



**COMMONWEALTH**  
**SECRETARIAT**

**TAKING UP THE CHALLENGE OF  
NON-COMMUNICABLE DISEASES  
IN THE COMMONWEALTH:  
17 GOOD-PRACTICE CASE STUDIES**

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The Commonwealth Secretariat would like to thank Katy Cooper, of C3 Collaborating for Health, the researcher and author of this selection of case studies. C3 Collaborating for Health is a UK charity with a global remit to tackle the four major chronic diseases (cardiovascular disease, diabetes, chronic respiratory disease and many cancers) by focusing on tobacco, poor diet (including the harmful use of alcohol) and lack of physical activity: [www.c3health.org](http://www.c3health.org)

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# FOREWORD

Non-communicable diseases (NCDs) – mainly cancers, diabetes, chronic respiratory diseases and cardiovascular diseases – account for the majority of death and illness in almost every region of the world, affecting both men and women. Much of this burden could be delayed or prevented by tackling the major risk factors – poor diet, tobacco use, harmful use of alcohol and lack of physical activity.<sup>1</sup> The aim of this document is to show **what is being done to address these risk factors in different Commonwealth communities with different needs and resources.**

This publication outlines seventeen case studies from a broad range of countries and in a variety of settings. The studies draw on communities in both developed and developing countries across the Commonwealth; some of the studies are national or regional in scope; some relate to small-scale, locally based initiatives. All involve a wide range of organisations and individuals, and we have selected examples of interventions from a range of settings – **schools, healthcare centres, workplaces and local communities.**

Some of the case studies focus on evidence gathering and are being rigorously evaluated; others focus more on putting existing knowledge into practice and adapting this to local realities. Behaviour change, awareness-raising and sustainability are key themes of the interventions.\*

This important publication supports two of the objectives of the Commonwealth Secretariat's 'Road Map' on NCDs, adopted by health ministers in 2010 – it can be used both as an advocacy tool to raise the profile and priority accorded to NCDs, and to promote successful interventions by sharing experiences of what works in a variety of different contexts.

September 2011 will see the holding of the United Nations High-Level Meeting on NCDs. Commonwealth Heads of Government in 2009 adopted a 'Commonwealth Statement on Action to Combat

Non-Communicable Diseases' and the 2011 Commonwealth Health Ministers Meeting in May has as its theme 'NCDs – A Priority for the Commonwealth'. The countries of the Caribbean Community (CARICOM) were at the forefront in initiating the call for global attention to NCDs, and leaders and health advocates across all regions increasingly have emphasised the importance of action on NCDs.

We need to take action now. We hope that this document will generate ideas for further initiatives throughout the Commonwealth, as well as serving to demonstrate what is already being achieved.

*Ransford Smith  
Deputy Secretary-General  
Commonwealth Secretariat*



*\* In this context, 'intervention' means 'action taken to improve a situation' – it is not referring to medical intervention.*

# THE COMMONWEALTH RESPONSE TO NON-COMMUNICABLE DISEASES

The Commonwealth has been described as a unique family, made up of 54 countries and accounting for around one-third of the world's population. Some of the planet's largest and smallest, richest and poorest countries make up the Commonwealth – the association is home to 2.2 billion citizens of all faiths and ethnicities. Commonwealth membership continues to grow, with the most recent members to join being Cameroon and Mozambique (both in 1995) and Rwanda (in 2009), and all share concerns over the growing problem of non-communicable diseases (NCDs). These diseases are mainly cancers, diabetes, chronic respiratory diseases and cardiovascular diseases.

The rising burden of NCDs now accounts for 60 per cent of the global disease burden – contributing to an estimated 35 million deaths each year worldwide, with 80 per cent occurring in low- and middle-income countries. They pose considerable burdens on already stretched health systems, and are a real danger to countries' ability to achieve sustainable development.

The Commonwealth Secretariat has responded to this crisis over recent years. One of the first preparatory steps for its work was a consultative meeting held in Toronto, Canada, in November 2008. Furthermore, at the 2009 Commonwealth Heads of Government Meeting in Port of Spain, Trinidad and Tobago, leaders adopted the Commonwealth Statement on Action to Combat Non-Communicable Diseases. The Statement acknowledged the epidemic of NCDs to be a serious threat to global health and to sustainable development, and called for a United Nations summit to be convened in 2011. The Statement also provided a rationale for discussing the steps the Secretariat can take

to lead on this issue and influence the global agenda. Thus the Commonwealth Secretariat Road Map on Non-Communicable Diseases was developed, and accepted by ministers of health at the annual Commonwealth Health Ministers Meeting in Geneva, Switzerland, on 16 May 2010. The Secretariat endeavours to implement activities within the Road Map, which include working to improve the capacity of media in member countries to report on NCD issues; organising dialogues across the sectors; conducting assessments; and sharing examples of best practice.

