safefood

TACKLING FOOD POVERTY

Lessons from the Decent Food for All (DFfA) Intervention

safefood research

Tackling food poverty: Lessons from the Decent Food for All (DFfA) intervention

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This document brings together the lessons from the All-Ireland Learning from the Decent Food for All (DFfA) intervention research programme. The full results can be found in three supporting documents:

- Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part I: Food Culture in the Armagh and Dungannon Health Action Zone (ADHAZ), Northern Ireland
- Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part II: Description of the Decent Food for All (DFfA) intervention
- Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part III: Community-level impacts of the DFfA intervention – statistical analysis and interpretation

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TACKLING FOOD POVERTY: Lessons from the Decent Food for All (DFfA) Intervention

This is the report of an evaluation carried out for ***safefood*** by the Institute of Public Health in Ireland.

The evaluation is of the Decent Food for All programme which was run by the Armagh and Dungannon Health Action Zone.

The Decent Food for All programme was funded by ***safefood*** and the Food Standards Agency Northern Ireland.

People are living in food poverty if they are unable to consume adequate safe healthy food in ways that are aligned with their cultural and social norms. As a result their physical, mental and social health and well-being suffer. In part due to the challenges faced in gaining financial and physical access to safe healthy food, people in lower socio-economic groups are at an increased risk of food poverty and obesity.

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Institute of Public Health in Ireland

Abbreviations

ADHAZ	Armagh and Dungannon Health Action Zone
BMI	Body Mass Index
CFT	Community Food Team
DFfA	Decent Food for All
DHSSPS	Department of Health, Social Services & Public Safety
FSANI	Food Standards Agency Northern Ireland
IfH	Investing for Health
HSS	Health and social services
IPH	Institute of Public Health in Ireland
LEG	DFfA Local Evaluation Group
NAPS	National Anti Poverty Strategy
NI	Northern Ireland
NISRA	Northern Ireland Statistics and Research Agency
OG	DFfA Operational Group
PAF	Postal Address File
PHAII	Public Health Alliance for the island of Ireland
PLA	Programme Logic Approach
RoI	Republic of Ireland
SHSSB	Southern Health & Social Services Board
TSN	Targeting Social Need

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Executive Summary

This report summarises the evaluation of the Decent Food for All (DFfA) intervention that was delivered by the Armagh and Dungannon Health Action Zone (ADHAZ) Partnership in the Southern Health and Social Services Board area in Northern Ireland. Further details can be found in three supporting documents accompanying this report.

Background (chapter 1)

People are living in food poverty if they are unable to consume adequate safe healthy food in ways that are aligned with their cultural and social norms. As a result their physical, mental and social health and well-being suffer. In part due to the challenges faced in gaining financial and physical access to safe healthy food, people in lower socio-economic groups are at an increased risk of food poverty and obesity.

When the DFfA intervention was being developed there was no formal policy framework for tackling food poverty or obesity in Northern Ireland. The government's *Fit Futures* Strategy only emerged towards the end of the DFfA intervention period. As a result of this changing policy context, DFfA's objectives were flexible so it could respond to emerging regional priorities.

What is DFfA? (chapters 2-3)

Decent Food for All (DFfA) was a four-year community-based project developed and implemented by the ADHAZ Partnership. Its aim was to increase physical, financial and information access to safe healthy food in twelve deprived/highly deprived wards in the ADHAZ area. DFfA's core activities focused on group-based health educational sessions and practical workshops, general communications and contributions to other community-initiated events.

Delivered between April 2003 and March 2007, the DFfA intervention was funded by ***safefood*** and the Food Standards Agency Northern Ireland (FSANI) (£240,000 over four years).

The DFfA recognised that efforts to tackle food poverty need to be part of wider efforts to address local regeneration and social inclusion. In addition to this initial funding, the ADHAZ Partnership attracted additional funding of £255,000 for other supporting programmes, which focused on the local production and distribution of food, such as community and school gardens and food co-operatives.

How DFfA was evaluated (chapter 4)

The Institute of Pubic Health in Ireland (IPH) is an all-island body established to promote North-South cooperation in public health. Tackling health inequalities is at the core of all that it does (***www.publichealth.ie***).

safefood commissioned the IPH to evaluate the DFfA intervention and to identify all-island lessons about the role of community-based interventions in tackling food poverty and obesity.

The comprehensive evaluation design included:

- Use of a programme development tool called the Programme Logic Approach (PLA)
- A process evaluation, overseen by the DFfA Local Evaluation Group, that monitored DFfA core activities and conducted the participant evaluations
- A series of ethnographic studies to explore the food culture in the ADHAZ area
- The use of Newry/Mourne HSS Trust as a (non-random) matched comparison area
- Pre-test and post-test community surveys and food basket studies.

Community-level impacts were assessed by comparing changes observed in the DFfA intervention area to those observed in the comparison area. Twenty one community-level performance indicators grouped under two themes ("local regeneration" and "individual, household and community change") were identified. These were statistically adjusted for confounding by various demographic and socio-economic factors.

What DFfA delivered (chapters 6, 7)

Between 2003 and 2007, the DFfA Community Food Team delivered approximately 370 core activities to approximately 3,100 residents.

These activities were very well received by participants who reported substantial improvements in their knowledge, attitudes and skills.

Approximately 1 in 8 residents of the intervention area participated in at least one DFfA core activity.

DFfA materials are now being incorporated into a wider food poverty toolkit to support community-based health education across Northern Ireland that is being developed by FSANI.

Community-level impacts (chapter 7)

At the end of the intervention period, DFfA was recognised by less than ten percent of adults living in the ADHAZ area.

At the community-level, the DFfA intervention achieved some significant improvements:

- Increase in self-reported confidence in knowledge and abilities about four food matters
- Increase in the self-reported consumption of fruit and vegetables
- Some reduction in the self-reported consumption of foods high in fat or sugar (marginally significant)
- Increase in self-reported levels of physical activity
- Increase in safe food safety practices.

These behavioural changes, however, were not accompanied by improvements in awareness and knowledge or the self-reported levels of obesity/overweight.

The DFfA intervention achieved particular success in rural areas and particularly disadvantaged wards in the already deprived/highly deprived intervention area. However, there was no clear relationship between these impacts and the types of areas in which the most DFfA core activities were delivered.

It is clear that the somewhat weak policy context that existed during most of the intervention period limited DFfA's potential to achieve further impacts at the community level:

- During the intervention period, there were mixed changes in the availability and price of food: the availability and price of food products – both unhealthy as well as healthy – increased
- The proportion (around 1 in 5) of adults who, in the last six months, had cut their weekly food spending in order to pay other household bills did not change during the intervention period.

Recommendations (chapter 8)

1. *Local action is an essential part of efforts to promote an affordable, safe, healthy diet. It should be supported appropriately by:*

- *Strengthening health education activities*
- *Addressing other local issues*
- *Enabling meaningful community engagement*
- *Supporting local teams.*

2. *If local action is to achieve greater and sustainable impact at the community-level, it must be properly embedded into a more comprehensive approach. If this approach is to be effective it must*

- *Incorporate cross-government action*
- *Be directly linked to government strategies to tackle obesity, poverty and social exclusion*
- *Involve closer working with the food industry including local food producers, suppliers and retailers*
- *Address issues at the regional and international levels.*

3. *Greater effort is required to better coordinate the work of researchers/evaluators, public health practitioners and policy makers, and the community. This will require:*

- *Innovative new ways of generating relevant knowledge as well as translating it into effective policy and practice*
- *New types of partnerships between researchers, policy makers, service providers and the community*
- *Greater coordination between policy development, service delivery and research/evaluation.*

4. *An all-island approach is necessary to effectively tackle food poverty and obesity:*

- *North-South cooperation could be strengthened in the context of the health promotion work of the Belfast Agreement*
- *It could be delivered through coordinated efforts of the implementation bodies for the Fit Futures strategy in Northern Ireland and the Obesity Taskforce in Ireland, and the anti-poverty strategies in both jurisdictions*
- *It should build on the existing work of all-island bodies such* ***safefood*** *and the Institute of Public Health who have already demonstrated the benefits of North-South cooperation.*

Conclusion

Core activities of the DFfA intervention had powerful impacts on participants in the deprived/highly deprived intervention area. However, its impact at the community-level was mixed, due in part to the lack of a more comprehensive approach to tackling broader issues.

To address this short-coming, a coherent policy framework with an appropriately supported and implemented strategy to tackle food poverty and obesity across this island is required.

1. Background

What is food poverty?

Some commentators describe food poverty as the inability to acquire or consume sufficient quantity of adequate quality food in socially acceptable ways, or the uncertainty of being able to do so[2]. Others emphasise the fact that people experiencing food poverty are unable to purchase and eat food in ways appropriate to their cultural and societal norms[3].

This report highlights the multi-dimensional nature of food poverty and its impact on health and well-being. We say that a person is living in food poverty if they are unable to consume adequate safe healthy food in ways that are aligned with their cultural and societal norms. As a result their physical, mental and social health and well-being suffer.

Some countries, like Canada, the USA and Australia use the term "food insecurity" [4].

Why is it important?

The Public Health Alliance for the island of Ireland's (PHAII) report *Food poverty in Northern Ireland – Fact or fiction* noted that 29.6% of the population were living in poverty in 2002/2003[5].

People living in poverty and social exclusion – such as the unemployed, low income families, people with little formal education or poor skills, people living in poor housing or in high crime areas – are at higher risk of poor dietary intake and poorer health status.

