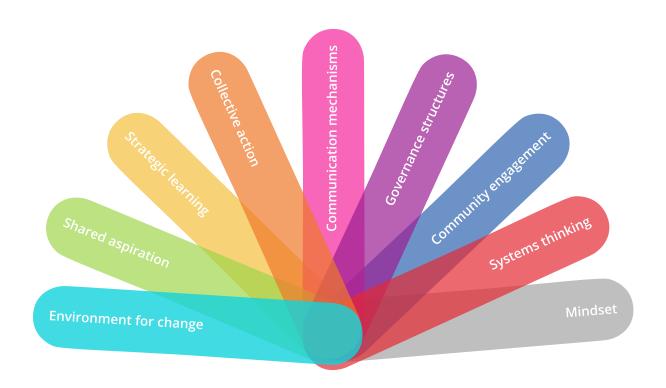
## INNOVATION AND PRACTICE

DEVELOPING WHOLE SYSTEMS APPROACHES
TO DIET AND HEALTHY WEIGHT IN SCOTLAND





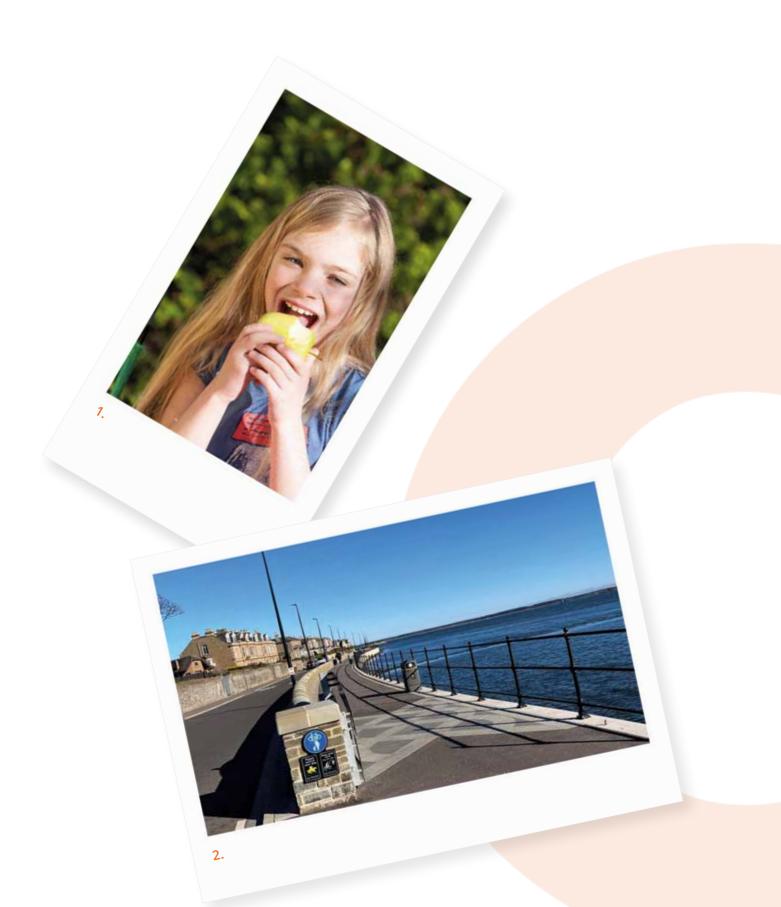


#### Front cover

Image taken from Public Health England (2019), Whole systems approach to obesity. A guide to support local approaches to promoting a healthy weight, page 22.

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### **EXECUTIVE SUMMARY**

This report describes the whole systems work undertaken by Early Adopter Areas in Scotland to address diet and healthy weight between 2019 and 2023. The report begins by describing why a population-based approach is necessary and identifies both the national and local partners who were involved in delivering the programme. All the participating areas used or adapted Public Health England's guide to taking a whole systems approach to obesity.

The actions delivered in local areas are then described in themes with sections on improving the food and physical activity environments. There is a focus on system leadership and community engagement which are essential components of a whole systems approach. The governance arrangements in each area are described in as much detail as possible. There is a final section describing the actions undertaken which may be described as community education.

