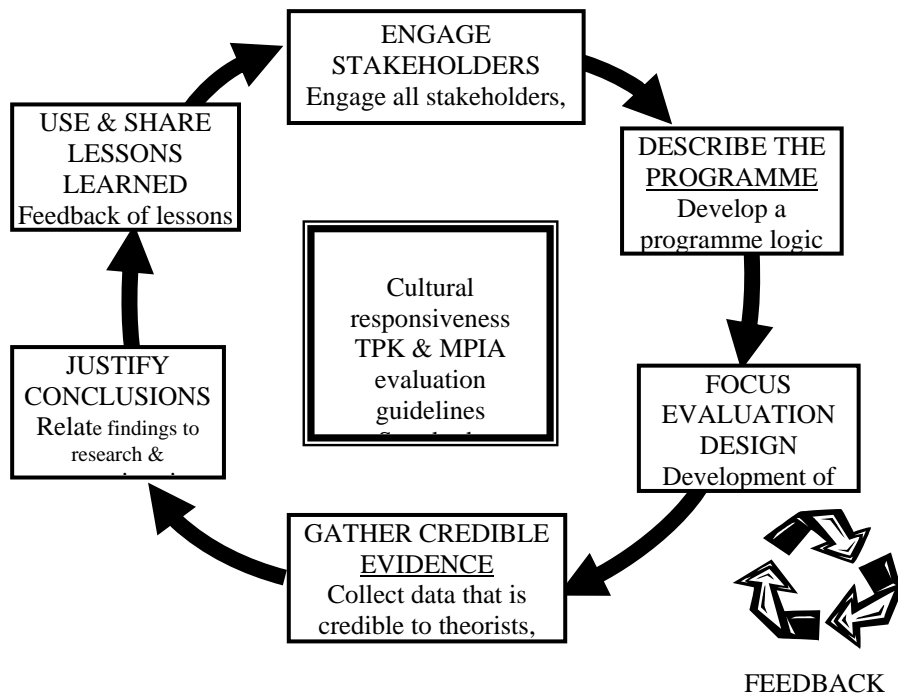
- To identify the specific interventions and promotions in each store (e.g. the fresh fruit and vegetables being promoted each week, in-store cooking demonstrations).
- To identify any barriers or enablers that encouraged or discouraged consumers from purchasing the featured fresh fruit and vegetables, from a consumer perspective.
- To identify and evaluate any barriers or enablers in regard to the development and implementation of the Fresh for Less campaign, from a stakeholder perspective.

The aim of the outcome evaluation was:

- To identify whether the Fresh for Less campaign led to an increase in fresh fruit and vegetable purchases during the intervention period and up to 3 months post-intervention.

#### **3.2 *The Evaluation Framework***

The conceptual framework that was used to guide the evaluation of the Fresh for Less campaign was the same used for the overall LBD programme evaluation. LBD is characterized by a continuous learning model, including participation and collaboration with providers and the community. Its evaluation framework is based on the Centers for Disease Control and Prevention framework for evaluation of public health initiatives (Centers for Disease Control and Prevention, 1999). This framework has been adapted to suit the cultural context of Counties Manukau, in addition to incorporating the continuous learning model, which suggests a constant flow of feedback throughout the evaluation cycle.



Adapted from the Centers for Disease Control and Prevention (1999).

## 4. Methodology

A mixed methods approach was taken in the evaluation. This section outlines the methods used to collect data.

### 4.1 Analysis of Sales Data

The outcome evaluation drew on existing data sources including food sales data for targeted promotions and other relevant food sales for the intervention stores. Data was also sourced from three control (PAK'nSAVE) stores outside the Counties Manukau district.<sup>5</sup> The control stores were selected to match, as much as possible, the intervention stores in terms of their socio-demographic setting.

Foodstuffs Ltd provided sales data (total number of fruit and vegetable purchases/transactions) for all produce sold in the intervention and control stores for weeks 25 to 45, in 2006 and 2007. The produce categories that were included are in Table 2.