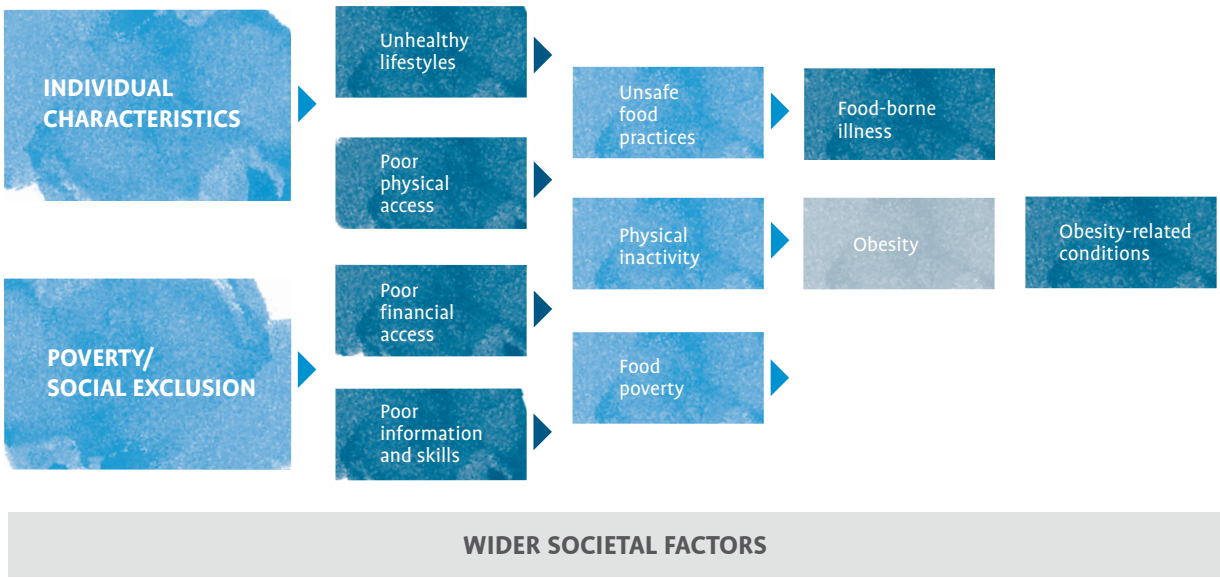
Figure 1 highlights the wider societal factors, including effects accumulated over a person's lifecourse, that affect behaviours and health. While many aspects of the obesogenic[1] environment affect all people, it is the poor and disadvantaged who are least able to cope. In many poorer households, food expenditure is the only discretionary budget item and it is often reduced to avoid debt or to pay other household bills such as rent, electricity, and gas[6].

Childhood and adult obesity have reached epidemic levels[7] and continue to rise. While the origins of obesity are complex, food poverty influences the way it is distributed across society.

[1] The "obesogenic environment" is a broad term used to describe the different aspects of the physical and social environment that tend to increase obesity rates in a population.

In particular, children living in poorer households experience food poverty and adopt unhealthy behaviours in early life. They are more likely to suffer conditions such as obesity, cancer and heart disease in adult life[8].

Figure 1: Poverty, food poverty, obesity



Background to this study

According to the FSANI's Consumer Attitudes Survey, healthy eating is as important to Northern Ireland consumers as health service provision and house prices[9]. It is widely recognised at regional and local levels that people on low incomes often do not have adequate resources to enjoy a healthy balanced diet.

An emerging policy framework

When the DFfA intervention was being developed there was no formal policy framework for tackling food poverty or obesity in Northern Ireland. The government's Fit Futures Strategy only emerged towards the end of the DFfA intervention period.

In 2004, Friel and Conlon conducted an analysis of food poverty related data and policy in the Republic of Ireland. Following publication of their report Food Poverty and Policy [3], in 2006, the Healthy Food for All (HFfA) initiative was launched with support from Combat Poverty Agency, Crosscare, ***safe*food** and St Vincent de Paul.

***safe*food** also commissioned the Public Health Alliance for the island of Ireland (PHAII) to undertake a similar analysis for Northern Ireland. Their report, *Food Poverty: Fact or fiction*[5], was published in late 2007.

Together, the Friel and Conlon report and the PHAII report provide a analysis of the policy context in both parts of the island of Ireland as it emerged during the DFfA intervention period.

Republic of Ireland

Quality and Fairness – A Health System for You (2001), Ireland's health strategy, embraces the need to modify high-risk lifestyle behaviours including adverse dietary habits[10]. Halting the increase in obesity presents a major challenge. *A National Taskforce on Obesity* was established in 2004 and its report encourages a healthier lifestyle7. It is widely agreed that the Taskforce's recommendations need to be put into action through a properly funded action plan endorsed and led by government.

The National Action Plan for Social Inclusion 2007-2016 addresses the underlying causes of poverty and social exclusion. It states that health promotion activities have to be further developed in partnership with the community, targeting specific topics including healthy eating[11].

Northern Ireland

Investing for Health (2002), Northern Ireland's public health strategy, prioritises healthy eating and physical activity[12]. It stresses that people must embrace the messages of healthy lifestyles and be well informed in order to protect and improve their health. It emphasises that a balanced, healthy and affordable diet should be more readily available to everyone – including those living on low or reduced incomes – and that food poverty should be eliminated. It highlights the need for action across the wider determinants of health and the far-reaching effects of poverty on issues such as food and nutrition.

Fit Futures Strategy: Focus on Food, Activity and Young People (2005) was introduced towards to end of the DFfA intervention period with a focus on young people[13]. Like *Investing for Health*, it promotes inter-departmental and cross-sectoral themes.

Lifetime Opportunities, Northern Ireland's anti-poverty and social inclusion strategy, refers to the reduction of childhood obesity but makes little reference to food poverty. It emphasises the need to fully engage with those communities where the impact of health inequalities is greatest[14].

This study

In 2003, ***safefood*** and FSANI funded the development and delivery of a community-based food poverty intervention called Decent Food for All (DFfA) in the Armagh and Dungannon Health Action Zone (ADHAZ) area of Northern Ireland.

safefood also commissioned the Institute of Public Health in Ireland (IPH) to evaluate the intervention and to identify the all-island lessons about the role of community-based interventions in tackling food poverty and obesity.

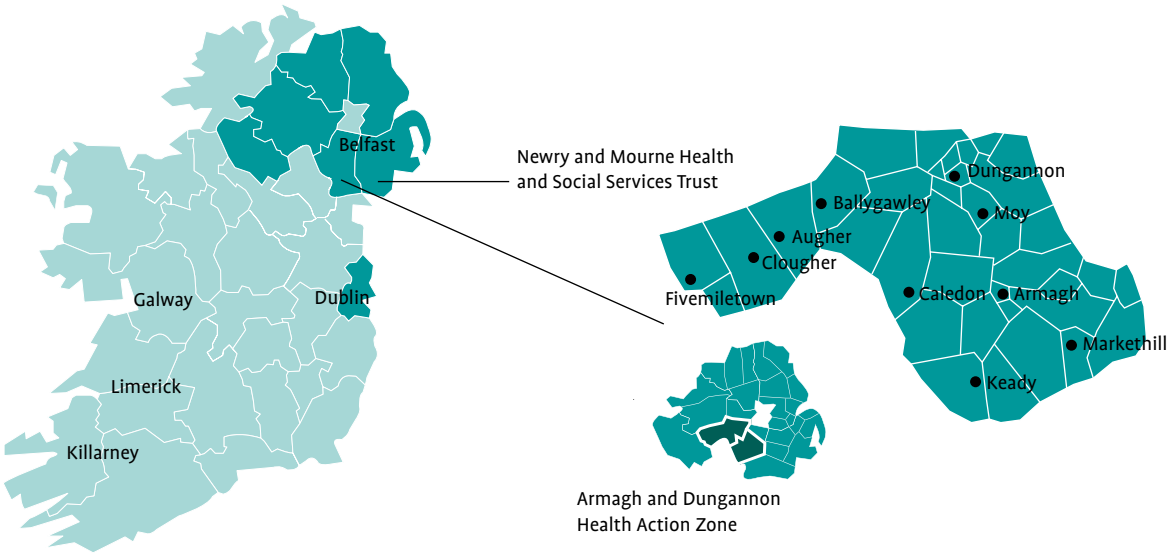
This document summarises the lessons from that evaluation. Full details can be found in three supporting documents:

- *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part I: Food Culture in the Armagh and Dungannon Health Action Zone (ADHAZ), Northern Ireland*[15]
- *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part II: Description of the DFfA intervention*[16]
- *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part III: Community-level impacts of the DFfA intervention – statistical analysis and interpretation*[17].

Each can be downloaded from the Institute's website (***www.publichealth.ie***).

2. Armagh and Dungannon Health Action Zone

Figure 2: The Armagh and Dungannon Health Action Zone (ADHAZ).



The Armagh and Dungannon Health Action Zone (ADHAZ) is made up of the Armagh City and District Council (260 square miles) and the Dungannon and South Tyrone Borough Council (315 square miles). It has a total residential population of around 106,000 with a population density well below the Northern Ireland average. Apart from its two main towns of Armagh and Dungannon, the area has a rural ethos. Thirty percent of residents are aged below 19 years and less than 1% of residents are members of an ethnic minority.

The ADHAZ Partnership

The ADHAZ Partnership is a broad-based partnership in the Southern Health and Social Services Board (SHSSB) area that is committed to improving the quality of life and reducing health inequalities in the ADHAZ area. It works with disadvantaged, vulnerable and socially excluded groups such as older people, people with disabilities, people with mental illness, low income families and the Traveller community (***www.adhaz.org.uk***).

The DFfA intervention area

The DFfA intervention was delivered in 12 electoral wards within the ADHAZ area (see Figure 2) that were selected because they were priority areas for the New Targeting Social Need strategy[18] (personal communication, ADHAZ). Based on the Northern Ireland Multiple Deprivation Measure (2005), nearly all of the wards were classified as either deprived or highly deprived when compared to the rest of Northern Ireland. Their combined population was 29,812 (NISRA mid-year estimates 2005, ***www.nisra.gov.uk***).

Figure 2 also shows the non-random matched comparison area – in the Newry and Mourne Health and Social Services Trust, Co. Down – used in the evaluation. It comprised 11 electoral wards that, in total, had a sex-age-rurality profile similar to that of the DFfA intervention area.

Food culture in the ADHAZ area

A series of ethnographic studies were conducted in 2004 to better understand the way in which social and cultural factors influenced diet in the ADHAZ area. These included focus group discussions, participant observations and a content analysis of local media.