The report then uses Public Health England's action mapping tool to reflect on the actions delivered by the Early Adopter Areas to address diet and healthy weight. The results from the tool are discussed together with the likely impact of the actions.

#### THANK YOU

Thank you to all those who have taken part in the Early Adopters phase of the WSA to Diet and Healthy Weight Programme in Scotland including those in Aberdeenshire, Borders, Dumfries and Galloway, Dundee, East Lothian, Fife, Midlothian, North Ayrshire and West Lothian.

Thank you to the Scottish Government, Public Health Scotland and Food Standards Scotland for their support of this programme.

## ADDRESSING DIET AND HEALTHY WEIGHT IN SCOTLAND

## THE IMPORTANCE OF A POPULATION-BASED APPROACH

Obesity has been identified as a complex problem requiring systems approaches and a collaborative coordinated approach to address it. Whilst creating healthier environments may be addressed through the UK and devolved government's policies, there are actions available at a local level which can be utilised to address local environmental drivers of overweight and obesity.

The 2021 Scottish Health Survey found that two in three adults and one in three children live with overweight and obesity in Scotland. The Scottish Government initiated the Whole System Approach (WSA) Early Adopter Programme in 2019 as a key part of Scotland's 2018 Diet and Healthy Weight Delivery Plan to support the ambition of halving childhood obesity by 2030. The programme also helped address Scotland's sixth national Public Health Priority: "A Scotland where we eat well, have a healthy weight and are physically active".

Whole Systems Approaches have been defined by Public Health Reform as applying systems thinking and processes that enable "an ongoing, flexible approach by a broad-range of stakeholders, to identify and understand current and emerging public health issues where, by working together, we

can deliver sustainable change and better lives for the people of Scotland". This approach encompasses a shift from a focus on individual behaviour change towards a population-based approach which focuses on building healthier environments.

Dundee, Dumfries and Galloway, and North Ayrshire were included as Early Adopters in the programme along with five other areas within the East Region Partnership (East Lothian, Fife, Midlothian, Scottish Borders and West Lothian).

Aberdeenshire was not one of the Early Adopter Areas (EAA) but has taken a whole systems approach to diet and healthy weight through its Healthy Eating Active Living (HEAL) project and is therefore included in this report.

Obesity Action Scotland (OAS) was asked to support the EAA's through the appointment of a National Co-

ordinator with governance provided by a board of National Partners (Scottish Government, Public Health Scotland and Food Standards Scotland). The Early Adopter Programme was due to end initially in March 2021, but due to the impact of the COVID-19 pandemic with its associated restrictions and impact on public health, this phase of the programme ended in June 2023.

This report is one of a series of actions delivered by Obesity Action Scotland designed to inform and support whole systems approaches undertaken to promote diet and healthy weight both now and in the future. It supports a recommendation from Public Health Scotland's Whole systems approach to diet and healthy weight: early adopters programme process evaluation (2022).



Prevalence of overweight including obesity (BMI 25 kg/m2 and over) among adults aged 16 and over, 2003 to 2021.

**Figure 1**Figure taken from The Scottish Health Survey, 2021 edition, Volume 1, Main Report, page 85.

#### INTRODUCTION

This report describes and reflects on the progress made by the WSA to Diet and Healthy Weight Early Adopter programme in health boards and local authorities in Scotland towards building environments for local populations which support diet and healthier weight. As described previously, the programme began in 2019 and had to navigate its path across a pandemic whilst trying to develop a whole systems approach (WSA) to diet and healthy weight. Previous Public Health Scotland reports have focused on how the EAA's have drawn on Public Health England's *Whole systems approach to obesity* and have described in detail the process proposed in using their guide<sup>1</sup>.

In contrast, this report focuses on the actions undertaken over four years in addressing diet and healthy weight in selected local areas. All the actions described will impact in some way on the obesogenic environment<sup>2</sup> and reflect the endeavours and hard work of individuals and organisations across Scotland who have sought to address a key public health challenge during the immediate public health emergency of COVID-19.

The number of activities does not necessarily demonstrate the level of local WSA interventions. We need to understand the problem and agree the barriers to establishing a healthier environment before seeking to find a way to overcome them.