**Table 2: Produce Categories Contained in the Sales Data**

Produce Categories	
Apples	Other Fruit
Bananas	Other Vegetables
Berry Fruit	P_Prepared Fruits
Citrus	P_Prepared Sal_Vege
Dried Fruit & Nuts	Pears
Fruit Juice _ Fresh	Potatoes
Grapes	Produce Dept Key
Greens	Produce Misc.
Melons	Root Crops
Mushrooms	Sprouts & Herbs
Organic Fruit	Stone Fruit
Organic Vegetables	Tomatoes

Aggregated sales data, for all produce categories combined, were used to produce individual graphs showing the pattern of sales for each of the intervention and control stores, with reference lines to indicate the timing of the intervention (showing pre, during and post intervention sales). Changes in average sales volume from the intervention period in 2007 to same period in 2006, from pre-campaign to during the campaign, and from pre-campaign to post-campaign were also tested for significance, in both the intervention and control stores.

A repeated measures ANOVA design was used for these analyses, with a model specified to produce the planned comparisons. As these comparisons were all planned, an interpretation of the omnibus test results (i.e. F statistic) were not required. All tests were conducted using a

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<sup>5</sup> We are unable to name the control stores for confidentiality reasons. However all three intervention stores were in the Auckland region.

significance level of 0.05 and Bonferroni corrections were used to control for the inflation of Type II errors in each of these comparisons.

## **4.2 *Analysis of Customer Surveys***

A short survey was conducted with consumers in the intervention stores in order to identify consumer awareness of the Fresh for Less campaign, and what specific components encouraged or discouraged them from purchasing or not purchasing the featured fresh fruit and vegetables.

The survey commenced on October 29 and data collection continued until December 8, 2007. The survey took approximately five minutes to complete. All participants were entered into a prize draw to receive \$100 of fresh produce vouchers redeemable at any PAK'nSAVE store. A total of 207 surveys were completed across four time points in each of the intervention stores.

All survey data was anonymous and was provided to the evaluation team for analysis. Surveys were not conducted in the control stores because the campaign was not implemented in them.

## **4.3 *Analysis of Stakeholder Interviews***

In-depth interviews were conducted with key stakeholders to identify any barriers and enablers in regard to the development and implementation of the Fresh for Less campaign.

The interviews commenced in November 2007 and were completed in January 2008. Stakeholders included representatives from LBD, Foodstuffs Ltd, PAK'nSAVE, FIG, intervention store management, produce managers and the in-store cooking demonstrators. All interviewees provided consent and each interview lasted around 15-30 minutes. In total, 15 interviews were conducted.

A thematic analysis was used to identify key themes identified in the data, as well as describing barriers, challenges and enablers encountered, along with recommended improvements and future directions.

## **4.4 *Limitations of the Study***

There were a number of limitations to the implementation and evaluation of the intervention study that should be acknowledged and understood:

- The intervention study had a very short planning period of 7 weeks only. The Government was launching its mass media/TV campaign promoting the consumption

of fruit and vegetables (*Feeding our Futures*) on October 15. The team felt it crucial to leverage off this, particularly given the intervention's limited budget.

- There was no dedicated project manager for the intervention, and so a “committee”/team approach was adopted, with team members doing activity on-top of their usual jobs and commitments. This did increase the likelihood of mistakes.
- The budget for the intervention was very limited, and therefore hard decisions and/or shortcuts had to be made. For example, promotions were limited to in-store; recipes for the in-store cooking demonstrations and recipe cards were ‘re-worked’ from existing recipe cards and resources; and there no resources or time to ‘test’ the promotional materials or recipes with the district’s diverse ethnic groups.
- The sales data collected and analysed for the evaluation was an imperfect measure of volume, being the total number of fruit and vegetable purchases/transactions as opposed to the actual total quantity of product purchased, which would have been the ideal. To get the latter would have required the development of new software which was not achievable within the short timeframe or limited budget.
- It was difficult to find control stores that had the same socio-demographic make-up as the intervention stores, particularly given PAK'nSAVE consumers are notably transient and travel afar to shop. However, the stores that were finally selected matched as much as possible the intervention stores.
- During the intervention period there were up to five other specials in-store per week. This was taken into account.