Focus group participants emphasised their preference for locally-produced food and the importance they placed on the local media as a source of reliable information. Participants also indicated that people found food marketing, food labelling and nutritional advice confusing.

Media content analysis highlighted the strong links between the local food industry and the nature of food-related items that appeared in the local media[19].

Overall, the studies found that food and food consumption are strongly influenced by social and cultural factors such as social status, gender and identity. They found that people think about food in terms of dichotomies like good and bad, safe and unsafe, "posh food and common food", and suggested that these dichotomies could be used in communications.

Further details about the food culture in the ADHAZ area can be found in Lessons from the *Decent Food for All (DFfA) intervention. Supporting Document Part 1: Food Culture in the Armagh and Dungannon Health Action Zone (ADHAZ), Northern Ireland*[15].

3. Decent Food for All (DFfA) intervention

In this chapter we describe the Decent Food for All (DFfA) intervention. Further details about the DFfA intervention can be found in *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part II: Description of the DFfA intervention*[16].

DFfA's mission

The DFfA intervention aimed to address inequalities in access to locally available and affordable food through community development and self-help/educational approaches. It recognised that efforts to tackle food poverty need to be part of wider efforts to address local regeneration and social inclusion.

The DFfA Mission Statement

"To improve the provision and consumption of an affordable, safe and healthy diet in order to protect and improve public health, particularly amongst the disadvantaged and vulnerable in the Armagh and Dungannon Health Action Zone"

To achieve its mission, the DFfA intervention focused on increasing financial, physical and information access to safe healthy food.

Reducing inequalities

Because nearly all the wards in the intervention area were officially classified as either deprived or highly deprived, the first aim of the DFfA intervention was to have a positive impact across the whole of its intervention area.

Within the intervention area, the DFfA Community Food Team then focused its attention on particular wards and disadvantaged groups. These were:

- Rural areas (because of poorer physical access to affordable, safe healthy food)
- Border areas (arising from a belief that the Troubles have had a particularly profound effect on health and well-being in these areas)
- Socio-economically disadvantaged wards (wards with particularly high local deprivation scores)
- People with little formal education
- Unemployed people.

DFfA's core activities

The DFfA intervention was based on the idea that changes in the supply of safe healthy food in the local area could be driven by the increased demand that would be generated by its core activities.

Table 1: DFfA's core activities

(Single) educational sessions	
Balance of Good Health	Children (nursery and primary schools)
Food hygiene training	Adults/Children
Understanding Food Labels	Adults/Older persons
Budgeting & Money Management	Adults/Older persons
Programmes of practical workshops	
Cook it	Adults/Older persons 6 sessions
Balanced Beginnings	Adults (young mothers) 2 sessions
My body	Children (aged 5-11 years) 6 sessions
Looking Good Feeling Better	Adults/Older persons 4 sessions
Contributions to community-initiated events	
Healthy eating sessions (Information, talks...)	Children/Adults/Older persons
Cookery Demonstrations	Adults/Older persons
Tastings (fruits + smoothies)	Children/Adults
General communications	
Health Fairs	Adults/Older persons
Healthy Eating sessions	Children/Adults/Older persons
Information stands and displays	Children/Adults/Older persons
Newspaper articles	Children/Adults/Older persons

DFfA's core activities (see Table 1) focused on individual-based health education delivered in group settings, general communications and contributions to other community-initiated events. The latter two included information booths, cooking demonstrations and tastings at events organised by other community groups such as the Salt Awareness Campaign, No-Smoking Day and Men's Health Week. Educational sessions and individual sessions (in a programme of workshops) usually lasted an hour.

Funding for core activities was provided by ***safe*food** and the FSANI for an initial period of three years that was later extended to four years. These funds (totalling £240,000) covered the salaries of the DFfA Community Food Team which comprised a Community Food Coordinator and up to three Community Food Workers.

Supporting programmes

In addition to the funding from ***safe*food** and FSANI, the ADHAZ partnership also attracted funding of £255,000 to deliver a range of supporting programmes that aimed to directly increase the production and distribution of safe healthy food in the local area.

These supporting programmes were pilot programmes of both local and broader initiatives (see Table 2), and funding was obtained from a number of sources (see Table 3).

Table 2: Supporting programmes

Suppporting programmes	
Fresh Fruit in Schools	Children
Dungannon and South Tyrone community and schools food gardens projects	Adults and children
The Armagh Community Food Garden Project	Adults/Children
Community Food Co-op	Adults/Older persons
Rise and Shine Breakfast Clubs	Children and parents
Water is Cool in School	Children

Table 3: Funding for supporting programmes

Supporting programme	Funding agency	Additional funding
Fresh Fruit in Schools	Department of Health, Social Services and Public Safety	£75,000
Community Food Gardens	Armagh and Dungannon Local Strategy Partnership	£40,000
Community Food Co-op	Dungannon Local Strategy Partnership	£20,000
Rise & Shine Breakfast Club	Big Lottery Fund	£118,000
Water is Cool in School	Southern Investing for Health Partnership	£2,000
Total		**£255,000**

4. How DFfA was evaluated

In this chapter we describe how the Decent Food for All (DFfA) intervention was evaluated. Technical details can be found in *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part III: Community-level impacts of the DFfA intervention – statistical analysis and interpretation*[17].

Introduction

A comprehensive research and evaluation programme was led by the Institute of Public Health in Ireland (IPH) with funding from ***safe*food**.

The Programme Logic Approach (PLA) was used to help the DFfA Community Food Team identify the Key Expected Outcomes of the intervention and to understand how the intervention would achieve those outcomes (its programme logic) at the community-level[20].

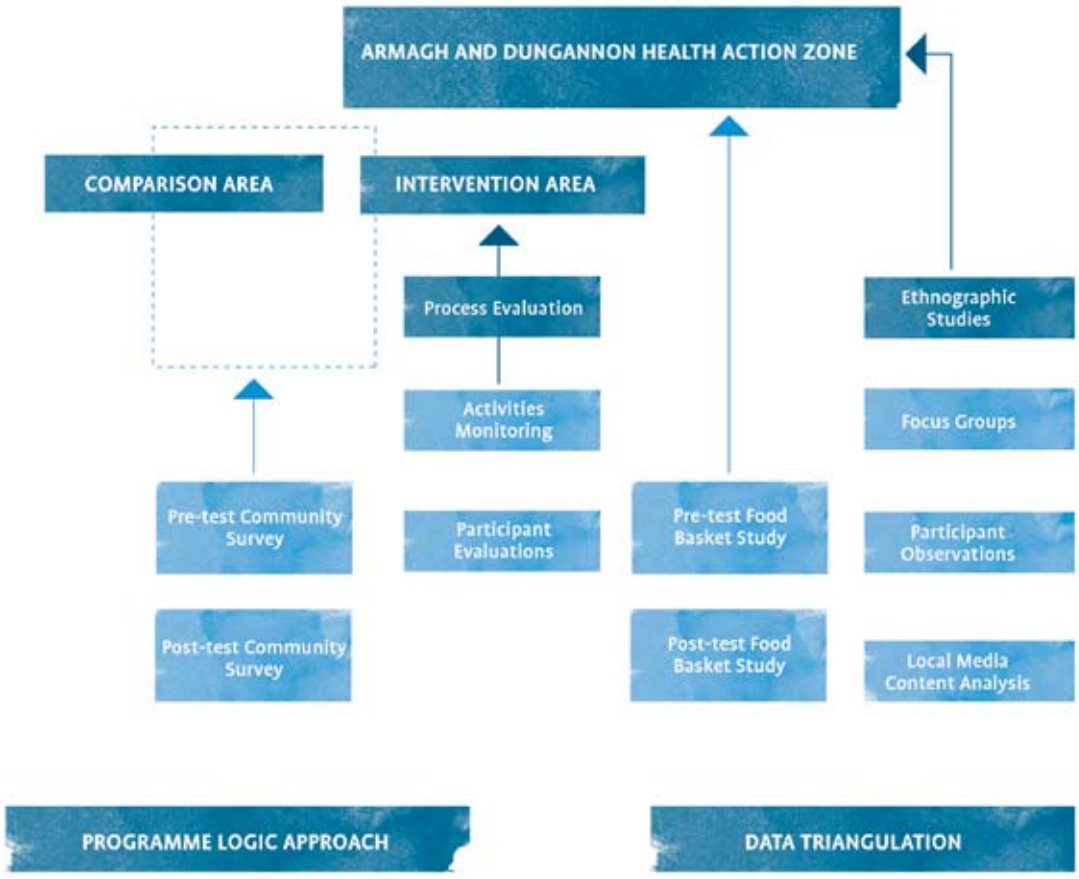
Community-level data collections

Several data collections gathered the information needed to answer the key evaluation questions (see Figure 3). The pre-test and post-test community surveys were conducted during October 2003 – March 2004 and November 2006 – March 2007, respectively. This ensured that pre-post comparisons were not confounded by seasonal factors.

As well as the 12 electoral wards that made up the DFfA intervention area, the community surveys were also conducted in the comparison area (see Chapter 3). Both surveys comprised face-to-face interviews of independent random samples of 1200 residents: 300 residents within each of the four cells (rural-intervention, urban-intervention, rural-comparison, urban-comparison). Response rates for the pre-test and post-test community surveys – 66% and 65%, respectively – were in line with those of similar surveys. Detailed analysis revealed that the overall conclusions of the study were not overly affected by non-response bias. A report on the pre-test community surveys[21] can be downloaded from the IPH's website ***www.publichealth.i*e**

The pre-test and post-test food basket studies were conducted at the same times as the community surveys. The aim was to assess the change that occurred during the intervention period in the availability and price of food. They involved visits to all food stores (classified as either multiple stores, discounter/freezer stores, affiliated independent stores, smaller independent stores and specialist shops) in the ADHAZ area to ascertain the availability and price of a standard food basket consisting of 53 food products. Response rates for the pre-test and post-test surveys – 65% (n = 156 shops) and 70% respectively (n = 143 shops) – were slightly lower than those in similar studies[22,23,24]. Detailed analysis revealed that the overall conclusions of the study were not overly affected by non-response bias. A report on the pre-test food basket study[25] can be downloaded from the IPH's website ***www.publichealth.ie***

Figure 3: Evaluation design



How community-level impacts were assessed

During the application of the PLA, performance indicators under the themes of "local regeneration" (n=6) and "individual, household, and community change" (n = 15) were identified (see Table 8). Definitions are given throughout the "Community-level Impacts" section of Chapter 7.