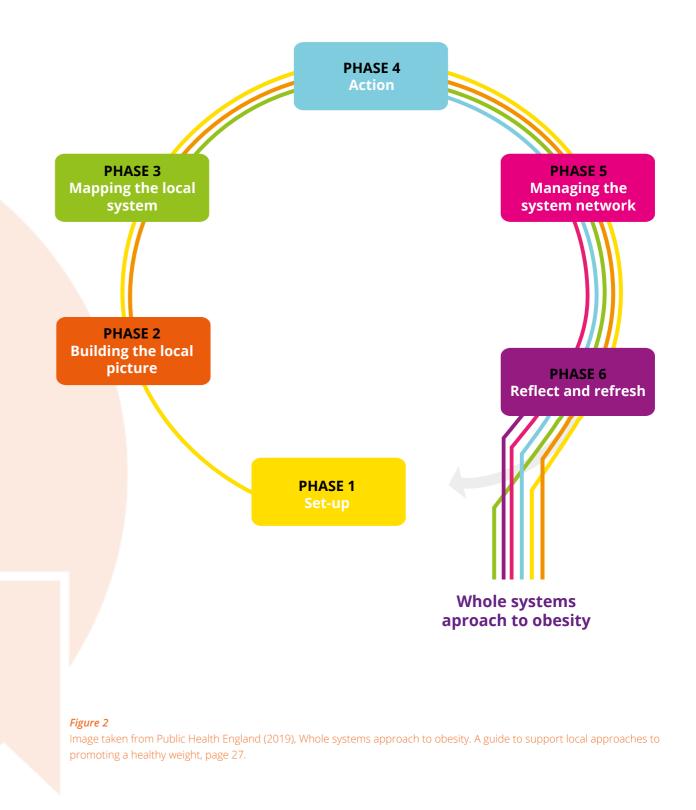
The report describes the actions undertaken in each area by themes. It is not exhaustive or attempts to suggest all the work described only happened because of the whole systems approach which was adopted. It is intended to provide an overview of what is possible at a local level to promote diet and healthy weight. It reinforces that, at

a local level, planning and licensing, economic regeneration policies, environmental health, transport infrastructure, and food retailing all have a significant part to play in the choices people are able to make in purchasing and consuming food and being physically active.

Each area drew on Public Health England's (PHE) guide in varying ways. Many staff were able to receive training by Leeds Beckett University, funded by the Scottish Government, in its use. In the majority of cases, areas used a workshop with local participants for them to map out what they considered to be the causes and drivers of obesity in their locality. A second workshop then took place to determine the actions required to address these. It should be noted that most of these workshops needed to take place online which impacted on both the process and the actions agreed (as well as the resources required to deliver them). This report will describe these actions to illustrate the various approaches undertaken across Scotland to address diet and healthy weight.

A final section of the report includes a discussion and reflection based on using the Determinants of Health Model (used in PHE's guide). The report is also able to draw on a new resource, Local Levers for Diet and Healthy Weight in Scotland, which describes the interventions that are possible to address overweight and obesity at a local level.

It is intended that this report records and celebrates the achievements made in local areas to build a healthier environment in order to promote diet and healthy weight. It is also important that the report is reflective on the work undertaken as this is intended to be the beginning of a systems-based journey to address diet and healthy weight. We know this will be a complex and often challenging path but hope the actions already delivered will build on our understanding of whole systems work and help individuals and organisations including both local and national partners, further develop this approach in a Scottish context.



The PHE guide (2019) provided a process to enable local authorities in England to start creating their own local WSA to tackling obesity and promote a

<sup>&</sup>lt;sup>2</sup> The term 'obesogenic environment' is commonly used to refer to "influences that the surroundings, opportunities or conditions of life have on promoting obesity in individuals and populations" (Hobbs and Radley, 2020)

# IMPROVING THE FOOD ENVIRONMENT ACCESSIBILITY AND AFFORDABILITY

One of the greatest barriers to healthier eating is the cost of living crisis which disproportionately affects Scotland's disadvantaged communities and has made an already difficult situation worse. These communities associated with poverty often are at greater risk of obesity and struggle to access healthier food options due to cost and availability. Many areas in Scotland recognise this issue and have now helped to support food larders and kitchens with the aim of addressing it. Food larders give residents the opportunity to access food, including fresh produce, at a token price in a shop-like environment. It is recognised that although there is a need for emergency food aid, food larders operate within a model that addresses sustainability and prioritises cash first/cash maximisation approaches.

