Toward Public Health Nutrition Strategies in the European Union to implement Food Based Dietary Guidelines and to enhance healthier lifestyles

Working Party 3: Final report+

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+ This report is based on the contributions of experts involved in Working Party 3: see Preface

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Abstract

This paper suggests strategies for implementing the EU food based dietary guidelines. Dietary guidelines have been developed and disseminated in many countries across the world. However, the EU guidelines are the first to include a specific section on implementation. The aims of the guidelines are twofold, 1) to provide food based dietary guidelines which can be used as a consistent communication tool and 2) as a springboard to planning, implementing, and evaluating public health nutrition strategies.

The report is not intended to be prescriptive. It aims to build upon a solid evidence base to provide practical and cost effective suggestions for developing public health strategies, which member countries can use and tailor to the social, cultural and health needs of their populations.

Diet and physical activity related diseases impose vast costs on the European economy. However, despite the enormous costs to healthcare systems and in terms of lost productivity, there have been very few resources allocated in Europe to attempting to prevent these, rather than treating them.

The burden of disease exists in the majority of the population, and not in high-risk groups. The optimal public health strategy is thus to focus on the population as a whole, rather than targeting those with increased risk factors or pre-existing disease. Reviews have been carried out on the health impact effectiveness of various types of intervention to promote healthy eating and physical activity in the population. These conclude that the most effective interventions a) adopt an integrated, multidisciplinary, and comprehensive approach b) involve a complementary range of actions, and c) work at an individual, community, environmental and policy level. Information provision in isolation is not effective, and may exacerbate inequalities in health.

In some countries inequities in diet and physical activity are not only significant contributors to inequalities in health, but are increasing. Effective interventions to address inequities need to tackle the broader determinants of health, including social exclusion, social cohesion, environmental, and structural factors.

One of the most easily transferable frameworks for the development of public health strategies attempts to capture the individual, community, environmental and policy levels, by working through ‘target groups’, ‘settings’, and ‘approaches’. The Working Party has suggested outline strategies for each of the key target groups, setting and approaches which it has identified as having the potential for maximum reach and influence. The key characteristics of effective interventions for each of these is given.

Finally, the evidence base points to the importance of a co-ordinated, multisectoral and population wide strategy. In order to develop and implement such strategies, identifiable structures and mechanisms will be needed at a national level within member states.

1.0 Introduction

'Public Health nutrition is the promotion of good health through nutrition and physical activity and the prevention of related illness in the population'

The remit of Working Party 3 of the EU Dietary Guidelines initiative was to identify strategies for implementing food based dietary guidelines. The overall objective of these strategies is to enhance relevant aspects of healthier lifestyles, including physical activity levels. The proposed strategies are based firmly on research which has been carried out on the very different attitudes to nutrition, physical activity and health in the member countries of the European Union, and on the evidence for the relative effectiveness of different types of intervention. They also offer the flexibility to address the needs of specific population sub groups, and equity issues, within member states.

Previously dietary guidelines have been developed and then disseminated. Sometimes they have even been used as a statement of government policy (for example in the USA). However, the EU Guidelines are the first to include a specific section on implementation. As with other guidelines, the aims of the European Guidelines are two fold, to provide food based dietary guidelines which can be used 1) as a consistent communication tool and 2) a springboard to wider nutrition and health strategies. This in turn means that there are two aspects to their implementation 1) the narrow one of promoting the guidelines themselves, and 2) the broad one of planning, implementing, and evaluating a public health nutrition strategy. Reviews of the effectiveness of nutrition and health interventions demonstrate quite clearly that a broad approach is more likely to bring about changes in patterns of behaviour and disease. For that reason this document concentrates on providing an evidence base and practical suggestions for developing public health nutrition strategies, which member countries can tailor to the social, cultural and health needs of their population.

This Report is divided into two main sections. The first gives the background to the development of strategies for the implementation of the dietary guidelines. In the second section key **target groups** in the population; **settings** where people spend much of their lives (e.g. schools); and different **approaches** to bringing about structural and individual change, are identified. These target groups, settings and approaches have the potential to reach and influence the greatest number of people in the most efficient way. For each key target group, setting, and approach practical suggestions are made for how this can be done. Individual member states can use these suggestions as a basis for developing and evaluating their own strategies.

The scientific evidence presented in this paper is used as a basis for proposing actions which can be taken at national and local levels within member states.

2.0 Background

Working Party 1 (WP1) has extensively reviewed the evidence for the links between diet and physical activity, and chronic diseases. It has also outlined the mortality and morbidity which result from these diseases. This section considers 1) the economic impact of the associated health care and lost productivity in member states; 2) inequities in diet and physical activity; 3) which approaches are most effective in preventing diet and physical activity related diseases, and where possible their costs.

2.1 Cost of diet related ill health in the European Union, and the cost of prevention

2.1.1 Cancers

There is no European wide information on the economic costs of cancers, but in the UK in 1992/3 it was estimated that the cost to the National Health Service plus personal social care

was nearly 2 billion ECUs[1]. This does not include lost production or informal care costs, and so is not directly comparable with the coronary heart disease (CHD) figure given below.

2.1.2 Cardiovascular disease (CVD)

It is estimated that at least one third of premature deaths from CVD in Europe are attributable to unhealthy diets. This means that approximately 60,000 premature deaths a year in Europe could be saved by dietary changes[2].

Each year about 74 billion Euros are spent on treating CVD in the EU. But CVD also costs an additional 106 billion Euros a year in lost production of goods and services because of premature death and disability. In total CVD costs the EU about 180 billion Euros a year*. These estimates are based on four separate analyses carried out in the UK[3], the Netherlands[4], Sweden**, and Germany[5].

2.1.3 Obesity

Insurance companies estimate that an obese person is 2-3 times more likely to die prematurely than someone with a healthy body weight. It is thought that obesity accounts for 5% of heart attacks and strokes, 10% of cases of osteoarthritis, 20% of cases on hypertension, and 80% of cases on non-insulin dependent diabetes mellitus[6].

There is limited data on the costs of obesity, but evidence suggests that the direct cost of obesity accounts for 5 to 7% of total health care expenditure [7-9]. In the States the direct costs in 1990 were 45.8 billion dollars, and indirect costs increased this by half as much again.

Within European countries, the Netherlands estimated that the health care costs of obesity were 3 to 5% of the health budget[10]. In 1994 it was estimated that the cost of obesity to the NHS in the UK was 248m ECUs[6]. This has recently been revised and current estimates of the cost to the healthcare system are between 525m ECUs and 2,625m ECUs per year***. This cost does not include lost working time, sick pay, reductions in productivity, and so on.

The estimates given above are fairly crude, and agreed definitions and analytical frameworks are needed to enable a rigorous analysis of the cost of diet and physical activity related diseases across Europe.

2.1.4 The cost of preventing diet related disease

In summary about a third of all premature deaths in Europe are diet related, and many are preventable. These diseases result in enormous cost to the health care systems and to the economy of member states. Despite this there have been very few resources allocated to attempting to prevent the diseases rather than treating them. For example, in England the food and nutrition education programme of the national health promotion agency has a budget of less than 1.5 m ECUs .The Dutch Government invests 6.5 m ECUs annually in a national 'Healthy Nutrition' campaign. In Flanders, the government have earmarked annually 62,000 ECUs for nutrition health promotion.