For indicators based on the community surveys, changes observed in the comparison area were taken as the background changes that would have occurred in the intervention area had the DFfA intervention not been delivered. Changes observed in the intervention area represented the combined effect of these background changes and the DFfA intervention. The difference between the changes observed in the intervention and comparison areas was taken to be the "impact" of the DFfA intervention.

However, these differences might also be explained by differences between the demographic and socio-economic profiles (sex, age, education, and employment status) of the populations or the characteristics of the wards (being along the border, being a rural area, its local deprivation score) in the intervention and comparison areas. Two strategies were used to adjust for such possible confounding:

- Firstly, the pre-test and post-test survey data were weighted (using sex, age and rurality) to the combined population of the intervention and comparison areas in 2005 (mid-year population estimates at LGD level)
- Secondly, where necessary, statistical modelling was used to adjust for any additional confounding by border status, local deprivation score, education and employment status.

Impacts that remained statistically significant after such adjustments can be more confidently attributed to the DFfA intervention.

Other indicators were based on the food basket studies, which were only conducted in the intervention area. In such cases, the impact of the DFfA intervention is measured by the change that was observed in the ADHAZ area. Without any adjustment for background changes in a comparison area, it is more difficult to attribute any changes to the DFfA intervention.

5. Some of the challenges faced

Community-based interventions and their evaluations face many challenges; at this point it is useful to highlight some of the ones faced during this project.

Delivery of the intervention

Table 4: Challenges faced arising during the delivery of the DFfA intervention

Intervention complexity	Effective community-based interventions usually involve a number of inter-related components that address not only local factors but also broader issues at the regional and international levels. Keeping track of these and coordinating their delivery is always very difficult.
Shifting goal posts	New priorities, such as the focus that the DFfA intervention placed on children and school-based activities following the publication of the *Fit Futures* strategy, often emerge during the intervention period.
Blurred geographical boundaries	While core activities were undertaken in the 12 intervention wards it was not practical to limit participation to the residents of those wards. There was also considerable demand from ADHAZ residents who lived outside the DFfA intervention area.
Chasing funds	Community workers often need to seek further funding – in this case, for the supporting programmes – to help meet this local demand. This leaves less time to tackle broader issues.
Frequent staff changes	Employment contracts are often short-term and result in considerable staff turnover. Work programmes are affected and the bigger picture can get lost as new project staff members are constantly "catching up". Again, this leaves less time to address the broader issues and the intervention team's focus often drifts towards outputs rather than outcomes.
Building and maintaining community engagement	• Priorities for DFfA were set by regional policy priorities – the *New Targeting Social Need* in this case (personal communication, ADHAZ) – and there was some feeling that these were not completely aligned with the local community's priorities. This can undermine local ownership and "buy-in". • Much community engagement in the DFfA Operational Group and the DFfA Local Evaluation Group was voluntary. If these groups had been given greater support to undertake their tasks, their contribution could have been greater.
Access to required skills mix	Often, not all the required skills are available within the intervention team and they have to be accessed from other sources in an informal manner. Again, this can lead to the intervention team concentrating on core activities with less time to tackle broader issues.
Conflict of roles	A challenge for both the delivery and evaluation of community-based interventions; the primary role of a community worker – to serve the local community – sometimes conflicts with the role of an evaluator – to maximise learning.

Evaluation of the intervention

Many of the challenges faced during the evaluation arose from corresponding challenges faced during the delivery of the intervention.

Table 5: Challenges faced during the evaluation of the DFfA intervention

Intervention complexity	It is often difficult to exactly define the intervention being evaluated. In this case, the DFfA intervention was extended to include a range of supporting programmes. Defining the intervention can be challenging outside a controlled laboratory setting.
Shifting goal posts	The focus on children and school-based activities that developed during the intervention period, partly because of the changing policy context and the launch of the *Fit Futures* strategy, could not be easily incorporated into a revised evaluation design as the focus emerged after the fieldwork for pre-test community survey and food basket study had been completed.
Unforeseen dilution/change in the contrast between the intervention and comparison areas	Powerful external factors exercise influence in intervention and comparison areas and wash out differences: • Some of the supporting programmes (e.g, Fresh Fruit in Schools and Cook It classes) – not formally part of the DFfA intervention – were delivered across all of Northern Ireland • Southern IfH Partnership introduced salad bars/green vending machines into schools in the Newry/Mourne HSS Trust but not in other parts of the SHSSB area (personal communication, ADHAZ). These result in unforeseen and unknown changes in the contrast between the intervention and comparison areas, and change the corresponding research and evaluation questions that can be answered. The nature of such intervention and comparison activities cannot be controlled as well as they can be in a laboratory setting.
Blurred geographical boundaries	• Because it was not possible to restrict participation in DFfA core activities to residents of the intervention area, it was impossible to exactly identify the correct population denominators for the calculation of various key performance indicators • Because the intervention team spent considerable effort and resources trying to meet demand outside the intervention area, the intervention evaluated does not include the complete efforts of the intervention team.

Representativeness of the study areas	• The intervention wards were selected because they were priority areas of the New Targeting Social Need (personal communication, ADHAZ). This, in turn, influenced the selection of the comparison area. The use of opportunistic rather than research criteria to select study areas compromises the external validity of the evaluation, making it difficult to precisely identify the areas of Northern Ireland to which the findings can be generalised • If local factors play a relatively important role and they vary greatly across the island, the notion of a single measure of background changes loses some meaning and the use of a single non-randomly selected matched comparison area becomes subject to unknown bias. A particular statistical issue that arises in such situations is regression towards the mean. Generally speaking, prior to the DFfA intervention, adults living in the intervention wards tended to have less healthy diets than adults living in the comparison wards. Over time, you would expect some levelling out of these differences.
Some general limitations of this evaluation	• Better assessment tools are required • More formal monitoring of other related activities • Use of self reports in participant evaluations • Inadequate attention to children.

Comments

These challenges are not unique to the DFfA intervention and evaluation; they are faced by all population-based studies.

Many of these challenges arose from the limited coordination between agencies delivering different components of a multi-level intervention, and between service delivery and research/evaluation activities. The first restricts the size of the community-level impacts that are possible; the second restricts the quality of learning that can be abstracted from research and evaluation studies.

6. What DFfA delivered

This chapter describe the DFfA core activities (see Chapter 3) that were delivered. Further details can be found in *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part II: Description of the Decent Food for All (DFfA) intervention.*

The DFfA intervention was delivered between April 2003 and March 2007, and included start-up and wind-down periods of approximately six months each.

Methods

Between September 2003 and October 2006 the DFfA Community Food Team used a standard data collection form to gather details about the DFfA core activities that were delivered in the 12 intervention wards. Details included the ward name, the gender and age groups that had been targeted, and the number of people who participated.

The level of core activity was measured in terms of the number of equivalent (one hour) "sessions" that were delivered, the number of contact-hours involved and the number of people who participated in at least one session. Programmes of practical workshops comprised more than one session; each was counted separately. For some activities (such as information booths and demonstrations at community-initiated events, and other general communications) we made some conservative assumptions about the number of people who participated and for how long they participated.

What core activities were delivered?

Between September 2003 and October 2006, the equivalent of 367 sessions were delivered to approximately 3,100 people (see Table 6). This corresponded to an average of over 120 sessions delivered to just over 1,000 people each year. If this level of activity had been sustained over the four-year intervention period, approximately 1 in 8 residents of the intervention area would have participated in at least one session.

Table 6: DFfA core activities delivered in the 12 intervention wards of the ADHAZ area (September 2003 – October 2006)

	TYPE OF ACTIVITY				
	(SINGLE) EDUCATIONAL SESSIONS	PROGRAMMES OF PRACTICAL WORKSHOPS	CONTRIBUTIONS TO COMMUNITY-INITIATED EVENTS	GENERAL COMMUNICA-TIONS	TOTAL
Number of sessions delivered	48	195	62	62	367
Total number of persons who participated	1,291	501	736	577	3,105
Total contact-hours	1,381	1,425	61	48	2,915

Figure 4: DFfA core activities delivered in the intervention area (September 2003 – October 2006)