## 5. Evaluation Results

This section presents the key findings from the process and outcome evaluation of the Fresh for Less campaign.

### 5.1 Sales Data Results

The following figures (1 and 2) show the patterns of total number of fruit and vegetable purchases/transactions made in the intervention and control stores across the pre-, during and post-intervention periods, respectively.

Overall, the results show a similar pattern of sales for both the intervention and control stores, rising to a peak around week 43 (Christmas) and dropping off in week 44. There is, however, a stepped increase in the sales for all of the intervention stores that occurs at the time of the intervention being introduced into the stores. A similar increase is visible in only one of the control stores, however this increase does not occur at the same time as the intervention stores and does not appear to be as large.

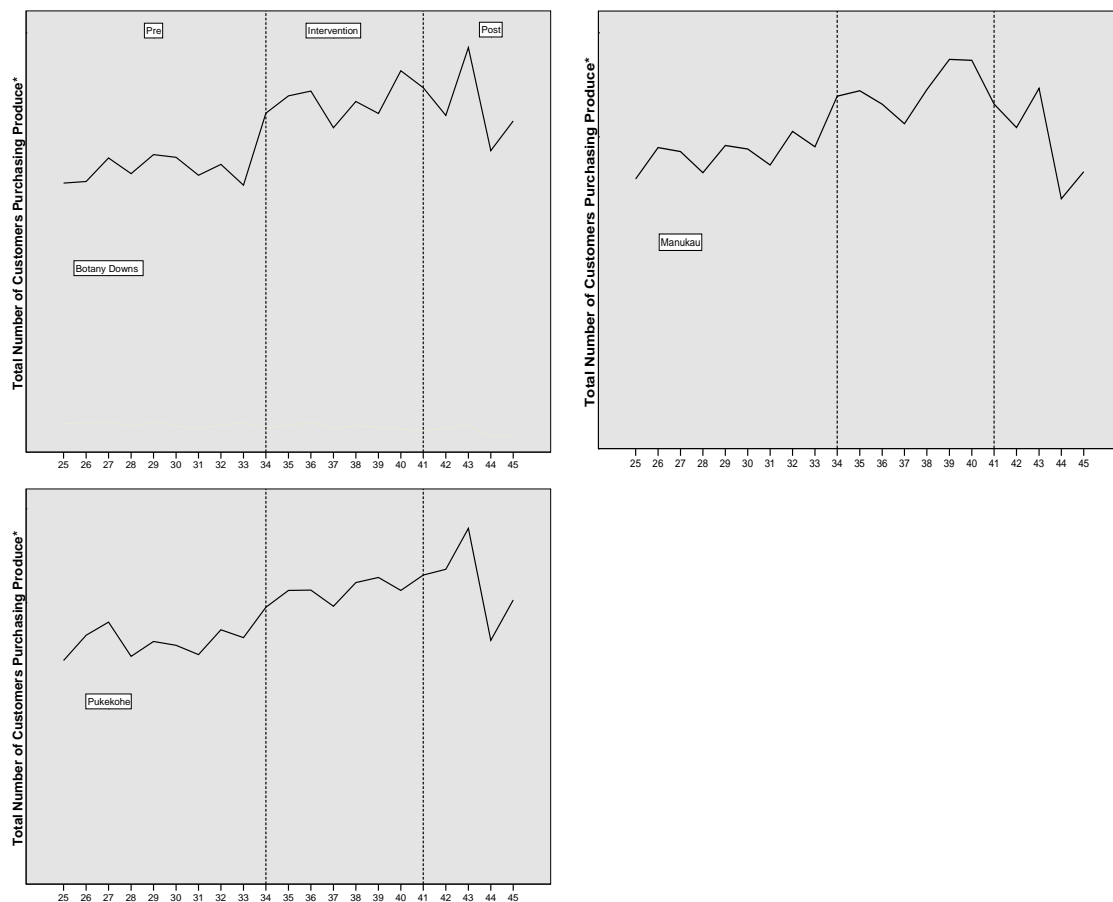
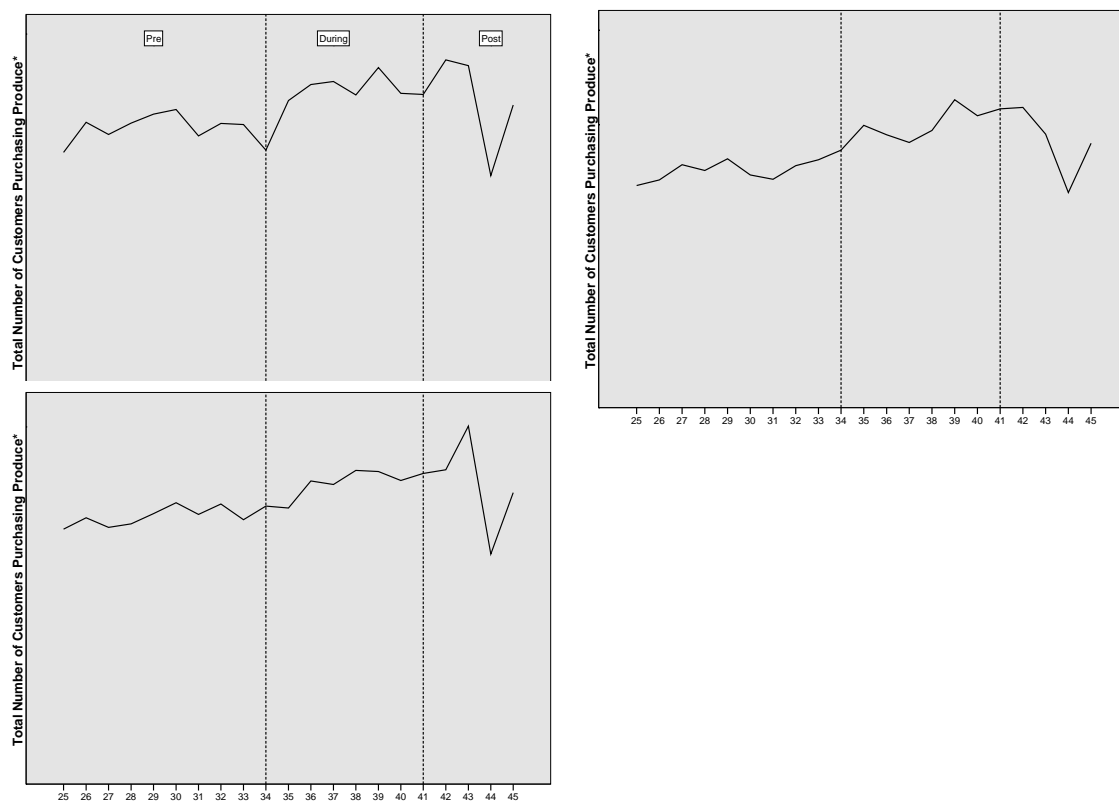


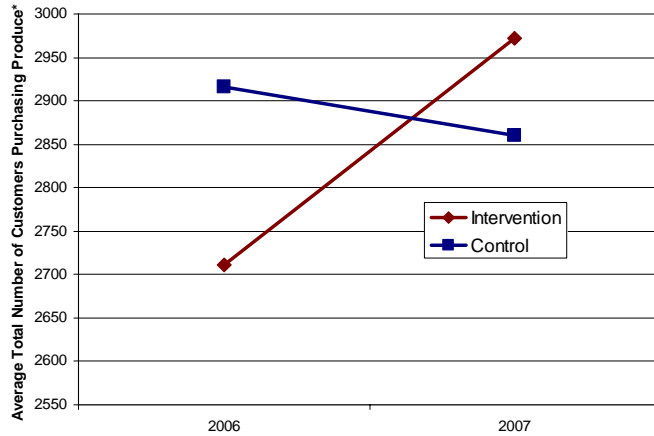
Figure 1: Total sales volume (number of purchases/transactions) in the intervention stores pre, during and post-intervention periods.