In Europe as a whole, the budget in member states specifically for health promotion is, on average, less than 1% of the total health budget[11].

This reluctance to invest in primary prevention of disease seems to be explained by the following misperceptions:-

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** Swedish Heart Foundation, 1999, personal communication

*** National Audit Office, personal communication

Myth 1: Primary prevention strategies are not effective.
This will be addressed in more detail later, but briefly a review of the literature suggests that healthy eating interventions are worthwhile and effective. A meta analysis of 17 randomised controlled trials assessed whether dietary interventions can change diet and cardiovascular disease risk factors[12]. The authors concluded that primary prevention dietary interventions could achieve modest improvements in diet and cardiovascular disease risk. They reported a 3.7% proportional reduction in serum cholesterol, and a 1.4% proportional reduction for diastolic blood pressure. When these figures were applied to theoretical predictions[13,14], it was calculated that dietary intervention could realistically reduce CHD by 14% and stroke by 9%.

Myth 2:Primary prevention strategies take too long to have an effect.
It is true that an investment in prevention would need to be long term, however the potential for cost savings is considerable and the sooner initiatives are started, the sooner results will be seen.

Myth 3: People do not like to be told what to do.
This is often the political perception of health promotion. In fact, telling people what to do is often counterproductive anyway. The broad public health strategies which are proposed later in this paper are based on the premise of enabling people to make choices.

Myth 4:The food industry will suffer.
If people choose, over time, to shift their eating habits, some parts of the food industry will benefit. Many of those who could theoretically see a downfall in their sales have already begun to adjust their product ranges and the composition of their products. The food industry is expert at responding to consumer demand and predicting trends.

Myth 5: Nutritionists do not agree
Reviews of dietary guidelines from around the world show a considerable degree of consensus. One problem is that arguments between interested parties and personalities often continue to be fought out long after majority, or even consensus reports are produced. It is also true that scientific knowledge changes and dietary guidelines should not be static, but will need to be revised at regular intervals. Unfortunately this can be seen as 'they've changed their minds again'. In other fields of science it is quite legitimate to revise advice because of scientific advances, and there is no reason why nutritional science should be any different. Finally, many of the perceived controversies are about 'fringe' messages, and are often the subject of disproportionate media interest, detracting from the core of well founded dietary messages.

Historically pitiful resources have been allocated to prevention of diseases, compared with the costs of these diseases to national economies. Substantial investment of resources will be necessary to implement the dietary guidelines through the development of public health nutrition strategies, but the amount of money needed is dwarfed by the potential these strategies have to decrease the vast economic burden currently imposed by diet and physical activity related diseases.

Recommendation: Adequate resources should be allocated to the development of public health nutrition and physical activity strategies. They have considerable potential to offset the current economic cost to Europe of chronic diseases.

2.2 Inequities in diet and physical activity

Between the late 1980s and 1993, poverty levels across the then 12 countries of the EU increased dramatically. Indeed, rates of increases in countries such as Germany, the Netherlands and the UK were above 20%. This growth of poverty has been driven by a number of factors, notably rising unemployment, increasingly insecure and low paid work,

and the pressures put upon social security systems, including wider welfare services such as health and housing.

WP1 have drawn attention to the marked discrepancies in health status within societies, with a five-year difference in life expectancy between the rich and poor in some countries. A significant reason for inequalities in health is inequity in access to health promoting physical activity and healthful diets. Obviously money is a major factor, but inequities refers to a broader concept, an unfair or unjust set of circumstances. For example, people who live in an area where there is a fear of crime may be reluctant to walk regularly. In such areas, there may be fewer food shops, and the ones that there are may be more expensive and stock a restricted range of foods. Circumstances that restrict people's access to a way of living enjoyed by most people in society, result in social exclusion.

In recent years it has also been recognised that people with good social networks suffer less ill health, than those who have little social support. This has led to the development of a concept known as 'social capital'. Social capital can be defined in terms of a) the existence of community networks b) civic engagement c) local identity and a sense of solidarity and equality with other community members and d) trust and reciprocal help and support being the normal behaviour in the community[15].

In terms of nutrition and physical activity, the poor spend a much greater proportion of their disposable income on food, but eat a diet of lower nutritional quality than the rich. They are also less physically active[16]. In some countries these inequities are increasing. Money is a fundamental factor in this, as are the circumstances in which poorer people live. It is also clear that social capital plays an important role. For example, in England a study re-analysing a national health survey concluded that after controlling for social class, there is a significant association between the quality of the diet and social support. A severe lack of social support significantly increased the odds of a poorer than average diet by 44% for men and 35% for women[17].

It is clear that tackling inequities should be at the heart of any public health nutrition and physical activity strategy.

Providing information is not a solution, and in fact a study[18] which reviewed interventions to reduce socio- economic health differences, concluded that provision of information in isolation is more likely to exacerbate inequalities in health. The interventions that were more effective addressed structural factors.

Inequity in health has only recently been fully recognised as an issue in Europe. In order to address it, it will be necessary to tackle the broader determinants of health, and to be prepared to consider innovative approaches. For example: reducing social exclusion by initiating community projects; reducing crime, so that people are able to walk in their locality, including going to local shops; improving the physical environment, including recreation areas and supporting local shops in stocking a wider range of items; creating respite opportunities for carers, so they can participate in physical activity programmes, cooking skills classes, and so on.

Recommendation: Tackling inequities in diet and physical activity, through the broader determinants of health, should be at the heart of public health strategies to implement dietary guidelines.

2.3 The effectiveness of public health nutrition strategies and interventions

Over the last ten years there has been a growing understanding of which public health approaches are more likely to result in changes in attitudes, behaviour, risk factors and morbidity and mortality outcomes. However, for policy makers it is critical to distinguish between health impact effectiveness and cost effectiveness. There has been rather less work

done on the latter, but this section summarises what is known about both health impact effectiveness, and cost effectiveness.

2.3.1. Health impact effectiveness

The importance of adopting a population wide approach, rather than just focusing interventions and resources on groups in the population who are at particularly high risk, is addressed in the report of WP1. Briefly, Geoffrey Rose highlighted the need to consider the population as a whole when devising prevention strategies[19]. While it might seem logical to identify the individuals most likely to develop disease, and to give them special treatment, he demonstrated that such a 'high risk' approach cannot succeed alone. Rose recognised that if there is an approximately linear relationship between the exposure level and the associated risk of disease, then the optimal preventive strategy will be to seek to shift the population distribution of risk downwards ('to the left') because the greater part of the disease burden occurs among those who are around the centre of the distribution.

A recent systematic review of interventions to promote healthy eating in the general population identified the characteristics of those interventions which had the most health impact[20]. The general characteristics were that the interventions should be: focused, for example on diet only or diet plus physical activity; they should not be based on the provision of information, but on one of the theoretical models which incorporates behavioural theories and goals; several channels should be used, or there should be repeated contact over time to re-inforce change. In interventions concentrating on relatively small numbers of people there should be: personal contact, active involvement and specific behaviour change strategies; tailoring to the needs of the individual; and feedback should be provided on changes in behaviour and other risk factors. In addition interventions were effective which encouraged broader environmental change (for example encouraging institutional change and different patterns of food provision) and involved the community.