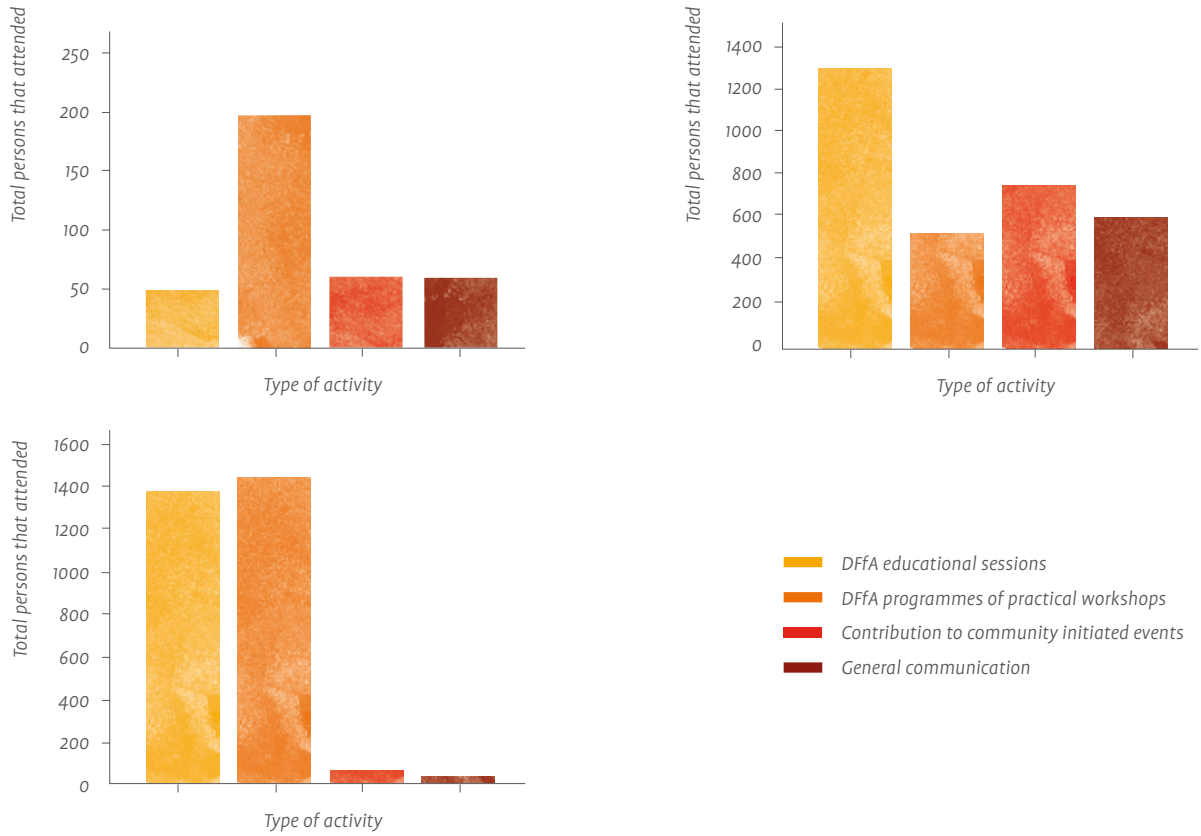


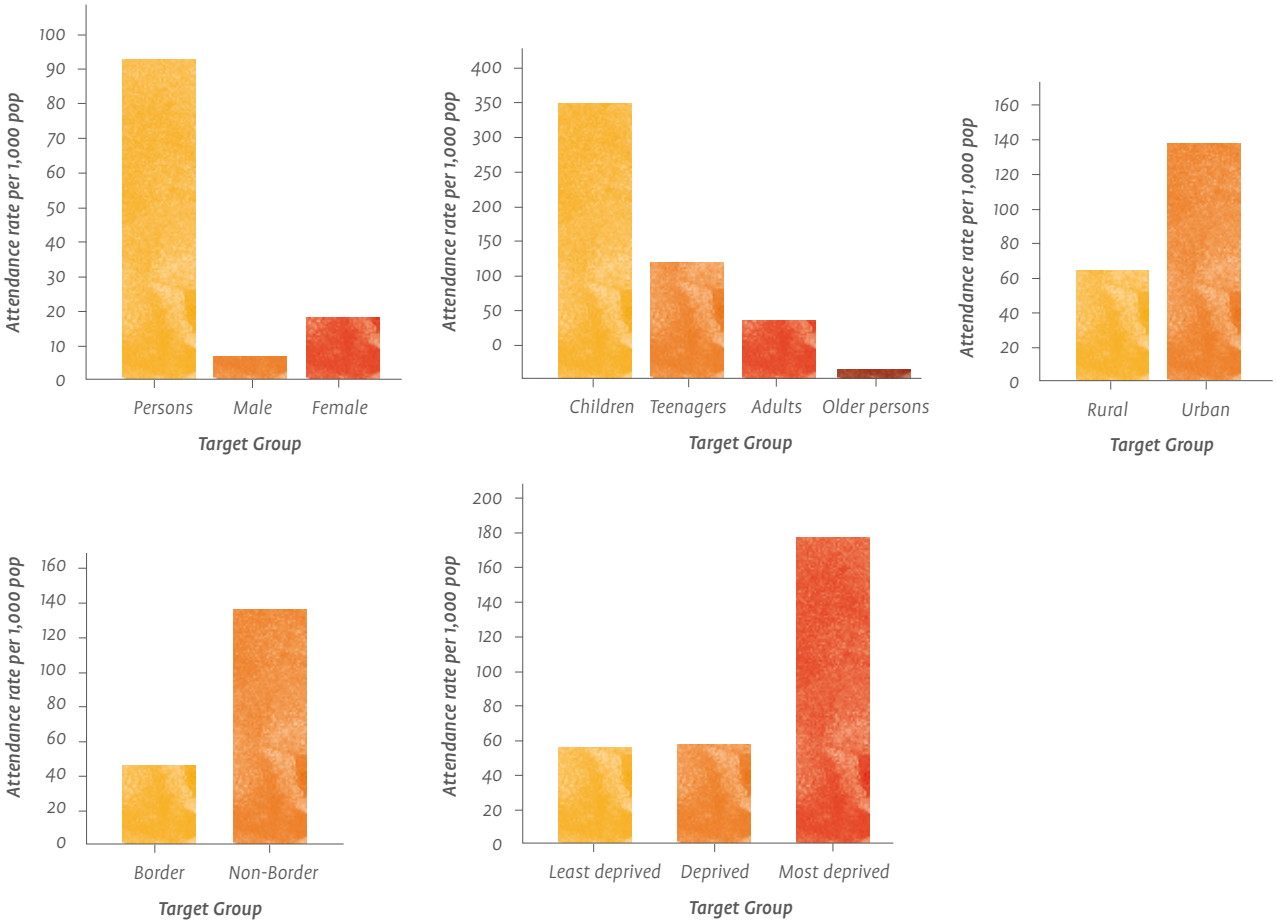
Figure 4 reveals that:

- The most (n = 195) sessions were delivered through programmes of practical workshops
- Total attendance was highest (n = 1,291) at (single) educational sessions
- (Single) educational sessions (n = 1,381 hours) and programmes of practical workshops (n = 1,425 hours) accounted for the greatest number of contact hours
- The very low contact hours associated with contributions to community-initiated events and general communications may reflect the conservative assumptions that were incorporated into these calculations.

Attendance rates shown in Figure 5 show that, after accounting for population size:

- Most DFfA core activities were not targeted at a particular gender
- There was very high attendance amongst children, perhaps reflecting the fact that the school-based activities can be delivered to large captive audiences
- More core activities occurred outside rural areas and outside border areas
- DFfA core activities, however, tended to occur in the most deprived wards of the intervention area.

Figure 5: Attendance rates (per 1,000) for DFfA core activities delivered in the intervention area (September 2003 – October 2006); by target group



Comments

After adjusting for population size, attendance was highest at core activities delivered in the most deprived of the already deprived/highly deprived intervention wards. Other than this, the majority of core activities were not delivered in the other target wards – rural and border wards – of the DFfA intervention. The relatively large amount of DFfA core activity targeted at children and teenagers was not part of the initial delivery programme. It was felt, initially at least, that while children influenced household food purchasing and preparation practices, theirs was a secondary influence. The subsequent targeting of children arose from the strong focus placed on children in the *Fit Futures* strategy[12] that was published during the DFfA intervention period (personal communication, ADHAZ).

7. What DFfA achieved

Impacts on participants

Self-completed exit questionnaires were used in participant evaluations, overseen by the DFfA Local Evaluation Group, of a number of DFfA core activities[26-30].

Changed ideas

98% of participants in the Balanced Beginnings workshops said they had changed their ideas about healthy lifestyles, healthy eating, food storage and food preparation.

95% of participants in the Cook It! workshops said they had changed their ideas about healthy eating:

- *"I always thought eating healthier would take a lot of time, now I know it doesn't"*
- *"It showed me how to cook the things I normally cook but in a healthier way"*
- *"I'm more inclined to use lots of fresh vegetables in my cooking. I see how recipes can be healthy and very tasty!"*
- *"I was surprised at how much fat and sugar are in some foods that I thought were healthy, I hope to change my diet."*

Using different types of food

70% of participants of the Cook It! workshops reported buying or cooking different types of foods:

- Wholemeal pasta, brown rice and bread instead of white
- Making homemade sauces instead of buying ready made
- Using more vegetables when cooking
- Using low fat spreads instead of butter.

Healthier cooking practices

Many participants in the Cook It! workshops reported healthier cooking practices:

- *90% said that they now cooked meat without adding any fat or oil*
- *86% reported draining fat off meat when browning it*
- *86% reported adding vegetables to dishes that they wouldn't have before*
- *64% said they had changed the amount of butter, margarine or low fat spread that they used on bread or toast.*

Better food safety practices

When asked what they learnt from the My Body workshops, participant's comments included:

- "I learnt that it was important to wash your hands"
- "To eat properly, keep fit and wash my hands more".

Intentions to maintain the changes

Nearly all (98%) participants in the Cook it! workshops said they planned to continue with these positive changes to their dietary and cooking practices.

Community-level impacts

In this section we describe the community-level impacts of the Decent Food for All (DFfA) intervention. Technical details can be found in *Lessons from the Decent Food for All (DFfA) intervention. Supporting Document Part III: Community-level impacts of the DFfA intervention – statistical analysis and interpretation*[17].

Theme 1: Local regeneration

The reach of the DFfA intervention

Despite excellent feedback from participants in DFfA core activities, overall recognition of DFfA in the community was quite low. At the end of the intervention period the same percentage of adults – approximately 7% – in the intervention and comparison areas said they had heard of Decent Food for All (DFfA).

Prior to the DFfA intervention, awareness of local food-related activities was significantly lower in the DFfA intervention area than it was in the comparison area. During the intervention period, this percentage increased from 10% to 16% in the intervention area and from 16% to 19% in the comparison area. The difference between these changes was only marginally significant ($p = 0.0109$).

The availability of food

In 2003, an average of 31 food products from the full food basket of 53 products were available in shops in the ADHAZ area. By 2007 the average number had increased significantly to 36.

The increase in availability, however, was not restricted to healthier foods:

- Availability of meat and alternatives; bread, rice, potatoes, pasta and other starchy foods; and foods and drinks high in fat and/or sugar increased significantly
- Availability of milk and milk products, and fruit and vegetables did not change.

In 2003, the large multiple and discounter/freezer stores (such as Tesco, Sainsbury's, Lidl, Iceland) and affiliated independent stores (such as Spar, Centra, Vivo, Supervalu, Co-op Supermarkets) stocked the greatest number of food products. Not surprisingly, the smaller independent and specialist shops stocked the least number. Changes in availability did not vary with the type of shop.