There are currently 14 established community larders operating throughout mainland North Ayrshire. These include the Quaint Food Larder run by Ardrossan Whitlees Community Association and funded by Cunninghame Housing Association.

Many areas help their populations to access healthier food options such as in Whitburn, West Lothian. Mayfield and Easthouses Pantry, Midlothian, will offer a free pantry shop to those in receipt of food bank parcels. In Aberdeenshire, their work under food accessibility includes looking at solutions to improve affordable and better access to local produce in communities, including rural areas. In addition, some areas have supported local cafés and community food outlets to offer healthier menus. Midlothian is trialling the use of MenuCal<sup>3</sup> with local food businesses with the support of Environmental Health. In Borders, LINKS Eyemouth (Linking Ideas for Nourishment, Knowledge and Support) is a peer support group which facilitates and coordinates fun, sociable healthy eating sessions for families with young children.

BIG COOK LITTLE COOK LINKS Eyemouth's New & Exciting Lunch Club A fortnightly cooking group where adults and children can A fortnightly cooking group where adults and children can prepare, cook and eat a delicious meal together for lunch. prepare, cook and eat a delicious meal together for lunch
Children and adults will learn new recipes and cooking
Wille while having fun and cooking the while having fun and cooking Children and adults will learn new recipes and cooking skills while having fun and socialising. We will have special skills while having fun and socialising and nutritional advice skills while having some along with too tine and nutritional advice. Skills while naving tun and socialising. We will have special while naving tun and socialising. We will have specially special Everyone is welcome to come along and join in. EES Quaint Larder

<sup>&</sup>lt;sup>3</sup> A free, secure, online tool that supports food businesses to manage allergen information and calculate calories in the food they serve.

### THE BEST START IN LIFE

Central to Dundee's whole systems approach to diet and healthy weight, is the belief that Dundee's children and young people deserve to have the best start in life. The Tayside Child Healthy Weight Strategy launched in June 2021 included key ambitions which aim to be achieved by improving school settings and health in education.

In Whitburn, West Lothian, there are plans to develop healthy eating and physical activity initiatives for children and young people through active schools and using buggy walks for families with young children. There is also work progressing to build the capacity of practitioners to deliver the HENRY ("a healthy start for a brighter future") programme.

Dundee City Council and NHS Tayside have also worked hard together to improve breastfeeding rates in Dundee. The Home Start Dundee, Breast Buddies Project provides support on all aspects of breastfeeding using peer support groups, one to one home visiting and online support. Further, NHS Tayside was the first Health Board in Scotland to achieve the UNICEF UK Baby Friendly Gold Award for Community – Health Visiting Service and Family Nurse Partnership.

Midlothian is another area that has prioritised breastfeeding including seeking to increase the number of breastfeeding friendly spaces in the region.





Many fast food outlets provide nutritionally poor, calorie dense food and fill most high streets. Evidence tells us that communities associated with poverty also have a higher density of these kinds of outlets than more affluent areas. In Aberdeenshire, the Environmental Health department are working with local outlets to reduce sugar and salt content in their ingredients. When they worked with a local business, a sampling intervention identified 12 grams of salt in a takeaway meal. Following advice, the business now measures sugar and salt with a teaspoon to accurately provide small quantities.



## IMPROVING THE PHYSICAL ACTIVITY ENVIRONMENT

Increasing physical activity and active travel has long been seen as a component of addressing the obesogenic environment (Public Health England and the Local Government Association, 2013). Whilst the rise of obesity has largely been driven by changes in food consumption, physical activity helps people maintain a healthy weight and has other important health benefits.