For physical activity promotion a similar review concluded that interventions which encouraged home based activities like walking, and which did not require attendance at a facility were more likely to increase and sustain overall physical activity. Frequent professional contact was stressed as important in increasing adherence[21]. Face to face contact appears to be important in increasing and maintaining physical activity levels[22]. Mass media approaches have a short term impact, but are more useful in supporting professionals working at a community level[23].

From these reviews, as well as others which have been carried out, the most effective interventions appear to: a) adopt an integrated, multidisciplinary, comprehensive approach b) involve a complementary range of actions, and c) work at individual, community, environmental and policy levels. Information provision by itself is not effective. This is summed up in Figure 1.

The two extreme approaches to developing a strategy are often called 'top-down' or 'bottom-up'. The first means that the strategy is developed and implemented often from a national or regional level, whereas the 'bottom-up' approach stems from the perceived needs of consumers and local workers. A pragmatic approach, which is in many ways intermediate between the two extremes and has been used with some success, is social marketing. This means assessing and responding to the needs of the end user, within the context of broad policy priorities.

However, it can be argued the social marketing approach can be refined by understanding more about why certain issues are important to the population. Broadly speaking this appears to be a product of the perceived significance to society (or political agenda) and audience interest (or public opinion agenda). Thus, for example issues such as genetically modified foods and environmental contamination score high on both of these, and so are very high profile issues. Dietary guidelines score fairly low on the public opinion agenda, yet

medium to high on the political agenda, and therefore they are not an issue which is likely to impact greatly on the public. Moreover, whereas food health risks are overestimated by the public, food health benefits are underestimated. It is thus suggested that to devise effective social marketing strategies it is important to understand the profile of an issue within society. This concept is particularly important in the advocacy approach described in Section 3.3.1

2.3.2. Cost Effectiveness

Ideally, a broad cost benefit analysis would examine all costs and all benefits of the policy options, whoever they accrued to. From a social welfare view, clearly the benefits must outweigh the costs. Such studies are difficult and have not been conducted. Cost effectiveness studies are narrower in scope but more practical, and attempt to answer questions about the best way of achieving a given objective.

In summary, dietary advice as a part of health promotion in primary care for the general population appears to be relatively cost ineffective. The knowledge-attitudes-behaviour model is only modestly effective among healthy people[12]. Where suitable primary care systems exist, dietary advice targeted at high-risk groups, with identified illness or elevated risk factor levels, may be cost effective[24]. Health promotion policies, including setting relevant policy objectives at governmental level, are likely to be relatively cost effective

Recommendations:

- Member countries should encourage the development, implementation and evaluation of nutrition and physical activity public health strategies which are tailored for the cultural and health needs of their populations. To be effective these strategies should be population based, and a) adopt an integrated, multidisciplinary, and comprehensive approach b) involve a complementary range of actions, and c) work at an individual, community, environmental and policy level.
- Both at EU and Member State level more research should be encouraged which will enable good quality cost benefit analyses

2.3.3 Evaluation of public health nutrition and physical activity strategies

As described in section 3.1.1, evaluation should be an intrinsic part of any public health nutrition or physical activity strategy. Member states are urged to include evaluation when developing strategies within their countries. It will also be important to monitor progress over time in Europe as a whole, and to make comparisons between member countries. At present, there is no system in place which enables this, although there are relevant discussions currently. A pan-European evaluation system is needed to assess not only morbidity and mortality and risk factors, but also relevant social and environmental variables. The study mentioned below in Section 2.4. is a useful contributor, assessing knowledge, attitudes, lifestyles and channels for communication. However, it very much reflects an approach which focuses on knowledge-attitudes- behaviour. The available information on effectiveness, which is described earlier, makes it clear that it will be important to work outside this paradigm to bring about change. In particular social, environmental and policy changes appear to underlie successful strategies.

Recommendations:

- Monitoring systems are needed to measure mortality and morbidity, attitudinal, lifestyle, social and environmental factors, consistently across the EU and member states.
- Encouragement should be given by Member States, and relevant sectors within them, to evaluate interventions and publish the results.

2.4 Determinants of food and physical activity patterns in different European Countries.

In order to obtain comparable baseline data at the EU level for health promotion in the areas of food, nutrition and physical activity, two pan European studies were designed and carried out between 1995 and 1997 [25, 26].

These surveys confirm that there are complex interactions of attitudes and beliefs that need to be addressed in different ways in different groups of people in different countries[27]. A great diversity of attitudes at the EU level was observed, with more differences between countries than within them. This supports the Working Party's approach that a single European-wide approach for health promotion is unlikely to be effective, and that it is preferable for member states to build nationally relevant strategies taking into account the attitudes, beliefs and cultural differences in each country. These national strategies should incorporate separate sub-strategies for different target groups.

2.5 Rationale for the structure used in the core of the Report: Why use target groups, settings and approaches? Which are likely to be key for the development of nationally relevant strategies?

The Ottawa Charter for Health Promotion, developed by the WHO, outlines an internationally accepted approach to health promotion which includes: building healthy public policies, creating supportive environments, developing the personal skills of the public and practitioners, re-orienting health services, and strengthening community action[28].

The earlier sections refer to the characteristics of effective interventions, but not to frameworks that can be used to develop public health strategies. Various frameworks have been used. The successful North Karelia project, for example, used four overlapping models of behavioural change as a framework. The first focused on encouraging changes by individuals, the second used popular media channels and interpersonal approaches, the third emphasised social change, and the fourth concentrated on how to bring about changes in community structures and social organisations. These were brought together to form a unified approach[29].

Another framework which is often used may appear more mechanistic, but in fact it attempts to capture the entirety of the task which is being undertaken (including social, structural, community, environmental, and individual aspects). This framework builds upon the concept of target groups, settings and approaches.

Target groups are groups of people within the population who are linked by common characteristics, for example age, gender, physiological state, ethnicity, or socio-economic group. Examples include: young people; pregnant women; school aged children; older people; ethnic groups; people living on a low income; refugees; homeless people; professional groups; and politicians

Settings are identifiable institutions in society, which contain large numbers of people in a common environment and/or which have significant influence. They have a dual role a) as a group who can be encouraged to change using individual, environmental and structural means b) as a tool to bring about changes in society outside of the immediate setting. Examples include: schools; workplaces; the commercial sector; primary health care; hospitals; communities; residential homes for older people; and nurseries.

Approaches (sometimes called channels) are ways of working in order to bring about change in target groups or settings, or for use by settings in influencing others. Examples include: mass media; written materials; skills training; counselling; partnership working; local projects; community development; and advocacy.

The Working Party has chosen to use this framework, as one that is readily transferable between the countries of the EU. It would not be practical in this document to try to cover all of the possible target groups, setting and approaches. Instead specific ones have been

chosen for their potential to reach and influence the greatest number of people in a country in the most efficient way. The Working Party has suggested outline strategies for each of the key target groups, setting and approaches that it has identified. These could be used as a basis for developing and evaluating action within individual member states, and it is hoped that they are treated in this spirit, rather than being seen as prescriptive. Each of the suggested strategies attempts to recognise the diversity of the countries within Europe, and the different weighting which will need to be given within countries to those population groups who are the most hard to reach or the most vulnerable. However, in developing nationally relevant strategies other frameworks entirely may be adopted, or it may be that other target groups, or settings or approaches are used. This is a decision that can only be made by those familiar with the national or local context.