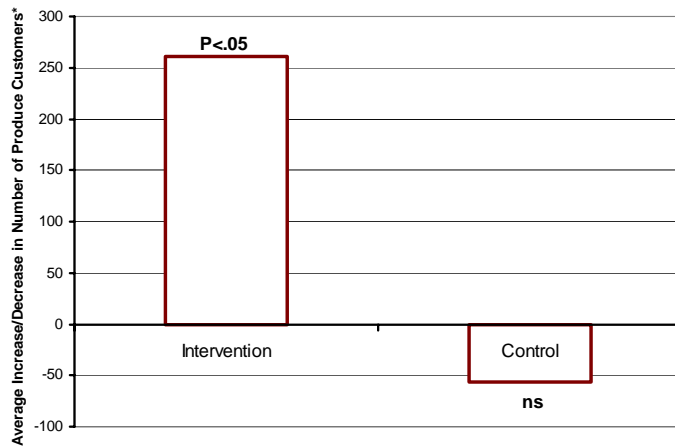
**Figure 2: Total sales volume (number of purchases/transactions) in the control stores pre, during and post-intervention periods.**

### **Intervention vs. Control Store Results**

Sales data from both the intervention and control stores for 2006 and 2007 were analysed. The results showed that there was a significant increase in average total produce sales, for the week 34-41 period, in the intervention stores ( $p < .05$ ) but not in the control stores (ns). This change is represented in Figure 3, but it should be noted that the statistics represented in this figure does not reflect the statistics used for the analysis. Figure 4 shows the average difference between the same 2006 and 2007 periods and represents the actual statistics compared in this analysis.



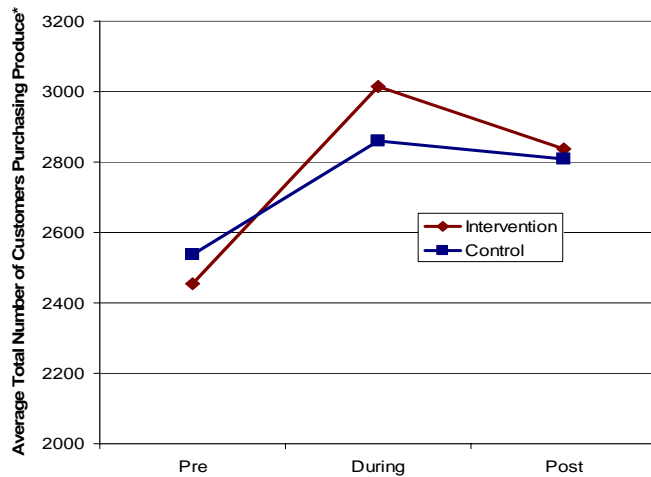
**Figure 3: Average total produce sales volume (number of purchases/transactions) for intervention and control stores in 2006 and 2007.**



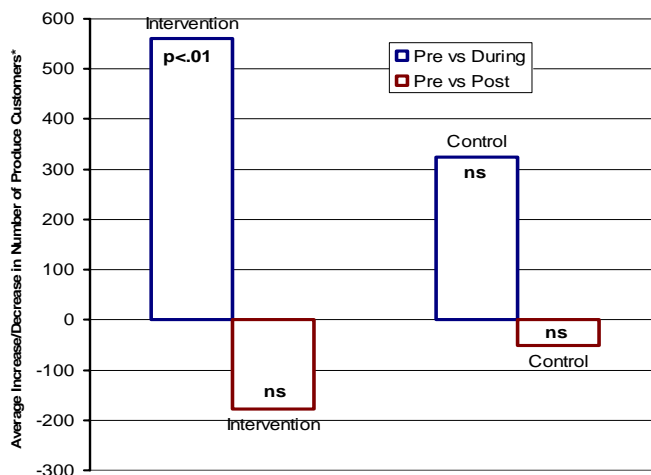
**Figure 4: Average increase/decrease in total sales volume (number of purchases/transactions) for the intervention and control stores.**