Systems based approaches and learning from Early Adopters Areas have been used to inform two priority programmes of work in Dumfries and Galloway. This includes the development of a new multi-agency Physical Activity Strategy and a scale up plan for enhancing local delivery of the National Physical Activity Pathway. Both programmes will focus on creating active systems, people and societies and apply the framework for action detailed in Public Health Scotland's *A systems-based approach to physical activity in Scotland*.



### ACTIVE TRAVEL

Local authorities are well placed to support the infrastructure for walking, wheeling and cycling. This is a theme adopted by many areas including Dumfries and Galloway, East Lothian, Fife, North Ayrshire and Dundee. Dundee has created cycle and storage units in 29, mostly city centre locations, focusing on some of the city's most deprived

areas. The cycle storage units are a key step in enabling more people to cycle and to store their bicycles safely. Funding for the scheme has come from Dundee City Council, the Air Quality Action Plan Grant and the Cycling Friendly Social Housing Partnership Fund. NHS Tayside has been able to provide cycle storage on NHS sites and at various GP surgeries.

Scottish Borders has also scheduled the installation of new cycle racks for the summer of 2023.

## IMPROVING ACCESS AND USE OF GREEN SPACE

As well as developing cycling and walking infrastructure, green space in local communities needs to be designed and maintained to help people be physically active. This is likely to have both physical and mental health benefits (PHE, 2013). Many urban areas in Scotland possess good quality recreational and play spaces but access often needs to be strengthened through spatial design and community engagement (the latter is covered in a later section). North Ayrshire has prioritised using the built and natural environment to improve health and wellbeing as one of its key themes. West Lothian has developed a series of walks to support health including the development of a Heritage Walk.

## SUPPORTING OUTDOOR ACTIVITIES

Borders has focused on outdoor activities as one of the themes they developed as part of their WSA as has Aberdeenshire which is fortunate enough to include the Cairngorms National Park within its borders. Midlothian plan to use existing outdoor green space to do outdoor play sessions for children aged 5-12 years.



## SYSTEM LEADERSHIP AND COMMUNITY ENGAGEMENT

Given that much of this section may be considered as an essential part of the process of adopting a whole systems approach, this is well covered by Public Health Scotland's *Whole systems approach to diet and healthy weight: early adopters programme process evaluation* and you are referred to this for more detail. This report focuses on some of the actions undertaken by the participating areas to ensure there was both senior level involvement and that stakeholder engagement and participation was strong.

#### SYSTEM LEADERSHIP

System leadership is a critical aspect of a WSA to addressing diet and healthy weight. It was acknowledged in Public Health Scotland's Process Evaluation that one of the key success features for an effective WSA, highlighted by the EAAs, includes clearly articulated senior buy in/engagement.

Governance varies considerably between the areas but is usually invested in a senior officer lead. Thus, in Dundee, this is Dundee City Council's Executive Director of Children and Families Services. Further, Tayside's Child Healthy Weight Strategy is one of the two health and wellbeing priorities of the Tayside Regional Improvement Collaborative. Aberdeenshire's WSA was part of their Healthy Eating Healthy Living (HEAL) project and the project officer was a member of the public health team within the Aberdeenshire Health and Social Care Partnership.

In Ayrshire, with three local authorities and one Health Board (NHS Ayrshire and Arran), the WSA focused on the North Ayrshire Community Planning Partnership. The PHS Whole systems approach to diet and healthy weight: early adopters programme process evaluation – case studies noted that the North Ayrshire WSA experience was supported by "ensuring high visibility for the WSA through formal sponsorship by very senior NHS and council staff and senior councillors".

West Lothian's WSA work has been presented at the Community Planning Partnership's (CPP) Board and is included within the Local Improvement Outcome Plan 2023-2033. It will also link with the development of the locality plan through the Whitburn Service Group. Midlothian's governance is through their CPP working group. Dumfries and Galloway's approach is led by their Health and Social Care Partnership.

In Fife, their WSA project is focused on Dunfermline and Cowdenbeath. These areas were selected due to the strong support and involvement of the Community Managers. This ensured that the work would be linked into local planning groups and partnerships enabling the engagement of a wide range of local partners and

stakeholders. A partnership working group with representatives from the NHS Fife Health and Social Care Partnership, Fife Council, Fife Voluntary Action and Youth 1st was established to take things forward with the project strongly supported by leads from these organisations.