3.0 Suggested strategies for key target groups, settings, and approaches.

As outlined at the beginning of this document, the Working Party recognises that there is a two-fold aim to the dietary guidelines. The first is the narrow one of promoting the guidelines themselves, and the second as a springboard to planning, implementing, and evaluating a public health nutrition strategy. This section concentrates on providing practical suggestions for developing public health strategies, which member countries can use and tailor for the cultural and health needs of their populations.

The Netherlands Nutrition Council has developed a decision making framework as a tool for making a choice between one intervention strategy and another. This provides a systematic way of assessing both the theoretical and practical effectiveness and risks of a strategy, the reasons for any differences between the theory and observed practice, and in the light of this the likely health benefits, and cost effectiveness of a particular strategy.

3.1 Key Target Groups

3.1.1 From the General Public to population subgroups

a) Promotion of Dietary Guidelines in the general population
It is hoped that the EU dietary guidelines will be used widely. For those countries which do not yet have national dietary guidelines, they may provide a template. For those who already have them, and revise them on a regular basis, it may be possible to take on some aspects of the European guidelines at the next revision.

The first public awareness of guidelines, new or revised, will often be the publication and launch of a simple leaflet. It may be the first in a series, with subsequent versions dedicated to particular target groups or aspects of health. Nevertheless, almost without exception the first public view of dietary guidelines is a simple all purpose leaflet.

By itself the impact of such a leaflet would be negligible. Provision of information is a poor way of encouraging changes in behaviour. Also, as the pan-European studies described in Section 2.3. show, the main source of information for Europeans is the mass media, and the most trusted source is health professionals. These channels are amongst those which will need to be explored for developing strategies for population sub groups, as described earlier. So, leaflets are not an effective communication tool, and may in fact exacerbate inequalities in health[18].

However, a simple all purpose leaflet is often recognised as a marker of political commitment and expert agreement. This is what signals it as important, as well as its potential for stimulating a more comprehensive public health nutrition policy.

This means it is worthwhile ensuring that the publication is a high quality one which meets all of its objectives. There are a number of learning points from other countries, which are listed below, and which may be helpful in preparing a simple publication for the general public:

1. Consumer based research is invaluable in informing the development of such a publication. For example in the USA the most recent revision of their guidelines was preceded by research which showed that the existing guidelines were: too 'top down' and did not begin with people's existing knowledge and understanding; did not clearly demonstrate what the benefits to consumers were; did not contain enough about how to change behaviour; and respondents also said they did not want scientific language but straightforward advice.
2. The wording of the guidelines themselves should be capable of being used independently of accompanying text. This makes them more flexible in terms of use in other resources and activities.
3. Involvement of the various sectors who will be promoting the guidelines, including practitioners and the commercial sector, is an important part of gaining commitment and support.

Recommendation: A simple all purpose leaflet may be developed adapting the guidelines to national or regional needs, as a sign of political and expert commitment, and a springboard to developing more comprehensive public health nutrition and physical activity policies. It should be based on consumer research; consideration needs to be given to how the wording might be used in the future, for example in other resources and activities; and the various sectors who are key to promoting the guidelines should be involved in its development.

b) Development of Public Health Nutrition and Physical Activity Strategies for target groups

In reality, a public health nutrition strategy for the general public will need to be broken down into specific strategies for population sub groups. Some of these subgroups are listed in 2.5, and there may be others in individual countries.

Priorities will vary according to health needs, and the potential health impact of focusing on particular sub groups. Some target groups are not easily reached by working through settings, and may need the development of specific strategies e.g. adolescents, young adults, the elderly, minority ethnic groups, the unemployed and those on low incomes[30].

The main steps in developing a public health strategy for population sub groups are outlined below, and these are derived from the approaches used in such projects as North Karelia project[29] and in the Australian Coalfields project[31]:

Planning

1. Define objectives
2. Assess needs of population sub group (structural, social, and other determinants of behaviour and barriers to change)
3. Identify appropriate theoretical models to base strategy on. A brief summary of these is given as an appendix in Roe et al [20]
4. Allocate Resources
5. Choose indicators
6. Establish partnerships
7. Project planning

Implementation

1. Training and Networking
2. Systematic implementation of an integrated, multisectoral, and comprehensive strategy which is relevant from individual to national level
3. Monitoring and feedback, with sufficient flexibility to adapt project plans

Evaluation

1. Formative evaluation (in particular, was the intervention based on current and good quality science?)
2. Attainment of objectives
3. Effects e.g. behaviour, risk factors, morbidity/mortality, structural or policy changes. Unless an experimental design is used it will be difficult to ascribe effects to a particular public health strategy, and generally speaking experimental designs are not appropriate for the implementation of a nation public health strategy. This means that only longitudinal changes can be assessed, along with any other contextual factors, which might have an effect.
4. Costs
5. Process
6. Other consequences
7. Feasibility for other sub groups, regions, or countries.

In developing strategies for population sub groups, it will be important to consider which settings and which approaches are the most relevant. Some of these are described in more detail later in this document. In the health promotion literature, there is also a wealth of information about the benefits and disadvantages of all of them, and some information about their possible effectiveness. The use of the mass media is not described in detail later, but it is clear from earlier sections that it is an important source of information for many people in the European Union, although it does not have particularly high credibility. Briefly, a systematic review of mass media interventions shows that it can be effective, at least in the short term[32]. It is most useful as a way of introducing people to new ideas; to support and reinforce those new ideas; as a supplement to broader based public health initiatives, and to promote existing programmes[33].

Recommendation: Nutrition and physical activity strategies should be developed for specific population groups, particularly those which are vulnerable or hard to reach. A structured approach to the development of these strategies should be adopted.

3.1.2 Professionals, other than those employed by the health service and education sectors

Professionals who work outside the immediate health care or educational environment have an important role to play in the development of public health strategies to implement the dietary guidelines. These include, for example, food inspectors, community pharmacists and physiotherapists, care workers, dieticians who work outside of the health service, and many others. In this document these groups have been categorised under 'target groups', since the first step is often to focus on a particular group in terms of basic and continuing education. It is equally important though to raise awareness of relevant issues with institutions and people who have strong influence on the day to day work of these professionals.
Public Health Nutrition has recently developed as a new speciality, which can be incorporated into both basic, postgraduate and continuing training, with individuals who meet certain criteria becoming eligible for registration as Public Health Nutritionists. This provides an opportunity for professional recognition amongst those who are not primarily trained in nutrition or dietetics. Qualified public health nutritionists could also be used as trainers.

Below the specific example of the potential role of community pharmacists is considered in some detail.

Community pharmacists, an example

In many countries there is an interest in broadening the role of community pharmacists to include more health education and disease prevention activities, such as patient counselling for risk management and interventions to improve compliance. A survey carried out recently in Quebec showed that few pharmacists practice prevention routinely. Those working in

small pharmacies, owning the pharmacy or with high job satisfaction were more likely to be involved in prevention activities[34]. Over 90% of respondents considered it relevant to integrate prevention activities into their practice. However, lack of time and lack of skills were the most important percieved barriers to doing this[34, 35].