### Pre vs. During and Pre vs. Post Comparisons

The results showed that there was a significant increase in average total produce sales between pre- and during the campaign for the intervention stores ( $p < .01$ ) but not for the control stores (ns). The difference between the pre- and post-campaign sales was not significant for either the intervention or control stores. The change in sales between time periods and the average difference between time periods within the control and intervention stores are presented in Figure 5 and Figure 6.



**Figure 5: Average total produce sales volume (number of purchases/transactions) for intervention and control stores, pre, during and post-intervention periods.**



**Figure 6: Average increase/decrease in total sales volume (number of purchases/ transactions) for intervention and control stores pre vs. during and pre vs. post-intervention periods.**

## 5.2 Customer Survey Results

A total of 207 surveys were completed by consumers across four time points in each of the intervention stores. The purpose of the surveys was to identify consumer awareness of the Fresh for Less campaign, and to identify what encouraged or discouraged them from purchasing the featured fresh fruit and vegetables.

The surveys were completed by consumers after they had passed through the fruit and vegetable section of the store.

Table 3 shows the number of surveys completed at each store across each time point. Gender, age and ethnic representation were sought and attained.

**Table 3: Number of surveys completed**

Store	Time point				Total no. of surveys
	1	2	3	4	
Botany	19	20	12	17	68 (32.9%)
Manukau	15	20	17	16	68 (32.9%)
Pukekohe	15	16	20	20	71 (34.3%)
Total	49 (23.7%)	56 (27.1%)	49 (23.7%)	53 (25.6%)	207 (100%)

The results showed that only 44% of respondents had heard about or seen the Fresh for Less campaign, indicating moderate awareness of the campaign. Of those who had heard about or seen the Fresh for Less campaign and its promotions, 59.8% reported that one or more components of the campaign had encouraged them to buy the featured fresh fruit and vegetables.

As shown in Table 4, Price (46%) appeared to be the most common factor encouraging consumers to purchase the featured products, followed by in-store cooking demonstrations (20%). The promotional materials, normally buying them, and needing or wanting them were other influencing factors.

**Table 4: Reported reasons for purchasing the featured produce and frequencies for each response**

Factor	Frequency
Price	35 (46.1%)
Cooking demonstrations	15 (19.7%)
Promotion	8 (10.5%)
Normally buy them	4 (5.3%)
Needed/wanted them	2 (2.6%)
Quality	2 (2.6%)
Healthy	1 (1.3%)
Other	9 (11.8%)

The most commonly reported reason for not purchasing the featured fruit and vegetables was not noticing the campaign (65%). Not needing or wanting them, lack of time, not liking the fruit and vegetables, and growing their own were also given as barriers to purchasing the featured produce as shown in Table 5.

**Table 5: Reported reasons for not purchasing featured produce and frequencies for each response.**

Factor	Frequency
Not noticing the campaign	37 (65.0%)
Not needing/ wanting them	8 (14.0%)
No time	3 (5.2%)
Not liking them	2 (3.5%)

Grow own	2 (3.5%)
Other	5 (8.8%)

The majority of respondents (58%) reported having learnt little or nothing from the in-store cooking demonstrations in terms of general health and nutrition. The low awareness of the campaign and its components (at 44%) and/or the reality that consumers may have sampled the cooking but not necessarily listened and interacted with the demonstrator may help to explain this. However, 64.7% of respondents who did learn something learnt new cooking ideas, and 52.9% reported having learnt health information. 5.9% gave no response.