NHS Borders and Scottish Borders Council (SBC) have published an Annual Report on the WSA taken in Eyemouth. This includes a detailed section on Governance and Funding reflecting the importance of governance structures in the effective implementation of a WSA. Most areas have a local governance group which meets regularly. In Borders, they have a Working Group which meets every two weeks and a Governance Group, chaired by the Director of Resilient Communities which meets every eight weeks. The latter has membership from SBC Community Learning and Development Service, SBC Communities and Partnerships Team, SBC Corporate Services, SBC Early Years Team, LIVE Borders and Public Health.

It is important to note that, as described above, a wide range of partners are required to be involved in a WSA. The EAAs are clear that is important to engage the 'wider system'. We need to work with organisations to help them identify the causes of obesity and devise solutions which require both system leadership AND system engagement.



## COMMUNITY ENGAGEMENT

Almost every area has followed the WSA of consulting with communities through an online or in-person workshop using PHE's WSA guide to support local approaches to promoting a healthy weight. The guide suggests two WSA workshops which are described in PHS's evaluation report. The workshops have generally been online as much of this consultation necessarily took part during the pandemic. This required the development of a new skillset and resources in order to engage effectively with communities digitally.

All areas have tried to ensure communities have been involved in the priorities determined for action (as described elsewhere in this report) and are actively engaged in the numerous interventions which have been delivered. The PHS *Whole systems approach to diet and healthy weight: early adopters programme process evaluation* noted the importance of community engagement and that this varied across EAAs.

Areas have used a variety of communication channels in community settings. Those focusing on specific communities within their areas have then used different methods to address these populations including using events such as in Musselburgh in East Lothian. In Borders, Eyemouth Living (a monthly magazine) was developed with the objectives of engaging with local stakeholders whilst providing information on what was available locally to promote health and wellbeing.

Other areas which have chosen to take a whole systems approach to addressing healthy weight in a specific population area within a local authority or NHS Board include Midlothian (Mayfield and Easthouses), West Lothian (Whitburn) and Fife (Dunfermline and Cowdenbeath).

### **VOLUNTEERS**

The use of community volunteers has been important in supporting many initiatives including the establishment of a Junior ParkRun on Eyemouth Primary Playing Fields which has benefitted from the support of 59 volunteers since its establishment in summer 2022. West Lothian intend to provide volunteering opportunities in its plans for work linking to community wealth building and community prescribing.



## **COMMUNITY EDUCATION**

Most areas have undertaken some community education activities, usually around food and physical activity. These were activities specifically requested by the local community. In North Ayrshire, this has included support to grow food. Aberdeenshire Council have helped a school in Fraserburgh (an area of social and economic deprivation) to implement a grow your own project.

Outdoor activities and education have been a significant theme in Eyemouth. Training was provided to children such as those from Eyemouth Primary School and the Nursery School Staff. Thus, outdoor cooking and fire lighting and safety are some of the topics which have been covered.



## CYCLE TRAINING

Eyemouth has cycling as an important theme in its action plan. This includes the development of out of school cycling opportunities, new cycling routes, more cycle storage and repair stations. There has also been an emphasis on increasing cycle safety amongst school children with the involvement of Junior Road Safety Officers (part of Scottish Borders Council's Traffic and Road Safety Team). Midlothian is working with early years settings to purchase play on pedal bikes to encourage cycle skills early. Other areas such as Dundee and West Lothian are also working closely with schools to support physical activity.





#### MAPPING THE ACTIONS

In preparing this report, the action mapping tool contained in the Public Health England guide was used to map actions undertaken in local areas against the Wider Determinants of Health (WDOH) model<sup>4</sup>. This has already been undertaken in some areas such as Borders, Dundee, Fife and Aberdeenshire. Using this model has enabled a consideration of whether actions needed to be refined to address wider conditions and living and working conditions (i.e. more upstream actions) in the Determinants of Health Model. Some areas have also used PHE's Action Scales model in reviewing their actions. For this report however, only the WDOH model was used for simplicity.