Commonwealth health ministers meet in Geneva each year on the eve of the World Health Assembly: it is notable that the theme of the 2011 meeting will be 'Non-Communicable Diseases – A Priority for the Commonwealth'.

NCDs are a concern for all Commonwealth countries. Tackling this health issue requires maintained country support, ministerial enthusiasm and continued engagement and action by civil society.

# TOBACCO-USE CASE STUDIES

Tobacco use is one of the leading causes of preventable death. There are **6 million tobacco-related deaths a year** – around 10 per cent of all deaths in the world – and smoking kills half of all smokers. While smoking rates have been decreasing in many developed countries, it is on the increase in the developing world, where 72 per cent of today's tobacco users live.<sup>2</sup> It is not only tobacco users themselves who suffer health effects – second-hand smoke is also estimated to kill 600,000 people a year.<sup>3</sup>



The impact of tobacco on global health is such that it is the subject of the world's first global public-health treaty: the Framework Convention on Tobacco Control (FCTC). It came into force in February 2005, and 172 states are currently (April 2011) party to it, covering 87 per cent of the world's population.<sup>4</sup> Countries have a responsibility, under the FCTC, to take a range of steps in many different settings, including workplaces and schools, to tackle tobacco use. Many are calling for a world essentially free from tobacco, in which less than 5 per cent of the population will be using tobacco by 2040.<sup>5</sup>

The case studies in this section are examples of successful initiatives, which could be rolled out more widely, each focusing on a different point in the life-course:

- helping pregnant women in underprivileged communities in Cape Town, South Africa, to give up smoking for the sake of their own health and that of their baby;
- raising awareness of the dangers of tobacco use among school children in Lesotho;
- helping policemen to stay healthy in the Indian state of Rajasthan, banning both smoking and chewing tobacco from their workplaces;
- using a ban on smoking in parks in New Zealand to 'de-normalise' smoking and create healthier play spaces for children.

## SMOKING-CESSATION AMONG PREGNANT WOMEN IN SOUTH AFRICA

– Empowering pregnant women from disadvantaged communities in Cape Town to give up smoking

With thanks to Katherine Everett-Murphy and Krisela Steyn, Chronic Disease Initiative in Africa and the Chronic Diseases of Lifestyle Unit, Medical Research Council, South Africa

Smoking during pregnancy is harmful to the health of the unborn child as well as to the mother, increasing the risk of miscarriage, stillbirth and low birth-weight of the newborn. Children whose mothers smoke during pregnancy may suffer learning difficulties and decreased lung function, and there is also increasing evidence that low birth-weight, coupled with rapid weight-gain after birth, can increase the risk of diseases such as cardiovascular disease in later life.<sup>6</sup>



Receiving smoking-cessation counselling in an antenatal clinic

‘Everything about me has changed. I think I have grown up a lot over the past few months and it had a lot to do with the smoking programme and with the talks I had with the counsellor. I now question everything I do and ask myself “is that good or bad for my baby?” I never felt like that before’

– participant in the initiative



In 2006 a smoking-cessation intervention was launched in four antenatal clinics in Cape Town to help disadvantaged pregnant women to give up smoking, funded by the International Development Research Centre in Canada.<sup>7</sup> Women of this profile are likely to find it particularly difficult to quit, as they tend to smoke heavily, are less well-educated, often live in a stressful environment and have problematic relationships. Smoking was highly prevalent in the community in which the initiative took place, with 47 per cent of women continuing to smoke during pregnancy, and over two-thirds being exposed to second-hand smoke at home. The study also revealed that 52 per cent of the women had drunk alcohol since becoming pregnant, thereby also placing their unborn babies at risk of developing foetal alcohol syndrome.

