Delivering a cardiovascular disease prevention programme in the United Kingdom: translating theory into practice

In response to, and support of the Editorial by Pecka Puska in the August 2007 edition of the Journal (Health in all Policies. European Journal of Public Health 2007;17(4):328), this article describes the Heart of Mersey (HoM) cardiovascular disease (CVD) prevention programme, which aims to improve the health of the local population by tackling inequalities via structural changes at regional, national and European level. Principally, the programme advocates that health improvement will be achieved primarily through healthy public policy, effective partnership and community integration.

Heart of Mersey: the programme

The HoM CVD Prevention Programme was launched in 2003 as a result of a visit to Finland in January 2001 to see how levels of heart disease have been dramatically reduced in North Karelia. The HoM programme focuses upon smoking and food, reflecting the evidence base of the main risk factors for CVD (i.e. raised blood cholesterol, high blood pressure and cigarette smoking), and more specifically the big gains that can be achieved in reducing the three main risk factors for CVD by structural policy changes at regional, national or European levels. Although the programme is focussed upon reducing CVD prevalence, it also recognises the impact that poor nutrition and smoking can have on the wider public health agenda, for example, on non-communicable diseases such as Type 2 diabetes and some types of cancer, reducing obesity and health inequalities. The two core programmes, food and tobacco control, are supported by two further programme areas, research and corporate communications. Both the food and tobacco-free programmes take a campaigning on public health approach, working through advocacy, public affairs, capacity building and partnership to support policy and initiatives for healthier diets and tobacco control. As an intervention programme, HoM works in partnership with local authorities, primary care trusts and health partnerships to support and enhance their CVD prevention initiatives.

HoM is striving to improve the health and lifestyles of Greater Merseyside residents and reduce health inequalities through:

- Reducing dietary saturated fat intake and levels of serum total cholesterol.
- Increasing fruit and vegetable consumption to five portions a day.
- Reducing salt and sugar intake.
- Supporting a smoke free Greater Merseyside.
- Supporting the development of a physically active environment.

The epidemiological framework and evaluation concepts

Baseline data is essential for CVD population-based intervention programmes and have been obtained for all major programmes. HoM commissioned the ‘Health Survey for Greater Merseyside’ in 2003 to provide a measure of the health experience of the population, in terms of CVD mortality and morbidity. The survey confirmed that CVD in Merseyside people aged 65 plus is one-third higher than the rest of the UK. It also exposed the stark inequalities in health that have contributed to the high levels of CVD in the region. The survey added to our earlier lifestyle surveys by including not only information on risk factors such as nutrition, smoking and physical activity, but also biomedical measures such as blood cholesterol levels. This provided baseline data of the current health status of the population: the core epidemiological profile. The Health Survey for Greater Merseyside will be repeated to assess changes in the local prevalence of CVD mortality and morbidity. HoM endeavours to monitor and evaluate its work programme and specific interventions, and uses both quantitative and qualitative research methods (for example, focus groups to identify lay perceptions of eating and food; baseline and post-intervention questionnaires for a hospital food project; surveys with school children regarding vending machines). This is currently summarised and reported in an annual publication of programme activity, which describes specific developments, partnership working and outcomes achieved.

Comparison with the North Karelia project

The programme draws upon the principles of the successful CVD intervention programme in North Karelia, together with the paradigm described by McKinlay. The North Karelia project focused much of its work with the community (as opposed to individuals), and utilised four key theoretical frameworks for behaviour change; namely, the behaviour change approach, the community-behaviour change approach, the innovation-diffusion approach and community organisation/social policy. HoM adopts the first three theoretical approaches at the local and regional level together with their local and regional partners. However, the main focus is upon population-based approach and social policy activity at both national and European level.

Whilst acknowledging and drawing upon the principles of the North Karelia approach, HoM has been very aware of the need to adapt its approach in the context of an urbanised, diverse population, living in an environment undergoing major regeneration in the 21st century—Greater Merseyside has a population of 1.8 million, approximately eight times the size of the North Karelian population of 180 000. There are major differences in the demographics of the population, with Greater Merseyside being urban and industrialised, whereas North Karelia was rural and relied upon agriculture and forestry. In addition, the media environment is very different and any communication strategies must be accordingly more sophisticated and inevitably more complex.