### METHOD

Participating areas brought stakeholders together to create a map of the local system that was understood to cause obesity and diet related inequalities. A further workshop was then held at a later date to prepare a whole systems action plan which included a series of themes and proposed outcomes intended to address health and wellbeing and healthy weight in their communities.

Public Health England's *Whole systems approach to obesity* provides an *action mapping tool (Resource D)* with a *Supporting guide (Resource E)*. The tool is intended to help understand current and future actions for tackling obesity locally. It helps to interpret where actions are invested and where future efforts should be targeted. Actions are entered using a spreadsheet with the results mapped against the Wider Determinants of Health model.

EAAs in Scotland were asked to provide the action plans they had developed and the action mapping tool developed by Public Health England was used to provide an overview of the actions being delivered. Seven areas were able to provide this information (the other areas had either not developed action plans at this point or only provided overall themes for their interventions). The use of this tool in this report is to assist current and future stakeholders in reflecting on their use of a whole systems approach and how they amend their actions as and when required. The tool is not able to evaluate the effectiveness of the actions.

In the PHE guide, there were 226 causes of obesity identified collected from five local authorities with additional causes added from the Foresight Report (2007). These local causes of obesity are listed in full as an appendix in PHE's *Resource E*.

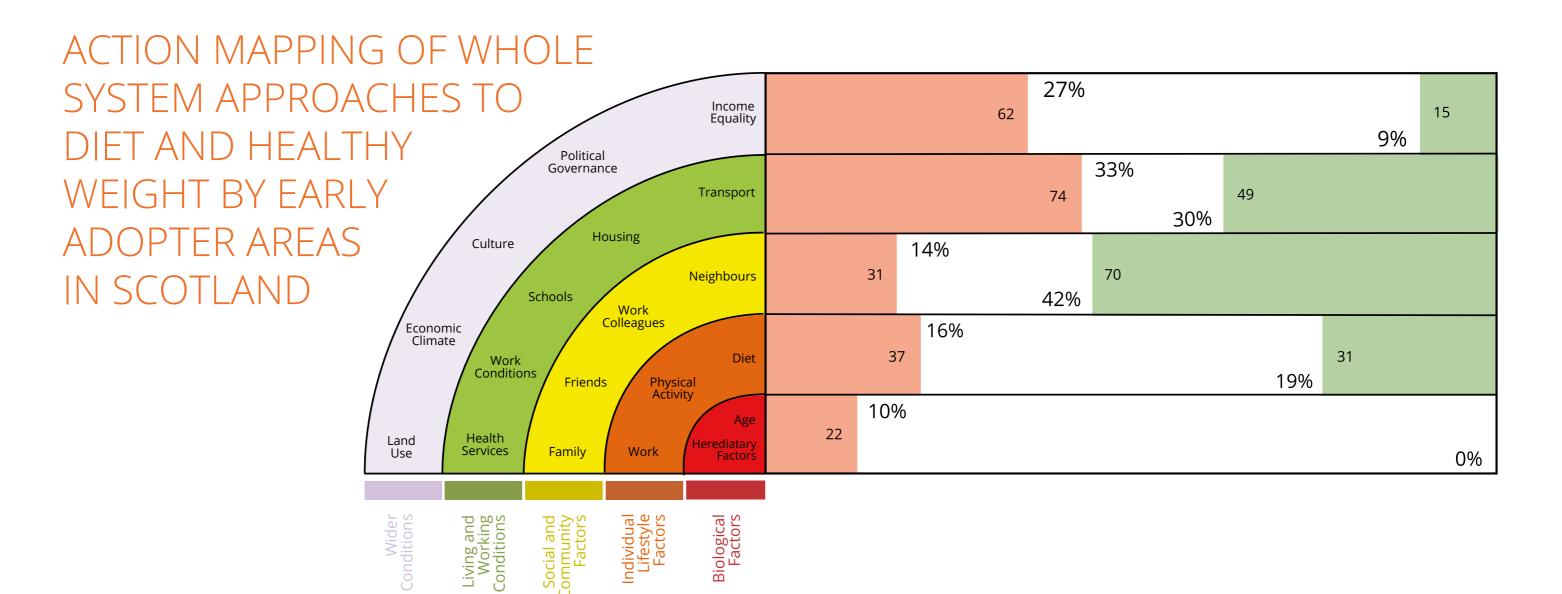
The 165 actions being delivered by the EAAs were then plotted against a range of factors including biological, individual lifestyle, social and community, living and working conditions and wider conditions using the PHE spreadsheet (*Resource D*). Three members of Obesity Action Scotland's staff were involved in inputting the actions into the model and agreeing how the actions should be coded.