In Spain a large proportion of pharmacists who participated in a recent survey claimed to have some role in prevention, particularly by providing advice to clients and patients regularly visiting the pharmacy for chronic treatment[36]. Pharmacists have also been involved in nutrition education interventions in community settings, particularly in rural isolated areas[37]. In Spain, the General Council of Pharmacists of Spain supported a nutrition education program delivered by pharmacists in different community settings. Several thousands of Spanish adults who for any reason visited a pharmacy received nutrition messages and many of them attended meetings for further advice, especially in rural areas[38].

It seems that pharmacists can play an influential role in preventing disease, and that ways to encourage this role to develop are:-

1. Continuing education, reinforcing communication skills and training in community or public health nutrition.
2. More involvement with initiatives which arise through the health care setting e.g. collaborating in primary health care or community intervention programmes.

Recommendations:

- For professionals who work outside the immediate health care or educational setting, ensure that there is access to appropriate continuing education and opportunities for active involvement with initiatives which arise through the health care or education settings.

- Establish public health nutrition training networks and structures at both EU and member state level.

3.2 Key Settings

3.2.1 Schools

The school setting provides a valuable opportunity to influence health through policy measures, education, and food provision. Schools provide the most effective and efficient way to reach a large proportion of the population, including young people, school staff, families and community members. Young people in particular, can be reached at an influential stage in their lives and over a long period of time. For example attitudes towards issues such as breastfeeding are often developed in adolescence, and the attitudes of both girls and boys can have a significant impact later on whether breastfeeding is started and then maintained.

The most comprehensive review of nutrition education research published to date[39] concluded that the following elements are critical with respect to effectiveness of nutrition education for school children:

1. Nutrition education interventions are more likely to be effective when they employ educational strategies that are directly relevant to a particular behaviour (e.g. diet or physical activity) and are derived from appropriate theory and research;
2. Interventions need adequate time and intensity to be effective;
3. Family involvement enhances the effectiveness of programmes for younger children;
4. Incorporation of a self-evaluation or self-assessment and feedback is effective in interventions for older children;
5. Effective nutrition education includes consideration of the school environment;
6. Interventions in the larger community can enhance school nutrition education.

Although, on the whole, young people are more active than adults, many have a sedentary life-style. There is a particularly sharp decline during the teenage years. The Centre for Disease Control[40] recently reviewed evidence for the promotion of physical activity among children and adolescents, and produced guidelines to promote lifelong physical activity. Their conclusions broadly supported previous ones[39], and reinforced the need for physical activity among students to be part of a coordinated, comprehensive school health programme. In particular, programmes should involve families, and be supported by the local community. A multidisciplinary approach is important, including health education, health services, social welfare, and other school support services.

Much of this thinking has been incorporated into what is becoming known as the 'whole school' approach, which is the basis for the WHO health promoting schools initiative. This is an integrated approach to promoting health, including teaching, facilities, service provision, culture and attitudes, and draws upon the views and needs of the children themselves.

There are a wide range of approaches to health education and to nutrition education in the different EU Member states. In some countries, to a certain extent, nutrition education is part of the School Curriculum. However, a survey carried out in all 15 EU member states, Iceland, Norway and Switzerland, during the testing process of a Nutrition Education Guide for Health Promoting Schools[41] found no official policies or overall national policies. Even in those countries where it is included in the school curriculum, it is not considered as subject in itself. There are also a variety of professionals (teachers, educators, nutritionists, school health people, public health workers, physicians and so on) with a responsibility for delivering nutrition education programmes. Although teachers are involved in nutrition education projects very often, teacher training in nutrition is often absent or poor.

Nutrition education programmes are implemented to varying extents in primary and secondary schools across European countries, often without continuity. The same diversity applies to school meals. Whilst in some countries every school provides a warm meal for the students, in other countries there are no school meals. In a few countries there are some regulations regarding the quality of the menu offered for school meals, in terms of nutrient content or consistency with national dietary guidelines. In most places existing regulations refer only to hygienic aspects of food quality. Overall there is a wide variation between and within countries, and between age groups in how food is made available e.g canteens, tuck shops, vending machines, and so on.

Recommendations:

1. At a national level: Implement a curriculum for nutrition and physical activity education from pre-school to secondary schools
2. At a national/local level: Integration of school meals in the educational process
3. At a national/local level: Training for teachers and others involved in nutrition education and physical activity promotion
4. At a national/local level: Involve School Health Services in the planning and implementation of programmes to promote healthy eating and physical activity
5. At a local level. Create a friendly school environment which contributes to making the healthy food choice available and easy, and enables physical activity.
6. At a local level: Encourage family and community involvement in school nutrition education and physical activity programmes

3.2.2 Health Care

The pan European survey[26] mentioned in Section 2.4 examined sources of nutrition information for consumers, and the trust which consumers place in these different sources. It is clear that although the main source of information is the mass media, the most trusted source of information is the health professional. In many countries a significant proportion of

the population are registered with a doctor. This means that health professionals and the health care setting are in a unique position to promote healthy nutrition and physical activity. This need not be confined to patients. In many cases doctors are in a position to influence the wider community, and medical professional organisations often form very powerful lobbies at a national level.

In 1997 Ebrahim et al reported a systematic review of randomised controlled trials of multiple risk factor interventions in primary health care and workplace settings[24]. From this review it seemed that standard interventions resulted in only small changes in risk factors and mortality in the general population. In higher risk populations the use of personal or family counselling and education (with or without pharmacological treatment) were somewhat more effective. The authors concluded that health protection by fiscal and legislative means deserves a higher priority.

However, this was a review of multiple risk intervention trials. In 1997 Brunner et al[11] specifically assessed the effectiveness of dietary advice in the primary prevention of chronic disease. The subjects were well motivated and most studies were either in a health care or institutional setting. Dietary advice to reduce fat or sodium and increase fibre was included. The authors concluded that primary prevention dietary interventions could achieve modest improvements in diet and cardiovascular disease risk. They reported a 3.7% proportional reduction in serum cholesterol, and a 1.4% proportional reduction in diastolic blood pressure. When these figures were applied to previous theoretical predictions, it was calculated that dietary intervention could realistically reduce CHD by 14% and stroke by 9%.

A similar meta analysis was reported by Yu-Poth[42]. The purpose was to evaluate the effects of the two stages of dietary intervention recommended by the National Cholesterol Education Programme in the USA. A 10% reduction in plasma total cholesterol was reported with the low intensity intervention, and a 13 per cent reduction with the high intensity intervention. Tang et al [43] focused specifically on randomised controlled trials where the intervention was individualised dietary advice to modify fat intake. 19 trials met the inclusion criteria. Reduction in blood total cholesterol attributable to dietary advice was 8.5 per cent at 3 months and 5.5% at 12 months.

In 1997 the systematic review of health promotion interventions, which has been mentioned earlier[20], included interventions in the primary health care setting. The authors identified 4 good quality studies in this setting, which had been carried out in the previous 10 years. Although there were relatively few studies, the results were remarkably consistent, showing modest and sustained effects on both blood cholesterol and dietary fat intake. This was true whether the intervention focused on diet alone, or was a multifactorial intervention. Those interventions which were most effective had the following characteristics: they were intensive and often targeted those with increased risk factors; they were tailored to the personal characteristics of individuals, for example readiness to change and current eating patters; and they were client centred and used educational and behavioural frameworks, with the 'Stages of Change' model being particularly useful.