The majority of respondents (83%) reported that the need to be healthy and eat healthily strongly affected their choices when shopping for food.

### **5.3 Stakeholder Interviews Results**

A total of 15 interviews with the key stakeholders were conducted to identify any barriers and enablers in regard to development and implementation of the Fresh for Less campaign. The key stakeholders had a variety of roles in the campaign including produce and store managers, Foodstuffs Ltd, in-store cooking demonstrators and their organisations.

The interviews revealed that the majority of key stakeholders successfully understood that the fundamental concepts of the Fresh for Less campaign were concerned with improving diet and health outcomes. However, there were differing views on who the target groups for the campaign were. This may reflect differences in the stakeholder roles in the campaign.

The campaign's promotional materials and the personnel involved were considered integral to the success of the campaign. The in-store cooking demonstrations were considered to be the principal facilitator of change. The successful collaboration between key stakeholders, increased public awareness in regards to healthy diets, and the food industry's increased awareness of health messages were considered the key achievements.

The barriers to the campaign's success were the lengthy implementation period (8 weeks) and the inappropriateness of some recipes for some ethnic groups.

In terms of the future direction of the campaign, expansions into other stores and increasing (store) staff knowledge and awareness of health and nutrition were regarded as beneficial actions to take. Whole organisation (store) engagement was also identified, especially in regards to produce managers' inclusion earlier in the development phase.

## 6. Discussion

The following section provides a brief overview of and discussion on the findings. Recommendations for future interventions of this nature are also provided.

### 6.1 *A Discussion of the Key Findings*

The Fresh for Less campaign adopted an innovative approach to increasing fresh fruit and vegetable consumption and there many key learnings that can be used to inform future interventions of this nature.

The sales data provides some evidence to suggest that there was an increase in the overall volume of sales of fruit and vegetables when the intervention was introduced into the stores. However there is difficulty in ascribing the change directly to the Fresh for Less campaign, given the large number of other promotions running in the stores and other influencing factors. Of particular note, one of the control stores showed a very similar pattern of change to the three intervention stores. All three of the intervention stores did, however, demonstrate a stepped increase in sales at the time of the intervention whereas the control stores did not consistently show this. It is also of note that none of the intervention stores showed the same stepped pattern of increase the previous year.

Results from the customer surveys showed that only 44% of respondents had heard about or seen the Fresh for Less campaign, indicating moderate awareness. Although this seems low, it is important to consider the impact of the context and limitations of the intervention, for example the promotions being limited to in-store point of purchase materials and the minimal external promotions. Encouragingly, 59.8% of respondents who were aware of the intervention reported that one or more of its components encouraged them to buy the featured fresh fruit and vegetables. Price appeared to be the most influential component, not only confirming that price is a key barrier to healthy eating for some population groups but highlighting the need for it to be incorporated into any intervention that aims to influence behaviour change. The second most influential component was the in-store cooking demonstrations, which suggests that stores could be viable settings for health education and promotion. Not noticing the intervention's promotional components appeared to be the main reason for not purchasing the featured products, which indicates there may have been issues with placement or promotion that will need to be considered for future interventions.

The majority of respondents reported having learnt nothing from the in-store demonstrations in terms of general health and nutrition. The low awareness of the intervention and its components (at 44%) and the reality that consumers may have sampled the cooking but not necessarily listened and interacted with the demonstrators may help to explain this. However, 64.7% of respondents who did learn something learnt new cooking ideas, and 52.9% reported having learnt health information. The need to be healthy and eat healthily

appeared to strongly affect the choices of the consumers when shopping for food, which provides support for interventions of this nature.

The results from the key stakeholders interviews provided a comprehensive insight into the implementation and development of the Fresh for Less campaign. The majority of the key stakeholders successfully understood that the fundamental concepts of the campaign were concerned with improving diet and health outcomes. The resources they considered to be integral to the campaign were the personnel involved and the promotional materials. The latter is surprising given consumers' moderate awareness of the campaign (44%). Enhancing and increasing these resources for future interventions would only be beneficial. All key stakeholders regarded the in-store cooking demonstrations as being the principal facilitator of change, which is consistent with the customer feedback.