18.

 $\mathbf{2}\mathbf{2}$ 

 $<sup>^4</sup>$  The Wider Determinants of Health model is a socio-ecological model which illustrates five factors that influence health , Dahlgren and Whitehead (1991).



**226 Causes** of obesity

**165 Actions** undertaken by the Early Adopter Areas to address Diet and Healthy Weight

## **RESULTS**

The results are shown in the figure and are displayed in numerical format and as percentages.

Whilst 62 (27%) of the 226 causes of obesity are shown to be caused by the wider conditions of the determinants of health – land-use, economic climate, culture, political governance and income equality – only 15 (9%) of the interventions of the EAAs address these.

In the biggest contrast, in the participating areas using the WSA approach in Scotland, 70 (42%) actions address social and community factors (family, friends, work colleagues and neighbours). This may be compared with the 31 (14%) causes of obesity identified in this section of the model in the PHE guide.

#### Figure 3

Figure adapted from Public Health England (2019), Whole systems approach to obesity. A guide to support local approaches to promoting a healthy weight, page 42.

### **DISCUSSION AND CONCLUSIONS**

Given the evidence that the rise of obesity and inequalities has been led by changes in food consumption, it is entirely appropriate that the largest number of actions undertaken by local areas has been to seek to improve their local food environment (with a few exceptions where the focus of the whole systems approach has been agreed to target increased physical activity).

Whilst every area has consulted with their local community to some degree to determine priorities, this may have meant that important interventions have not been included, as local priorities will not always align with best evidence based interventions. For example, *Local Levers for Diet and Healthy Weight in Scotland* includes two actions not considered by the participating local authorities and health boards. These are strengthening public food procurement and provision standards, and the restriction of food marketing.

Further, the Determinants of Health model used in the PHE guide does not reference commercial determinants of health (the way that the actions of commercial organisations may impact on public health). In England, public health based in local councils is starting to address unhealthy commercial influences through advertisement and sponsorship policies, for example, with Tower Hamlets in London the most recent to do this (Sustain, 2023).

The action mapping tool used as a reflective device in this report was discussed in PHS's Whole systems approach to diet and healthy weight: early adopters programme process evaluation – case studies. Its use demonstrated that "while the causes of obesity are more frequently associated with people's living and working conditions than lifestyle factors, current and future actions tend to focus on lifestyle choices with comparatively very little action being targeted on the main causes of obesity". As shown in the figure on pages 24 and 25, whilst 39% of the Early Adopter Areas' actions were focused on the wider determinants of health, 61% considered social and community factors and individual lifestyles.



Using the action mapping tool is recommended to help areas to consider whether their actions need to be refined to address wider conditions and living and working conditions (i.e. more upstream actions) in the Determinants of Health Model.

In conclusion, this report illustrates that the actions undertaken in a whole systems approach to diet and healthy weight are diverse but all will contribute in different ways to improving the health in local populations. The greatest impact however is likely to accrue where system leadership is fully engaged and upstream interventions and policies are included in the complex system of actions required if we are to fully address diet and healthy weight in Scotland.

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#### **CREDITS FOR PHOTOGRAPHS**

#### Page 4

1. NHS Borders

2. William Cook

#### Page 11

3. LINKS Eyemouth (NHS Borders)

4. North Ayrshire Council

#### Pages 12, 13

5. NHS Tayside

6. NHS Tayside

7. Aberdeenshire Council

#### Pages 14, 15

8. Dundee City Council

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#### Page 17

11. North Ayrshire Council

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12. East Lothian Council

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19. William Cook

## **NOTES**


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