The difficulty with these types of high intensity interventions is that they are costly. Encouragingly the review also reported that low intensity interventions, such as mailed computer generated personalised nutrition education material could be effective in well-motivated groups.

Recently a review was carried out of exercise referral schemes, which commonly involve patients with one or two moderate CHD risk factors[44]. This consisted of a systematic review of 254 papers in the peer-reviewed literature, and three in depth case studies. The literature review concluded that these sorts of schemes resulted in small but meaningful improvements in physical activity patterns. The case studies suggested that the effects are wider ranging, and influence more people than is apparent in the experimental literature. For example, some of the benefits are psychological and social, and the schemes do not only have an

impact on patients, but also affect primary care staff, leisure centre staff, communities, friends and colleagues.

A Finnish Working Group recently made recommendations to improve the way in which physical activity is promoted to help treat and rehabilitate those with raised risk factors or existing disease, and encourage increased physical activity in the wider community[45]. These include:-

1. Primary health care (PHC) organisations responsible for local or regional services should develop guidelines for exercise counselling. These should be based on up-to-date evidence, and will be more cost effective if they involve collaboration with other health and fitness services. The implementation of these guidelines should be monitored and their relevance should be checked periodically.
2. Health care staff should always consider the role that physical activity might have in answering the needs of clients. It is likely to be particularly important with clients who are sedentary and have increased risk of preventable diseases. The importance of physical activity should be assessed and a physical activity plan based on the needs and readiness to change of the individual should be compiled. Follow up and re-assessment should be an integral part of the process.
3. Service suppliers should work out product specifications for their health related physical activity services to enable assessment by health care staff.
4. PHC organisations (or units) responsible for local or regional services should develop a strategic approach to promoting physical activity in the community, including agreeing responsibilities of different organisations and services, and monitoring the impact of the strategy. For monitoring purposes it is important that standard approaches to assessing and recording physical activity should be adopted.
5. This will need to be supported by continuing education for relevant staff
6. Health care personnel themselves should be encouraged to increase their physical activity levels, as a part of work-site health promotion.
7. In local planning and decision making care providers / health care units should advocate services and environments conducive to increased physical activity.

The promotion of healthy weights in a population is complex, and the evidence indicates that an integrated approach is essential. As part of that integrated approach, the health care setting has a role to play, not only in promoting healthy nutrition and physical activity, but also in treating those who are already overweight or obese. The National Institutes of Health in the USA[46] systematically reviewed the literature on the identification, evaluation and treatment of overweight and obesity in adults. They concluded that there is strong and consistent evidence that patients in well designed programmes can achieve a weight loss of as much as 10% of baseline weight; that physical activity alone results in modest weight loss, and cardio respiratory fitness is increased, independent of weight loss; there is strong evidence that the combination of dietary change and increased physical activity produces greater weight loss than diet alone or physical activity alone; there are strong indications that behavioural strategies to reinforce changes in diet and physical activity in obese adults produce weight loss in the range of 10% over 4 months to 1 year; weight which is lost is usually regained unless a weight maintenance programme consisting of dietary therapy, physical activity, and behaviour therapy is continued indefinitely.

There are wide variations in rates of breastfeeding initiation and continuation in the member states of the European Union. Hospital practices and the support of community health services are important influences in this. In 1997 two systematic reviews of the literature were published which included interventions to promote breastfeeding, and opportunities and barriers to good nutritional health in infants[47,48]. Initiation and duration of breastfeeding are associated with the physical hospital environment and routines e.g. feeding at set times, separation of mother and baby, use of infant formula, but also importantly by the attitudes and expectations of the health professionals who are involved.

One major barrier to health professionals playing a positive role in promoting nutrition is their own lack of basic training, both in the topic and in the skills necessary to bring about change. In the UK there are attempts to tackle this, as well as encouraging the provision of post-basic and continuing education. These have resulted in the publication of reports such as 'Nutrition for Medical students'[49] and 'Nutrition: Core Curriculum For Nutrition In The Education Of Health Professionals'[50]. The steps necessary to address the training issue will differ with each member state, but the establishment of a European Health Professionals' Forum to enable co-operation and communication, could help in stimulating change at a national level. It may also contribute to health professionals moving from focusing on the treatment of the better off, to developing and supporting broader approaches, which can bring benefits to all strata of society.

Recommendations:

1. Better training for health professionals in the skills and knowledge to develop and implement locally relevant interventions
2. Support at a national and professional level for health professionals to participate in broader community programmes which tackle the underlying determinants of health
3. Establishment of a European health professionals' forum to enable communication and co-ordination, and stimulation of the preceding two recommendations.
4. Primary health care services can help treat and rehabilitate those with raised risk factors or pre-existing disease by: developing guidelines for exercise counselling; raising awareness of health care staff about the usefulness of physical activity for these clients; developing product specifications for health related physical activity services.
5. Primary health care services can encourage physical activity in the wider community by: developing a strategic approach in partnership with other local or regional services; providing continuing education for relevant staff; encouraging healthcare personnel themselves to increase their physical activity levels; advocating services and environments conducive to increased physical activity.

3.2.3 Workplace

The Health Education Authority in the UK recently carried out a review of workplace health promotion, and much of this section is based on that review[51].

The workplace has enormous potential as a setting for improving the health of the adult population because of: ease of access to a large number of people; a relatively stable population; a working community which can offer benefits such as positive peer support; and established channels of communication which can be used to publicise programmes, encourage participation and provide feedback.

The workplace is therefore seen as a medium through which the working population's health status can be improved both directly, through supporting and allowing the individual to take action on their health, and indirectly through the development of an overall health culture. It also has an important role to play in enabling breastfeeding women to return to work. The data is not particularly good, but some studies indicate that if women return to work, they are nearly half as likely to be breastfeeding at 4 months, as women who are not working[52]. The converse of this is that women who do not have supportive workplaces are less likely to return. Employers thus benefit from creating a supportive environment by having higher rates of return from maternity leave, and lower absenteeism (breastfed babies are less likely to suffer illnesses that those who are formula fed). The type of support provided could include explicit policies supporting the breastfeeding woman, provision of childcare facilities, and the cultivation of a sensitive and supportive attitude amongst other staff.

In 1998 the Health Education Authority's review of the effectiveness of health promotion interventions in the workplace[51] identified general principles for effective workplace health promotion which included.

1. Visible and enthusiastic support and involvement with the intervention from top management
2. Involvement by employees at all organisational levels in the planning and implementation of the intervention
3. A focus on definable and modifiable risk factors which are a priority for the workers.
4. Interventions should be tailor-made for the characteristics and needs of the employees
5. Use of local resources in organising and implementing the intervention
6. Evaluation should be included.
7. Organisations should employ both population-based policy initiatives and intensive individual and group-oriented health promotion interventions.
8. The intervention should be sustained and based on principles of empowerment and/or a community-oriented model using multiple methods.

Examples of some successful nutrition and physical activity activities in the workplace include:
a) healthier eating has been encouraged by targeted provision of information such as point-of-purchase labelling of healthy food choices in workplace cafeterias, and computer-generated personalised nutrition advice; b) prompts at decisional points e.g. posters at stair/escalator intersections have doubled stair usage[53]. Workplace schemes to increase cycling and walking to work, and the provision of shower facilities, safe bike storage etc, have also reported some success.