The successful collaboration between key stakeholders was considered a key achievement of the intervention. Strong foundations for a long-term partnership relationship have been laid, and should be built on. The other key achievements were the food industry's increased awareness of health messages and increased public awareness in regards to healthy diets - although there is no way of knowing the degree to which the latter happened.

The lengthy implementation period and the inappropriateness of some recipes were considered the foremost barriers. The majority of stakeholders were of the view that short, sharp, dynamic campaigns repeated a number of times throughout the year would be more effective as would keep the customers engaged. It was also acknowledged that the intervention's limited budget necessitated hard decisions and shortcuts, which contributed to the inappropriateness of some recipes for some ethnic groups. Recipes for the in-store cooking demonstrations and recipe cards were 're-worked' from existing recipe cards and resources, and there no resources or time to 'test' the recipes with the district's diverse ethnic groups. More resources and time to do this would enhance outcomes.

In terms of the intervention's future direction, incorporating the learnings from the evaluation, expansion into alternative stores, and increasing (store) staff knowledge and awareness of health and nutrition were regarded as beneficial actions to take. Whole organisation (store) engagement was also identified, especially in regards to produce manager inclusion earlier in the development phase.

In sum, although consumer awareness of the Fresh for Less campaign was not high, there was an increase in sales for the featured fresh fruit and vegetables, with price, followed by the in-store cooking demonstrations the most influential factors. The intervention study has provided some positive outcomes, and more importantly key learnings to inform and guide future interventions of this nature.

## 6.2 *Recommendations*

In light of the process and outcome evaluation findings of the Fresh for Less campaign, it is recommended that:

- Foodstuffs Ltd (PAKn'SAVE specifically) and LBD run another similar intervention of this nature based on the impact on fresh produces sales.
- Future interventions be implemented at a time when there are fewer confounding factors, such as other in-store promotions and specials. This would enable more in-depth analysis of the intervention's impacts.
- Price reduction remain a key factor in future interventions of this nature, as it appeared to be the most influential factor in terms of influencing consumer purchasing behaviours.
- The learnings from the process evaluation be incorporated into future interventions of this nature. Subsequently, it is recommended that:
  - Produce managers be included earlier in the development process to not only increase intervention appropriateness but ensure ownership and support, and minimise any unforeseen implementation issues.
  - There be a longer planning period to ensure issues of in-store consultation and food hygiene and health and safety are taken care of.
  - Shorter campaigns be implemented and repeated a number of times throughout the year. This will keep the customers engaged.
  - Future interventions of this nature be designed to enable evaluation of the impact of the promotions and in-store cooking demonstrations components specifically. This could be done by having these additional components in some stores and not in others.
- In terms of the in-store cooking demonstrations, it is recommended that:
  - The location of the in-store demonstrations and promotional materials be more central or prominent to ensure maximum customer attraction and awareness.
  - The in-store demonstrators be fully informed about the products and key messages to be delivered to the public so as to maximise the value of the health education/promotion.
  - The products be in season to support a greater increase in sales.
  - The recipes for the in-store cooking demonstrations and give-away recipe cards be tested to ensure appropriateness for the diverse ethnic groups.
- Collaborations between LBD, CMDHB, FIG, Foodstuffs Ltd and the PAK'nSAVE stores in Counties Manukau continue, as this first-off collaborative intervention was a success, and provides strong foundations for future collaborative efforts aimed at improving the health and wellbeing of Counties Manukau.

## Appendix



The Fresh for Less logo.

All resources and promotional materials were branded, including the banners, posters, price tags, recipe cards, point of sales materials and the in-store cooking demonstrators' uniforms (caps and aprons).



Kate Smallman, Diabetes Nurse Specialist from Diabetes Projects Trust, delivering an in-store cooking demonstration session at PAK'n SAVE Botany Downs.

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