The study compared two groups of women registering at public-sector antenatal clinics in 2006 and 2007. In 2006, the control group received usual antenatal care, which consisted of the midwife giving simple advice about how to stop smoking. In 2007, pregnant women attending the same clinics received the intervention – receiving advice from midwives and peer counsellors trained in best-practice smoking-cessation counselling methods.<sup>8</sup> Pregnant women were provided with tailored motivational leaflets and a detailed self-help Quit Guide. The media used photographs and real-life testimonials from women in the community. These women were inspiring role models, as they had managed to overcome significant difficulties to give up smoking during pregnancy.<sup>9</sup>

The evaluation of the smoking-cessation intervention showed a statistically significant difference in the smoking rates between the experimental and control groups. In the control group, less than 1 per cent of the women gave up smoking during their pregnancy, whereas in the group exposed to the intervention the quit rate was 5.3 per cent (which is around the international average for such programmes – 6.4 per cent). In addition, 28 per cent of women in the intervention group reduced their tobacco use by at least half, significantly more than in the control group (16%). These changes in smoking behaviour were measured by checking levels of a metabolite of nicotine, called cotinine, in the women’s urine. Babies born to the intervention group were also slightly heavier than those born to the control group. The peer counsellors also succeeded in helping some women give up alcohol. Qualitative interviews with the women indicated that the assistance and support received from the lay counsellors was the most valued aspect of the programme.

This intervention shows that educating and empowering women to take control of their own health is essential in helping women give their baby the best start in life. Its replication elsewhere could have significant implications for improving the health of the next generation.





# TOBACCO AWARENESS AMONG SCHOOL CHILDREN IN LESOTHO

– School-based initiative to help 12–18-year-olds and their families to give up smoking

With thanks to Varsay Cooper, Chief Government Physician, Mpolai Moteetee, Director-General for Health Services, and Nkareng Mosala, Tobacco Control Focal Point, Lesotho

## Tobacco by Mojabeng Moholi (17)

From the first day  
You were trouble  
Kings smelled fortune  
Yet you made them poor

From Africa to America  
Asia to Europe  
Mothers and fathers were turned to slaves  
Slaves for tobacco

From slavery to freedom  
Freedom of buying my own pack of cigars  
A PACK OF DEATH  
From a corner shop down the street  
To my father's pocket  
To my best friend's back pack

She turned to you when friends were few  
You gave her lung cancer  
My brother joined your gang to be cool  
You stained his teeth.

I was a lovely life growing inside  
my mother  
She puffed a bit of you  
You deprived me of oxygen

I WAS DEFORMED  
My father,  
Smoking like a chimney around us  
I caught bronchitis

You look so cool  
Slim, sleek and short  
Or even long and thick  
Ma grand-ma likes the way you open her nerves

You turned to my new best friend  
You are addictive  
You made me turn my back from reality  
Yet draining my red blood cells.

Tobacco,  
Tobacco  
To-b-a-cc-o, you helped open many graves  
But soon your fate will come  
When all people know what a deceiver you really are,  
that day you will be the enemy

The Lesotho Network on Anti-Smoking was established by the Ministry of Health and Social Welfare in 2000 to oversee anti-tobacco efforts across the country, with a particular focus on helping children to resist the temptation to begin smoking, and to help those who have already begun to smoke to stop. The Global Youth Tobacco Survey conducted in 2008 found that 11.8 per cent of boys and 7.5 per cent of girls aged 13–15 in Lesotho use tobacco (of whom 82% would like to give up), and that 36.9 per cent of children live in a house where family members smoke in their presence.<sup>10</sup>

The smoking and health programme, which now costs US\$50,000 a year, is aimed at 12–18-year-olds. It initially began in 38 schools and was extended in 2008 to 52 secondary and high schools. Each school is visited by a member of the Network, and a teacher at each school is trained in anti-tobacco activities such as counselling, and reports back to the Network about the activities in each school. Additionally, over 2,000 'peer educators' have been taught about the dangers of tobacco, and where to seek help, so children can ask one another for advice.

Activities run in schools to highlight the dangers of tobacco include anti-smoking clubs, debates, poetry and song competitions (see opposite for a poem written by a student, Mojabeng Moholi). Each year the activities are based on the World Health Organization's World No Tobacco Day theme – in 2010 this was 'Gender and tobacco with an emphasis on marketing to women', and in 2011 the theme is 'The Framework Convention on Tobacco Control'.<sup>11</sup>

The programme is advertised through pamphlets, posters and bill-boards, so it reaches an audience beyond the school gates. Parents, for example, also have access to advice on smoking-cessation since the teacher responsible for delivering the programme can refer parents to rehabilitation centres along with their children.