Table 7: Percentage of shops that stocked particular food products

Table 7 shows that, in both 2003 and 2007, the most commonly available products were the less healthy options and the least commonly available products were the more healthy options.

MOST COMMONLY AVAILABLE PRODUCTS			
2003		2007	
Product	**% of shops**	**Product**	**% of shops**
Jam	81	Jam	90
Sausages	80	Sausages	85
Coke	79	Crisps	85
Milk (full and semi-skimmed)	79	Bacon (leanback)	85
White bread	79	Milk (full and semi-skimmed)	85
Baked beans	79	Potatoes	81
		Coke	84
LEAST COMMONLY AVAILABLE PRODUCTS			
Product	**% of shops**	**Product**	**% of shops**
Wholemeal pasta	4	Wholemeal pasta	11
Frozen cod (battered)	13	Beef (mince)	13
Cottage cheese	15	Low-fat cheddar cheese	19
Beef (mince)	19	Mandarin oranges	20
Brown rice	20	Cottage cheese	20
Lean steak (mince)	32	Frozen cod (battered)	24
Low-fat cheddar cheese	35		

The price of food

The average price (adjusted for UK food inflation rate) of the full food basket in the ADHAZ area increased significantly from £74.85 in 2003 to £79.15 in 2007.

The price increase, however, was not restricted to unhealthier foods:

- The average price of cereal-based products and potatoes; foods high in fat and/or sugar; fruit and vegetables; and water all increased slightly
- The average price of meat and alternatives, and milk and milk products were unchanged.

When looking at different types of shops, only food products that were available in at least one shop of each of the four shop types could be included. Ten food products were excluded, leaving a reduced food basket of 43 products. Between 2003 and 2007, the average price of the reduced basket increased in all types of shops (particularly in the smaller specialist shops) except the larger multiple and discounter/freezer shops where it decreased significantly.

Forced reduction in weekly food spending

Prior to the DFfA intervention, significantly more adults (23%) in the intervention area than in the comparison area (16%) had, in the last six months, cut their weekly food spending in order to pay other household bills.

The DFfA intervention had no impact on this: the percentage of adults decreased similarly in both the comparison (from 16% to 15%) and intervention areas (from 23% to 19%).

However, this result masks some evidence of improvement in the DFfA target wards: a positive impact in rural wards was offset by a negative impact in urban areas (see Figure 6), and no clear impact in non-border areas was offset by a positive impact in border areas.

Figure 6: The percentage of adults who had recently cut their weekly food in order to pay other household bills.

Comments

The availability and price of food in local shops are only two aspects of physical and financial access to food. The findings from the food basket studies presented above do not include, for example, the cost of travel needed to fill the food basket.

The DFfA intervention's impact on the availability and price of food was mixed:

- The percentage of well-stocked/lower-priced shops located in the more deprived wards did not change during the intervention period
- The availability of all food products – both unhealthy and healthy – increased
- The price of the food products – both healthy and unhealthy – increased.

These observed changes could not be confidently attributed to the DFfA intervention. This is perhaps not surprising given that the supporting programmes comprised only a number of pilot programmes involving community and school food gardens and food co-operatives. While they were well received, they were unlikely to have a strong influence on the local food industry. Given the limited reach of the DFfA intervention at the community level, the lack of other strategies to increase demand and so improve the availability and price of safe healthy food was critical.

The DFfA intervention did not significantly reduce the percentage of adults who had recently reduced their weekly food spending in order to pay other household bills. This is perhaps not surprising given that efforts to improve financial resources of disadvantaged groups through budget/benefit maximisation were limited to Budgeting and Money Management educational sessions which were attended by a relatively small percentage of the population.

In many poorer households, food expenditure is the only discretionary item in the household budget and is often reduced to avoid debt or to pay other bills such as rent, electricity and gas. Rising food prices, fuel prices, rents and mortgages will aggravate the level of food poverty amongst disadvantaged groups. Most immediate is the need to provide adequate income support for poorer households, and efforts to tackle food poverty and obesity need to be placed in the context of the wider anti-poverty and social inclusion agenda.

Theme 2: Individual, household and community change

Awareness and knowledge

In the community surveys, respondents were asked what they understood by the term healthy eating. By comparing their replies to a list of eight items (reduce fat or fried foods, eat fruit and vegetables, eat plenty of starch and carbohydrates, etc) the number of items they mentioned that indicated an understanding of the term healthy eating was calculated.

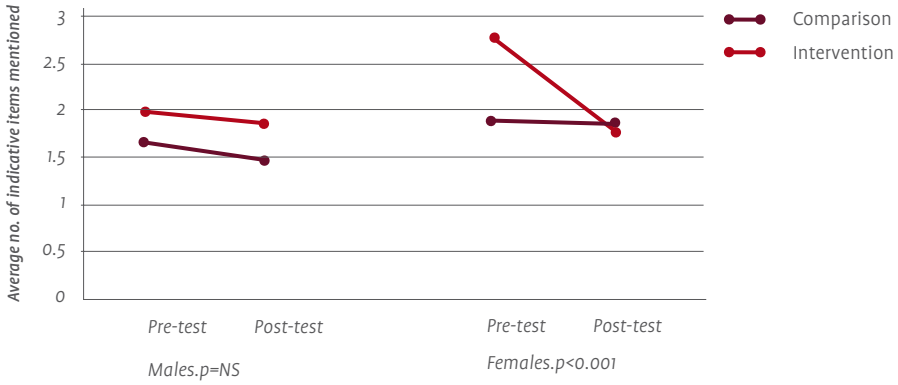
Understanding of the term healthy eating was very low.

On average, adults mentioned a little over two items such as reduce fat or fried foods, eat fruit and vegetables, eat plenty of starch and carbohydrates, eating a balanced diet, etc that indicated an understanding of the term healthy eating.

The DFfA intervention appeared to have negative impact on understanding of the term healthy eating. Understanding was significantly better in the intervention area in 2003. During the intervention period it fell in the intervention area (from 2.4 to 1.8 items) while the average number of items mentioned fell only slightly from 1.8 to 1.7 in the comparison area.

The negative impact of the DFfA intervention seems to have only occurred in urban areas, non-border areas and in the less deprived wards. One unexpected result was the negative impact amongst females (see Figure 7).

Figure 7: Changes in the understanding of healthy eating amongst males and females



Demand for safe healthy food

An early sign of increased demand for healthy food occurs when adults look for so-called healthy options as they shop for food.

In the community surveys, respondents were presented with a list of thirteen issues (advertised, wanted to try it, fat content of item, what the children like, etc) and asked which they considered when shopping for food. From their responses, adults who considered at least one healthy option when they shopped for food were identified.

Consideration of at least one healthy option when shopping for food was quite low.

Almost half (45%) of all adults in the study areas do not consider any healthy options when they shop for food.

During the intervention period, the percentage was unchanged in the comparison area at 54% and increased from 55% to 60% in the intervention area. The difference between these was not statistically significant.

Self-reported food consumption

In the community surveys, respondents were presented with a list of 19 different food items and asked how often, in an average week, they consumed each. The possible responses were: More than once a day, Once a day, Most days (3+ a week), 1-2 times a week, Weekly and Never.

The items came from different parts of the eatwell plate (see Figure 8):

- Four items belonged to the bread, rice, potatoes, pasta and other starchy foods part of the eatwell plate
- Eight items belonged to the foods and drinks high in fat and/or sugar part of the eatwell plate

- One item was fish
- One item was milk or milk products.

From responses, the daily/weekly frequency with which foods from these food groups were consumed was calculated. No standard portion sizes were presented to respondents.

Figure 8: The eatwell plate

.

Respondents were also asked how many portions of fruit and vegetables they ate in an average day. The possible responses were None, One, Two, Three, Four and Five or more. Standard portions were not presented to respondents.

Bread, rice, potatoes, pasta and other starchy foods

Prior to the DFfA intervention, the daily consumption of bread, rice, potatoes, pasta and other starchy foods was low with adults consuming, on average, such starchy foods three times a day compared to the recommendation of six daily portions. The DFfA intervention had no significant impact on the number of times that adults ate such starchy foods each day.

Fruit and vegetables

Prior to the DFfA intervention, adults in both the comparison and intervention areas consumed an average of 2.6 portions of fruit and vegetables per day: less than half the recommended daily number of portions.

Overall, the DFfA intervention had a statistically significant positive impact: daily consumption increased significantly in the intervention area (from 2.5 to 3.0 portions per day) while it remained unchanged (at 2.7 portions per day) in the comparison area. The DFfA intervention had significantly positive impact in more deprived wards.

Milk or milk products

Prior to the DFfA intervention, almost 1 in 5 adults in both the comparison and intervention areas consumed milk and milk products less than once a day. The survey questionnaire did not distinguish between products that were low or high in saturated fats. Therefore, 1 in 5 is probably an underestimate of the proportion of adults who do not comply with current recommendation of at least one portion per day (while avoiding saturated fats).

The DFfA intervention had no significant impact on the percentage of adults who consumed dairy products less than once a day – it decreased similarly in both the comparison (from 18% to 17%) and intervention (from 19% to 15%) areas.

Fish

Prior to the DFfA intervention, adults in both the comparison and intervention areas consumed fish an average of 1.2 times a week. The current recommendation is to increase consumption to at least two portions of oily fish per week. The survey questionnaire did not distinguish between oily and non-oily fish.