Recommendation:
Employers should be encouraged and supported in developing interventions which include: management support; employee involvement; a focus on specific risk factors; tailoring to suit the needs of the work force; making best use of local resources; and which employ both population based, and individual initiatives.

3.2.4 Commercial Sector

This section concentrates on the critical role that the commercial sector has in shaping and responding to the food consumption patterns of the EU population. The sector is taken to include food manufacturers, retailers, and many caterers. It should be mentioned though that the commercial sector is also an important partner in promoting physical activity, for example: by sponsorship of initiatives to encourage the types of physical activity which can easily be undertaken by most sections of the community; by supporting research; and by working with those responsible for local infrastructures to provide an environment and facilities which encourage and enable people to be physically active.

The data on the effectiveness of nutrition interventions in the commercial setting is not of such a high quality as that for many others. Although the commercial sector routinely collects data to inform its decision-making, this is not in the public domain. The studies that are in the public domain are often not of particularly good quality, and in the most relevant systematic review[20] the inclusion criteria had to be relaxed for this setting. The main conclusions of the review were that interventions in supermarkets, for example point of choice signs, advertising, supermarket tours, and educational videos could be effective, although there was very little evidence about the sustainability of any effect. The results were similar for changes to catering provision, although passive manipulation of the nutrient content of menus appeared to be promising.

The following are suggestions for action which could be taken by the commercial sector to support public health nutrition strategies.

1. **Pricing**. Pricing structures should not discriminate against healthy food choices; price incentives should apply to healthier food choices. This is of particular importance in the

context of health equity. Pricing strategies for a particular category of foodstuffs may have unintended consequences on foods in other categories, for example if people buy substitutes, and this should be taken into account.

2. **Formulation.** Food product formulations could be modified in many cases to reduce levels of nutrients such as salt and saturated fatty acids.
3. **Health claims** for such foods may be appropriate in limited categories, with mechanisms to ensure that guidelines/legislation for such claims should reflect current nutritional knowledge and are readily useable by the consumer.
4. Healthy eating **point of purchase schemes** provided by some retailers are a very welcome development, but these should be run using common standards, to maximise their usefulness to consumers.
5. **Availability.** Positive promotion of foods that have a beneficial effect on the balance of foods in the diet is essential. This will help increased consumption of these foods becoming 'normal' rather than exceptional.
6. **Sustainability.** Food produced, processed and transported using energy intensive inputs and methods militates against a sustainable public health strategy. Much of the industry is responding to increased consumer awareness and environmental concerns, but much still remains to be done.
7. **Labelling.** Effective compositional and nutritional labelling is an essential and valuable part of a population based food and health strategy. There is an urgent need to get agreement with the food industry on what is 'essential' and what is 'complementary' information on food labels. Many consumers find labels difficult to read and interpret. There have been some very positive industry initiatives in Europe, for example the introduction of Guideline Daily Amounts for energy and fat on food packaging, developed by the Institute of Grocery Distribution in the UK. In other countries collaborative working between the health and industry sectors has resulted in initiatives such as the Green Keyhole scheme in Sweden. In Belgium, the food industry, together with the distribution industry, the government and consumer organisations, developed a programme to help consumers understand food labelling better.
8. **Nutrition information**. Manufacturers and retailers have an important role to play in public education. In-store information can complement food product labelling by providing e.g. folders, brochures and touch-screen information kiosks.
9. **Innovation.** For example, bar-code scanners have the potential to provide print-outs with tailor-made information according to the specific nutritional needs of each customer.
10. **Advertising**. Much advertising currently promotes high value added products such as confectionery, snacks and sweetened drinks. There is particular concern about advertising that targets children. School education could help teach children how to evaluate media messages about food, diet and health, and to take control of their food intake for themselves.
11. **Partnership working with the health sector.** There are numerous examples of successful partnerships between industry and the health sector. For example, supermarket tours, recipe demonstrations, joint promotions.

Recommendation: The commercial sector is in a key position to contribute towards an environment that encourages and supports changes towards more healthy eating patterns, for example through pricing structures, product formulation, labelling initiatives, and partnership working with the health sector. It is urged to explore ways in which it can do this.

3.3 Key Approaches

3.3.1 Advocacy

It is important to begin by explaining this concept, since it is well understood and used in some European countries, and not others. Advocacy literally means acting as a 'go-between' or pleading on behalf of someone or some group, often with powerful individuals or organisations. In the case of public health it is used to mean that health and other bodies can seek to gain the understanding and support of, for example the media, politicians, trade

unions, and other key organisations and individuals. By enlisting their support it is possible to raise an issue on the political and media agenda, and bring about structural and social changes.

Successful advocacy depends on a sophisticated understanding of those you seek to influence, and what affects their agenda. For example issues tend to get on to the media agenda because of 'trigger events' (crises, disasters, 'food scares'), or 'trigger personalities' (film stars, maverick scientists, politicians). There is also a complex interrelationship between for example, the media, politics, and public opinion. On some issues politics will lead the media agenda, sometimes resulting in a particular public opinion emerging. On others public opinion and the media seem to keep urging each other forward, as in the case of genetic modification, with eventual impact on the political agenda. Choosing when to put forward a particular case, and with which combination of interests, and with which trigger factors, is a crucial decision in advocacy. To some extent success also depends on luck, since random events can sometimes thwart the best laid plans.

As well as a sophisticated understanding of powerful interests, dedicated and adequate resources (money and people) are essential. It is also important that the funding is from independent sources, and that there is a good, publicly funded, research base on which to draw. In trying to influence opinion on health issues, there are often powerful and well organised interests who oppose the health stance. In many cases, particularly in the types of issues covered by the dietary guidelines, the health proponents are badly organised, have few resources, and those they are trying to influence can perceive very few benefits in supporting them.

With an understanding of the processes, and adequate resources, advocacy can be used successfully at local, national, and international level, to change important influences on health, which could not be approached in any other way. For example, educational curricula, availability of shopping and leisure facilities, catering provision in public sector institutions, availability and cost of public transport, cycle lanes, food marketing and labelling, health claims, local and national government responsibilities for food and health, employer responsibilities for their employees.

There are many types of advocacy, from local health centres to large and well resourced international organisations. Examples of successful advocacy, from a variety of sources, which have supported healthful eating and physical activity patterns include:-

1. In Delft, Munster, and Basel significant increases in cycling rates were achieved by, for example, using traffic restraints, cycle networks, traffic calming, and influencing public transport and land use planning.
2. The WHO/UNICEF Baby Friendly initiative has proved a focus for advocacy work in many countries, resulting in an increasing number of 'Baby Friendly' hospitals, and the extension of the scheme into the community.
3. In the UK health interests have played an important role in the development of Government initiatives such as proposed legislation on an integrated transport system, a national cycling strategy, and national walking strategy
4. In the UK health interests have been concerned for many years about an Agriculture department which combined protecting both the interests of consumers and producers. As a result of advocacy for an independent agency over a number of years (helped by the BSE crisis), a new Food Standards Agency is currently being set up, with a consumer protection focus.
5. As mentioned previously, there is particular concern about advertising which targets children. Many organisations have used advocacy approaches to raise this on the political agenda.