The programme is reported to have been successful – 62 per cent of children at the schools have received counselling and access to resources to help them quit, and over the decade that the initiative has been in place, about 20 per cent of young smokers reached by the initiative have managed to kick the habit. The next step planned is to expand to all schools across the country.



Lesotho Network on Anti-Smoking poster used in schools



## TOBACCO-FREE POLICE STATIONS IN INDIA

– Helping police personnel to stay tobacco-free in Rajasthan, India

With thanks to Rakesh Gupta, former Director (India), American Cancer Society



No-smoking posters in the Rajasthan Police Academy

Working-age adults spend around 40 per cent of their waking hours in the workplace – making it an ideal place in which to encourage healthy living.<sup>12</sup> In Rajasthan, India (a country that ratified the FCTC in 2004 and is seeking to implement it), the State Police Department has worked with the American Cancer Society to make it easier for its 80,000-strong workforce to be healthy, most recently focusing on a project to make it tobacco-free.

‘The tobacco-free initiative in the Academy has helped me quit successfully. Not only is my family happy – our premises have been cleaner too!’

– male nurse, Medical Centre, Rajasthan Police Academy



The tobacco-free project began in 2008 in the Rajasthan Police Academy,<sup>13</sup> and has now been extended to the six police training centres in the region (these became tobacco-free on 1 January 2010). According to a representative survey of police personnel in Rajasthan, 12.5 per cent use chewing tobacco and 12.7 per cent smoke – with 35 per cent of the smokers smoking between 5 and 15 times a day, and 13.3 per cent smoking more than 15 times daily. There are significant health problems within the (largely male) workforce, including stress (which over 20% of smokers cited as the reason for tobacco use) and hypertension (around a quarter were hypertensive, with higher rates – 40% – in Jaipur).

Since 31 May 2008, the Rajasthan Police Academy, with a staff of 250, has been tobacco-free. Here and, later, in the police training centres, senior members of staff were made aware of the importance of giving up tobacco; working groups were set up and empowered to communicate to others on the importance of being tobacco-free, along with the benefits of quitting. The costs of the programme were minimal, as the American Cancer Society provided training and materials adapted from its ‘Freshstart’ tobacco-control programme, and the Academy has promoted and supported the initiative from its budget for employee welfare. When the programme was first established, 21 people took part in the programme at the Police Academy, and an estimated 40 per cent of them have stayed tobacco-free. From January 2010 onwards, the programme has been supported by the Rajasthan Cancer Foundation in Jaipur.



The health benefits of the initiative have not been fully assessed at the Academy, but in future the Medical Centre at the Academy plans to evaluate the benefits through collaboration with the Indian Council for Medical Research, New Delhi, and the Indian Institute of Health Management and Research, Jaipur. The feedback has been good – it is inexpensive and easy to replicate, with a key role played by personal relationships and peer support – and the programme is soon to be rolled out to all 700 police stations in the region. The director of the Academy has commented that ‘its tobacco-free environment is what graduating recruits will miss the most’.



## NO-SMOKING PARKS IN NEW ZEALAND

– Rotorua Council's efforts to reduce and 'de-normalise' tobacco use by restricting smoking in playgrounds

With thanks to George Thomson, Senior Research Fellow, Department of Public Health, University of Otago, Wellington, and to Toi Te Ora Public Health Service, Bay of Plenty District Health Board

A relatively recent development in tobacco control is to move to restrict smoking not only indoors, but also in outdoor public places. This reduces exposure to second-hand smoke and protects parks and other spaces from environmental pollution (cigarette-butt litter and the chance of fire), and also strengthens efforts to 'de-normalise' smoking in society – if children see fewer people smoking, they are less likely to take up the habit themselves.