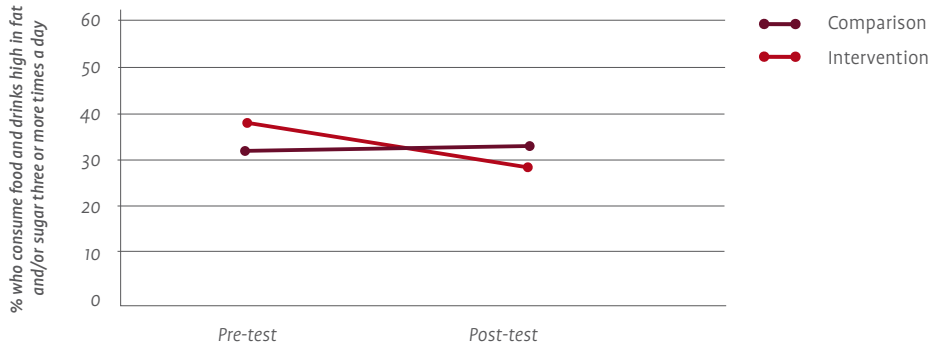
The DFfA intervention appeared to have a negative impact on fish consumption: fish consumption increased significantly in the comparison area (from 1.2 to 1.7 times per week) while a smaller increase (from 1.1 to 1.3) observed in the intervention area was not statistically significant. Mostly, this negative impact occurred in urban areas, non-border areas and less deprived wards.

Foods and drinks high in fat and/or high in sugar

Prior to the DFfA intervention, approximately one third of adults in both comparison and intervention areas consumed food and drinks high in fat and/or sugar three or more times a day. Authorities recommend that adults limit their consumptions of these foods.

The DFfA intervention had a marginally significant (p = 0.018) positive impact on the consumption of these types of foods. The percentage of adults consuming such foods three or more times a day decreased significantly (from 38% to 29%) in the intervention area but remained unchanged (32% to 33%) in the comparison area. The DFfA intervention had a significantly positive impact amongst adults with the lowest levels of education.

Figure 9: The percentage of adults who consumed food and drinks high in fat and/or sugar three or more times a day



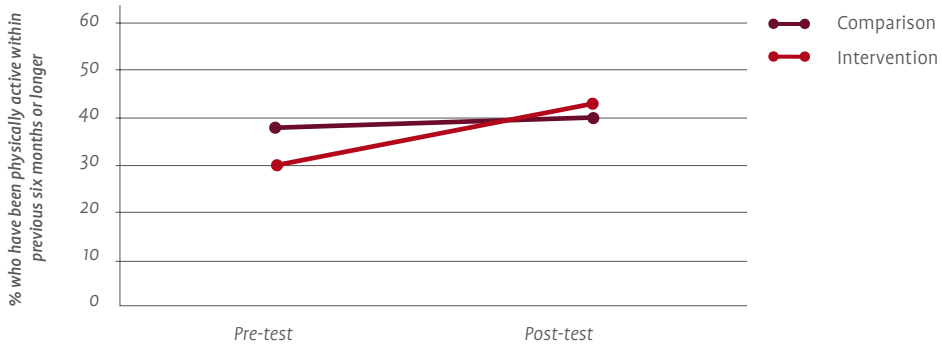
Self-reported physical activity

In the community surveys, respondents were read out a definition of regular physical exercise and asked to select, from a list of five statements, the one that best described how physically active they had been over the last six months. People who selected I am regularly physically active but only began in the last six months or I am regularly physically active and have been doing so for longer than six months were taken to be physically active.

Prior to the DFfA intervention, only 1 in 3 adults in the study areas reported that they were physically active. Significantly more adults in the comparison area reported they were physically active than in the intervention area (38% vs 30%).

The DFfA intervention had a significant positive impact on the level of physical activity: while no significant change occurred in the comparison area (38% to 40%) the percentage of adults in the intervention area who reported they were physically active increased significantly (from 30% to 43%) (see Figure 10).

Figure 10: Changes in level of physical activity



Obesity

Prior to the DFfA intervention, approximately 1 in 6 (17%) adults in the intervention and comparison areas were obese (based on self-reported height and weight).

While there was some evidence that the DFfA intervention improved diets and increased levels of physical activity, it had no significant impact on the percentage of adults who were overweight or obese.

Self-reported food safety and hygiene practices

In the community surveys, respondents were read out a list of ten food safety behaviours (Follow manufacturers' instructions for preparation and cooking of food, Store perishable foods in a fridge at home within two hours of buying them, etc) and asked how often they followed each practice. The possible responses were Always, Usually, Sometimes, Rarely, Never and Don't know. From their responses, adults who stated that they always complied with all ten food safety practices were identified.

Prior to the DFfA intervention, just over 1 in 6 (15%) of all adults reported that they always complied with all food safety practices. The percentage was significantly higher in the comparison area than it was in the intervention area (18% vs 11%).

The DFfA intervention had a significant positive impact on the percentage of adults who always complied with food safety practices: no significant change was observed in the intervention area (slight increase from 11% to 13%) while it decreased significantly (from 18% to 6%) in the comparison area.

Self confidence about food matters

In the community surveys, respondents were asked to rate their confidence in their knowledge and abilities about four food matters (Your ability to prepare safe food, Your ability to prepare healthy food, Your knowledge of what a healthy diet should be, etc). Possible responses were Not confident at all = 0, Not very confident = 1, Neither = 2, Confident = 3 and Very confident = 4. The mean confidence score was calculated and adults with an average score corresponding to Confident or Very confident (i.e, an average score of 3 or higher) were identified.

Prior to the DFfA intervention, nearly 4 in 5 adults (79%), in both the comparison and intervention areas, reported they were confident or very confident about food matters.

The DFfA intervention had a significant positive impact on the self-confidence in food matters. While the percentage of adults who reported they were confident or very confident about food matters decreased significantly (from 80% to 66%) in the comparison area, a slight increase (79% to 83%) was observed in the intervention area.

Social inclusion

Social contacts

In both community surveys, respondents were asked which of six types of social contacts (Visited relatives/ been visited by relatives, Spoke to relatives on the phone, Visited friends/been visited by friends, etc) they had

in the previous two weeks. The number of different types of social contacts in the previous two weeks was taken to be an indicator of a respondent's level of social contact.

Prior to the DFfA intervention, adults in both comparison and intervention areas had an average of 4.4 different types of social contacts (out of a possible 6) in the previous two weeks.

The DFfA intervention had a significant positive impact on the average number of different types of social contacts. While the average number decreased significantly (from 4.3 to 4.0) in the comparison area, no significant change (4.5 to 4.6) was observed in the intervention area.

Participation in community activities

In the community surveys, respondents were asked which of five different community activities (Attended an adult education night school class, Participated in a voluntary group/local community group, Participated in community or religious activities, etc) they had participated in the previous two weeks. The number of different types of activities they had participated in was then calculated.

Prior to the DFfA intervention, adults in both the comparison and intervention areas, had participated in an average of 1.2 (out of a possible five) different types of community activities.

The DFfA intervention did not have a significant impact on community participation. However, it had an unexpectedly statistically significant negative impact amongst females.

Community efficacy

In both community surveys, respondents were asked Do you agree or disagree that, by working together, adults in your neighbourhood could influence decisions that affect the neighbourhood? The possible responses were Strongly agree, Agree, No opinion, Disagree and Strongly disagree. The percentage of adults who agreed or strongly agreed was taken as an indicator of community efficacy.

Prior to the DFfA intervention, the percentage of adults who agreed or strongly agreed was significantly higher in the comparison area (55%) than it was in the intervention area (44%).

Overall, the DFfA intervention had a significantly positive impact on community efficacy. While no statistically significant change was observed in the comparison area (55% to 63%), the percentage increased significantly (44% to 84%) in the intervention area.

Comments

Looking at the 15 key performance indicators relating to Theme 2 (individual, household, and community change), the DFfA intervention had a significant positive impact on seven, a significant negative impact on two, and no significant impact on the remaining six.

There were positive impacts on the self-reported consumption of fruit and vegetables and foods high in fat or sugar (marginally significant), the level of physical activity, and safer food safety practices. However, these behavioural changes were not accompanied by positive impacts on awareness and knowledge, or on the self-reported levels of obesity.

It is difficult to directly attribute these changes to the DFfA intervention:

- There was no clear relationship between self-reported changes in consumption of different foods and changes in their availability or price. For example, the availability of foods high in fat and/or sugar increased but their self-reported consumption decreased
- Some of the positive social inclusion impacts are difficult to explain in terms of DFfA activities
- Some of these significant positive impacts are based on deteriorations in the comparison area rather than improvements in the DFfA intervention area.

There was evidence that the DFfA intervention achieved some success in its target wards and disadvantaged groups in this already deprived/highly deprived intervention area (see Chapter 3). However, there was no clear relationship between the patterns of these impacts and the way in which the DFfA core activities had been delivered (see Chapter 5).

8. Recommendations

These recommendations are based on the formal evaluation as well as the reflections listed in Chapter 5.

Recommendation 1: Local action should be appropriately supported

Recommendation 1:
Local action is an essential part of efforts to promote an affordable, safe, healthy diet. It should be supported appropriately by:

- *Strengthening health education activities*
- *Addressing local issues*
- *Enabling meaningful community engagement*
- *Supporting local teams.*

Strengthening health education activities
Participant-level impacts could be strengthened and more effectively translated into impacts at the community-level by:

- Providing more follow-up support to participants
- Undertaking linked activities with participants' households and communities
- Tailoring health education activities to particularly disadvantaged groups
- Expanding effective activities to meet local demand
- Conducting coordinating activities in the local media and school, workplace and community settings.

Addressing local issues
To achieve greater community-level impacts, however, other local issues must be addressed by:

- Improving physical access through local transport initiatives and partnerships with local food retailers to provide wider range of food delivery options
- Distributing food to disadvantaged groups (food banks, etc), taking care to avoid stigmatising recipients and exploitative retail practices[31]
- Maximising financial resources available to disadvantaged households through benefit maximisation
- Working with local take-away outlets, restaurants and cafes, and catering businesses
- Establishing more school and community food gardens
- Extending food-co-operative initiatives
- Linking with existing local regeneration projects
- Addressing local social and cultural factors.

Enabling community engagement

Recent public health guidance from the National Institute of Health and Clinical Excellence (NICE) highlights the contribution that strong community engagement makes to the effectiveness of local public health action[32].

The DFfA Operational Group was a key element of the DFfA intervention. It raised local concerns, gave advice, identified opportunities and advocated for the intervention. The DFfA Local Evaluation Group monitored core DFfA activities and conducted participant evaluations.