Recommendation:
Advocacy is a useful approach to bring about structural and social changes, and to raise issues on the political and media agenda. If it is adopted as part of a public health strategy, it

is important to have a good understanding of the processes which are involved, and ensure dedicated and adequate resources.

3.3.2 Local/Community Food projects

There is an enormous range of types of local food projects. Broadly speaking they are projects which either operate in a given community, or which have arisen from a local group within a community[54]. Although there are an almost infinite variety of projects, they can be grouped into three main categories. The first are projects which have a very specific health focus, and are often part of a larger health related initiative. The second, and probably the largest group, are those projects which attempt to address the needs of low income groups. They sometimes identify themselves as projects concerned with poverty, or with sustainable communities. The third, and a group which is growing, are projects which arise from food related environmental concerns, including the way food is grown, distributed and sold. These are often referred to as projects concerned with a sustainable environment. These categories are very crude, and many projects have objectives which fall into all three categories. There is a very obvious link, for example, between sustainable communities and a sustainable environment.

a) Projects with a Health focus
The North Karelia project[29] enabled local organisations and communities to undertake activities which they had identified as important to the health of the community, within the wider context of the intervention. For example the housewives' organisation (MARTTA) identified health needs, and then jointly planned activities with the N.Karelia team, and received practical support from them. Evaluation was carried out jointly. The types of activity included 'Happy Hearts' evenings, and a weight reduction campaign.

Another project which arose from the local community within N.Karelia, was the 'Berry' project. It was proposed that growing berries might not only contribute to health, but also provide an alternative source of income for dairy farmers. The project was carried out collaboratively, involving 5 years of innovative activities to successfully promote consumption of local berries[55]. The World Health Organisation has also provided a context for local community activity, for example through the 'Healthy Cities' initiative.

The projects described above were given a context in which to develop activities to address the needs of their local communities. They were then supported in undertaking these activities. Too often this is not the case. One section in a report on social exclusion in the UK, pinpoints the importance of flexible and supportive infrastructures very well. " Local people and organisations can easily identify the problems they face and propose solutions. Very often, these solutions cannot be implemented because of the inflexibility of centrally devised programmes and policies. The main obstacles to effective co-ordination at a local level are narrowly defined value for money and other performance indicators; rigid administration so that local actors are not empowered to move budgets between sub programmes or areas; inflexibility in the face of changing needs"[56].

b) Projects with a Poverty focus
In response to the increasing awareness of inequalities in health, described in Section 2.2, there has been a rise in local food projects concerned with poverty. The most common setting for these are schools, community or health centres. They are often linked to local health or government structures, and increasingly are part of a wider local health or anti-poverty strategy.

Some of these projects include specific elements to encourage a healthier balance of foods in people's diet, or increased levels of physical activity. Others may be concerned with the lack of local retail outlets which would enable people to buy fresh and wholesome food. Some give people more confidence in food buying and preparation skills. However, many of them aim to tackle underlying problems, including increasing skills which can lead to greater

employability, reducing social isolation by creating networks, increasing people's understanding of their situation (thereby enabling them to challenge it), and increasing self esteem.

There has been very little evaluation of community projects, although nationally more and more support is being given to enabling local projects to measure their effectiveness. However, it can be argued that outcome measures should include more than those associated with diet or physical activity, and that in fact it is more important to assess the impact on social capital.

c) Projects with an Environmental focus

Over the past decade there has been increasing concern about the sustainability of current food production and distribution practices. In Sweden, for example, it is estimated that one fifth of energy consumption goes towards transporting and producing food[57]. The same report suggests ways in which energy usage can be reduced at various stages in the chain, including the role of locally produced food.

Local food projects with an environmental focus recognise this, and use various strategies to support local food production and distribution. Farmers' markets are becoming more common again in many European countries, and offer a venue for local producers to sell produce directly to consumers. Not only does this approach offer environmental benefits, it can also help regenerating local economies, and ensuring that consumers know more about the provenance of the food they eat. These projects may include community cafes and food co-operatives (which are also commonly found in projects with more of a poverty focus as well), and so offer direct opportunities for the implementation of dietary guidelines. Local production often centres on growing fruits and vegetables (as with the N.Karelia Berry project), and again this presents opportunities for partnership working which have not been taken in many countries.

In the UK the Local Food Links Project aims to develop local organic and affordable food production and consumption by promoting links between producers and consumer, and establishing a national network of local food initiatives which are both socially and environmentally sustainable. At a European level the European Network of Experiences in Sustainable Development works to strengthen rural areas, by supporting initiatives and facilitating exchange among different European rural areas[58].

d) What makes a local project successful?

Recently a piece of research was carried out to identify what local project workers thought was important in terms of enabling a project to work, and what hindered its development[59]. Sustain (a UK alliance of 100 national public interest organisations) has also published a toolkit for local food projects which suggests keys to success[60]. The main points that were made in these two publications are summarised below:

1. **Reconciling Agendas**. National and local polices need to be flexible so that agencies can be responsive to the needs of particular communities.
2. **Funding**. Access to secure and ongoing funds to both set up and run the project.
3. **Role of Professionals**. At present many professionals work within narrowly defined structures, with tight time allocations. To work in true partnership with a community, professionals need time, resources, authority, and flexibility.
4. **Involving communities**. Projects need to genuinely involve local people, and accord them equal respect.
5. **Measuring success**. Evaluation should not be confined to narrow clinical and behavioural measures, but include e.g. food purchasing patterns, structural changes, and social outcomes.
6. **Local Structures and Partnerships**. Striking a productive balance between partnerships and local ownership.
7. **Networks**. Local and national networks to enable sharing of experiences.

8. **Training**. For both professionals and members of the community, so that they can acquire new skills for a new way of working.
9. **Volunteers**. Government policies which do not deter volunteers (e.g. social welfare benefits)
10. **Incentives for local projects and small businesses**. For example tax relief.
11. **Community buildings as a resource**. Making space available for community projects

Recommendation: Local food projects are often an expression of the direct needs of the community, and should be encouraged. For them to succeed it is important to have national and local policies which are flexible enough to accommodate and support them: availability to secure long term funds; relevant professionals need sufficient time, resources, flexibility and authority to work in genuine partnership with local people; there needs to be access to local and national networks, and to sources of training for both professionals and members of the community.

4.0 Integrating public health nutrition and physical activity strategies at Member State level

The previous sections of this paper have given the scientific evidence base for the investment of resources in the most cost effective manner for the primary prevention of diet and physical activity related diseases. A framework has been suggested, building upon the concept of target groups, setting and approaches to design and implement public health strategies. Recommendations for action have been given, where these arise directly from the evidence base.

However, it is clear looking at these recommendations, that there is a danger of fragmentation. The World Health Organisation is currently developing a Food and Nutrition Action Plan for Europe, in which it recognises this issue, and suggests that each Member State should establish or strengthen intersectoral Food And Nutrition Councils, or install mechanisms to secure better co-ordination between different ministries. The report goes on to suggest the components for this integrated approach.

Whether this course of action is pursued is obviously a political decision, and the remit of the WP is to provide the evidence base for policy development. However, the scientific basis does point strongly to a co-ordinated, multisectoral and population wide strategy as being the most effective.

Recommendation: Member States to give careful consideration to establishing or strengthening intersectoral food and nutrition councils, or installing mechanisms to secure better co-ordination between different ministries.

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Figure 1