The North Karelia project focussed much of its work within the community and galvanised the support and collaboration of organisations such as Martta, a national housewives’ group. HoM has been aware from its early days that this approach would be difficult to replicate in Merseyside, or even the UK, without a substantial budget. Rather than trying to engage the population directly, therefore, HoM has concentrated on influencing and engaging the policy makers. Establishing a strong identity has been a key part of this approach.
At the European level HoM maintains an ongoing relationship with the European Union, Finland’s National Public Health Institute, KTL, and is a member of Countrywide Integrated Noncommunicable Diseases Intervention (CINDI)—a World Health Organization (WHO) European Region network. For example, we were part of a World Health Organisation team who visited Estonia to review the Baltic State’s CVD prevention programme; we are currently co-ordinating a European Commission funded ‘Healthy Sports Stadia Programme’ with partners in North, South, East and Western Europe.

**General discussion and conclusions**

By focussing on the entire population, HoM does not explicitly limit its activity to those individuals who are at risk. Being guided by an assessment of health status (i.e. risk factors, problems, protective factors) within the whole population has enabled the organisation to establish priorities, plans and interventions. By ongoing evaluation and monitoring, interventions can be adapted and changed accordingly. These issues are focussed upon together with the broader determinants of health, such as public policy, income and social status and nutrition. The programme considers the entire range of factors that promote or prevent population health rather than just personal health risks or disease.

By adopting a population-based strategic approach, HoM aims to create an appropriate environment for change which is sustainable via structural change. By creating healthier environments, the ultimate aim is to secure long-term health benefits for the whole population of Greater Merseyside. The ongoing activity at the macro to micro level is illustrated in Table 1, with examples of some ongoing interventions which reflect the programme’s philosophy.

By working collaboratively with the public, private and independent sectors across Greater Merseyside, the aim is to ‘add value’ to local programmes and interventions by working at local area, regional, national and European levels to tackle CVD prevention through integrated, evidence-based initiatives and most importantly, public health advocacy.

To date, evidence from the HoM primary prevention intervention programme suggests that adopting this approach is having a positive effect. The programme is receiving interest from both within the UK and abroad about how such an approach can be developed and implemented to address the health requirements of other populations. To summarise, our experience suggests three key requirements for a CVD primary prevention intervention programme: (i) a scientific evidence-base; (ii) identification of an applicable theoretical framework; and (iii) focused and realistic objectives.

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The information provided in this paper is based upon the Heart of Mersey theoretical model with relevant supporting papers relating to CVD prevention and public health evidence base and theory.

**Conflict of Interest Statement:** None declared.

**References**


**Table 1 Examples of heart of mersey CVD prevention programme activity**

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<tr>
<th>Location</th>
<th>Activity</th>
<th>Description</th>
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<tr>
<td>European</td>
<td>Health advocacy; Networking</td>
<td>Influencing policy development at EU level (mainly nutrition policy). Involves joint working with partners/ allies at EU level. ‘Food and Health Strategy for Greater Merseyside’ – urging reform of the European Common Agricultural Policy to favour plant rather than animal-based production; seeks local support for local producers to grow more fruit, vegetables, grains and cereals. Responding to relevant EU and UK government consultations (i.e. food/nutrition; tobacco; inequalities). Lobbying for smoke-free public places; healthier food in pre-schools, schools, hospital settings. Comprehensive, multi-sector long-term strategy for food and health. Total ban on advertising to children of foods high in fat, salt and sugar. ‘Greater Merseyside Food Charter.’ Working with food service providers to help them make changes to ensure that healthy food is available, accessible and affordable.</td>
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<tr>
<td>Regional; Local</td>
<td>Lobbying; Advocacy</td>
<td>Working with the public sector to develop healthier food policies and procurement. Working with schools and hospitals to improve food and nutrition.</td>
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<tr>
<td>National</td>
<td>Advocacy; Networking; Collaboration; Creating healthier environments</td>
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<tr>
<td>Regional; Local</td>
<td>Advice; Collaboration; Networking; Creating healthier environments</td>
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