Some members of these groups participated on a voluntary basis; others represented their host organisations. Their contributions could have enhanced if:

- They had greater clerical, administrative, research and evaluation support
- They had been able to more meaningfully engage their host organisations in the process.

Supporting local teams

The reflections listed in Chapter 5 highlight some of the challenges faced by the DFfA Community Food Team. The mixed success in achieving community-level impacts can be attributed in part to the relatively limited attention the DFfA Community Food Team was able to give to broader issues – the local and wider food industry, income security, supportive public policies in transport, education, etc – that contribute to food poverty and obesity.

More broadly-based local teams, better equipped to deliver a comprehensive local intervention, with adequate time to build strong community engagement and local ownership are required. A more stable funding base that could support longer term employment contracts is a key pre-requisite of achieving this goal.

Recommendation 2: Local action should be embedded in a more comprehensive inter-sectoral approach

Recent public health guidance from the National Institute of Health and Clinical Excellence (NICE) emphasises the need to address wider issues if we are to achieve behaviour change for better public health[33].

The OTTAWA CHARTER[1] reminds us that health promotion action involves:

- Building Healthy Public Policy
- Creating Supportive Environments
- Strengthening Community Actions
- Developing Personal Skills
- Reorienting Health Services.

Many of the success factors for the DFfA intervention involve:

- Public policies concerning health and social services, food and agriculture, transport, education, etc at local, regional and international levels
- The food industry
- Income security for poorer households
- Broader communications.

Many of the key decisions relating to these issues are taken outside the ADHAZ area and were beyond the influence of the DFfA Community Food Team. The lack of coherent cross-government approach to tackling food poverty and obesity during the intervention period further limited the DFfA intervention's potential to achieve a greater community-level impact.

Recommendation 2:

If local action is to achieve greater impact at the community level, it must be properly embedded into a more comprehensive approach. To be effective this approach must:

- *Incorporate cross-government action*
- *Be directly linked to government strategies to tackle obesity, poverty and social exclusion*
- *Involve closer working with the food industry including local food producers, suppliers and retailers*
- *Address issues at the regional and international levels.*

This approach must be guided by a properly supported, coherent cross-government policy framework with an appropriately supported and implemented strategy.

The food industry

The evaluation highlighted the need for stronger engagement with the food industry – both inside and outside the local ADHAZ area:

- Participants in the ethnographic studies emphasised their preference for locally produced food and the importance of the local media as a source of reliable information
- The content analysis of the local media found a very close links between the local food industry and the nature of the diet-related news items that appeared in the local media
- Almost half of all adults do not even consider healthy options when they shop for food. In this situation, the

location of shops and the shop environment – its layout, the food it stocks, the composition of those foods, food labelling and in-store marketing – have a very significant influence on food purchasing behaviours
- The food basket studies highlighted the very significant role played by the large multiple, discounter/freezer and affiliated independent stores like Tesco, Sainsburys, Spar and Centra.

Many of the key decisions about the location of shops, the foods they stock, and their pricing and marketing practices are made outside of the local ADHAZ area. This significantly limits the likelihood that local changes in demand can bring about changes in the local supply of safe healthy food.

It is essential that there is greater engagement with the food industry on issues such as:

- The composition of food products
- Sourcing and pricing of food products
- Food marketing in the media and in-store promotions – particularly those aimed at children
- Food labelling – including simpler, consistent food labelling across the island
- The location and contents of retail food outlets.

The fundamental role of the Common Agricultural Policy (CAP), EU competition regulations and advertising rules all highlight the need to engage at the international as well as local and regional, level[34].

Recommendation 3: Better coordination between research, policy and practice

The reflections listed in Chapter 5 highlight some of the challenges of evaluating local efforts to tackle food poverty and obesity.

Many of these challenges are common to all population-based studies. They arise from the limited coordination between agencies delivering different components of a multi-level intervention, and between service delivery and research/evaluation activities. This restricts the size of community-level impacts that are possible as well as the quality of learning from research/evaluation.

Better coordination of service delivery – at the local, regional and international levels – and research/evaluation is required if they are to support and complement, rather than possibly undermine, one another.

Recommendation 3:

Greater effort is required to better coordinate the work of researchers/evaluators, practitioners and policy makers, and the community. This will require:

- *Innovative new ways of generating relevant knowledge as well as translating it into effective policy and practice*
- *New types of partnerships between researchers/evaluators, practitioners and policy makers, and the community*
- *Greater coordination between policy development, service delivery and research/evaluation.*

If evidence-informed policy and practice is to flourish then we need to look at:

- Innovative ways of i) capturing the tacit knowledge accumulated by practitioners, policy makers and the community; and ii) integrating it with knowledge derived in more traditional research settings
- Wider dissemination of research/evaluation findings and sharing of resources through knowledge brokerage events, communities of practice and web-based portals
- Adapting to public health the structures and processes underpinning, for example, the Northern Ireland Clinical Research Network (NICRN) and the All-island Cancer Consortium Northern Ireland Clinical Research Support Centre (NICRSC)
- New types of partnerships such as the Centre of Excellence for Public Health (Northern Ireland) at Queen's University Belfast that was recently established in partnership with the Institute of Public Health in Ireland and the Community Development and Health Network
- The use of multi-site research/evaluation designs with more routine data collections and more comprehensive activities monitoring
- More routine use of programme development tools like the Programme Logic Approach (PLA) to ensure the action is delivered and evaluated in a systematic way that takes account of good practice.

Recommendation 4: Greater North-South cooperation

A shared priority

Both parts of the island are experiencing rising obesity rates and anticipate associated increases in chronic illness and disability, health and social services costs, and mortality. Public policies across the island give a high priority to the promotion of an affordable, safe, healthy diet for the whole population and recognise the need to address the wider determinants of food poverty and obesity.

Why an all-island approach?

There are several reasons why an all-island approach to tackling food poverty and obesity is both necessary and possible:

- Many of the contributors to food poverty and obesity such as the production, marketing and distribution of food either operate across the border or affect both sides of the border in similar ways
- Key influences such as the Common Agricultural Policy (CAP) can only be addressed at the regional or international level
- Health promotion is an area of cooperation under the Belfast Agreement
- Existing all-island bodies such as ***safe*food** and the Institute of Public Health in Ireland have already demonstrated the benefits of North-South cooperation
- Several agencies across the island have developed complementary experience in the different components of a comprehensive approach.

Recommendation 4:

An all-island approach is necessary to effectively tackle food poverty and obesity:

- *North-South cooperation could be strengthened in the context of the health promotion work of the Belfast Agreement*
- *It could be delivered through coordinated efforts of the implementation bodies for the Fit Futures strategy in Northern Ireland and the Obesity Taskforce in the Republic of Ireland, and the anti-poverty strategies in both jurisdictions*
- *It should build on the existing work of all-island bodies such* ***safe*food** *and the Institute of Public Health who have already demonstrated the benefits of North-South cooperation.*

Summary tables

The tables below summarise the reach of the DFfA intervention, its community-level impacts on four local regeneration indicators and 15 individual, family and community change indicators. The tables:

- Highlight statistically significant (positive and negative) impacts across the whole population
- Indicate when the overall impact varies with either a geographical feature or an individual characteristic.

Traffic lights are used to identify significant impacts:

Green traffic lights highlight a significant positive overall impact (favouring the intervention area); or a positive impact in a DFfA target ward or amongst a DFfA disadvantaged group (see Chapter 3)

Red traffic lights highlight a significant negative overall impact (favouring the comparison area); or a negative impact in a DFfA target ward or amongst a DFfA disadvantaged group

Amber traffic lights indicate mixed impacts and cover all other situations.

Table 8: Changes in the availability and price of food in the DFfA intervention area (based on food basket studies)

INDICATOR	FOOD GROUP						WHERE THE SHOP IS LOCATED			TYPE OF SHOP
	All	High in fat and sugar	Meat, fish, eggs...	Fruit and vegetables	Breads, rice, potatoes	Milk and dairy products	Rural/ Urban	Border/ Non-border	Local depreva-tion score	
THEME 1: LOCAL REGENERATION										
KEO: Improved accessibility to affordable safe and healthy food										
Availability of food items	●	●	●		●					
Price of a food basket	●									●

Table 9: Community-level impacts of the DFfA intervention (based on the community surveys)

INDICATOR	OVERALL IMPACT	WHERE YOU LIVE			YOUR INDIVIDUAL CHARACTERISTICS	
		Rural/Urban	Border/Non-border	Local deprivation score	Education Level	Employment status
THEME 1: LOCAL REGENERATION						
Reach of the DFfA						
Awareness of DFfA			●	●		
Awareness of local food-related activities						
KEO: Improved accessibility to affordable safe and healthy food						
Distance travelled to main food shop	●					
Recent necessity to reduce food spending to pay other bills		●	●			
THEME 1: LOCAL REGENERATION						
KEO: Improved awareness/knowledge of nutrition. Food safety and food poverty.						
Understanding of the term healthy eating	●	●	●	●		
Awareness of the term food poverty						
KEO: Greater demand for affordable, safe and healthy food						
Consideration of at least one healthy option when shopping for food			●	●		

INDICATOR	OVERALL IMPACT	WHERE YOU LIVE			YOUR INDIVIDUAL CHARACTERISTICS	
		Rural/Urban	Border/Non-border	Local deprivation score	Education Level	Employment status
KEO: Improved health behaviors						
Consumption of bread, rice, potatoes, pasta and other starchy foods						
Consumption of fruit and vegetables						
Consumption of milk or milk products						
Consumption of fish						
Consumption of foods high in fat or high in sugar						
Compliance with food safety practices when dealing with food						
Regular physically active within the previous six months or longer						
Obesity						

INDICATOR	OVERALL IMPACT	WHERE YOU LIVE			YOUR INDIVIDUAL CHARACTERISTICS	
		Rural/Urban	Border/Non-border	Local deprivation score	Education Level	Employment status
KEO: Greater individual development						
Self-confidence in abilities/ knowledge of food safety and nutrition						
KEO: Greater social inclusion						
Community participation						
Social contact						
Community efficacy						

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