In New Zealand, where an estimated 5,000 people a year die from the effects of smoking, including over 300 from exposure to second-hand smoke,<sup>14</sup> smoke-free outdoor areas are increasing in number,<sup>15</sup> and the Cancer Society of New Zealand and the Health Sponsorship Council have produced an implementation kit to assist in making the case for smoke-free areas.<sup>16</sup>

The District Council in Rotorua – an area with a population of around 70,000, of whom 36 per cent belong to the Māori ethnic group<sup>17</sup> (a group with relatively high rates of tobacco use and lung cancer) – has as one of its aims 'a healthy community – health is holistic; people are supported to enjoy and experience physical, mental, emotional and spiritual well-being'. Fulfilling this commitment requires looking beyond healthcare to health promotion, which the Council has interpreted to include creating smoke-free areas in its 76 playgrounds and the Council-owned area of the Whakarewarewa Forest. This policy was adopted in 2008, and was initiated, driven and evaluated by Toi Te Ora Public Health Service, funded by the Ministry of Health. The restrictions are not legally enforceable, so are reliant for success on the support of local people to stop smoking and discourage others from lighting up in the areas. The policy is reinforced with prominent signs (see photos).

Toi Te Ora evaluated attitudes to the restrictions before and after implementation,<sup>18</sup> and carried out environmental scans to assess its impact. Before the restrictions, 85 per cent of those interviewed supported the creation of the new policy, particularly because of its perceived impact on the attitudes and exposure of children to smoking; four months afterwards, this had risen to 93 per cent.\* The majority of people – 73 per cent – claimed not to smoke in the areas even before the restrictions; this rose slightly after the restrictions were implemented, to 75 per cent. However, the number of discarded cigarette butts fell by 29 per cent in the two months after the restrictions were put in place, suggesting that the policy was already having an effect on behaviour.

Similar assessments of other smoke-free parks have found that smoking continued to decline significantly beyond the first few months – further assessment of the Rotorua project is planned for 2011 and will be published on the Toi Te Ora website.

\* Around 500 people were interviewed, of whom approximately 40 per cent were Māori, and around a third were smokers.



# PHYSICAL-ACTIVITY CASE STUDIES

The World Health Organization estimates that **physical inactivity is the fourth-leading risk factor for global mortality and is responsible for 6 per cent of deaths globally.**<sup>19</sup>

There is a large body of evidence on the role of physical activity in ensuring health and well-being. Physical activity can be beneficial in lowering blood pressure, improving blood cholesterol levels, and lowering body mass index – which in turn reduces the risk of coronary heart disease and hypertension/stroke, type 2 diabetes, colon cancer, breast cancer, musculoskeletal problems and depression.



People who are active have a 31 per cent lower risk for all-cause mortality<sup>20</sup> – for example, there is a 25–30 per cent reduction in stroke among active individuals,<sup>21</sup> physically inactive people can have as much as twice the risk of coronary heart disease,<sup>22</sup> and lack of physical activity is associated with around a quarter of type 2 diabetes.<sup>23</sup>

The recommendation for physical activity is that adults (18–65 years of age) should undertake moderate-intensity aerobic physical activity (such as brisk walking) for a minimum of 30 minutes on five days each week or vigorous-intensity aerobic activity (such as jogging) for a minimum of 20 minutes on three days each week, or a combination of moderate and vigorous activity (e.g. walking briskly for 30 minutes twice during the week and then jogging for 20 minutes on two other days). Lower goals may be necessary for older people who have physical impairments or functional limitations, and older adults should also do balance exercises. Children should do at least an hour of physical activity every day.<sup>24</sup>

This section presents four case studies, each of which focuses on different ways of encouraging physical activity:

- the Global Corporate Challenge is a workplace-based physical activity challenge, to encourage walking in daily life;
- in Northern Uganda, a soccer programme has been set up to engage the local community, build a more robust peace in this former conflict zone, and improve the physical and mental health of 10–14-year-olds;
- 'Run for a Cure' in Nigeria highlights awareness of the importance of physical activity in preventing breast cancer, as well as raising money;
- creating an environment in which it is easy to take physical activity is an essential tool in tackling NCDs, and the final case study is an example of active travel – efforts to encourage cycling in England.

## THE GLOBAL CORPORATE CHALLENGE: GETTING EMPLOYEES WALKING

– Employees see the health benefits of participating in an annual walking challenge based in workplaces

With thanks to Tom Sermon, Chief Operating Officer, Global Corporate Challenge

The Global Corporate Challenge (GCC)<sup>25</sup> is a rapidly growing organisation that has developed and established an annual four-month physical-activity challenge for employees. Started in 2004 in Australia, the organisation has now helped encourage over 250,000 employees in more than 2,300 of the world's companies across 65 countries to improve their lifestyles.



GCC participants out and about



Employees taking part in the GCC form teams of seven, with each participant issued with a pedometer and the goal of achieving at least 10,000 steps daily – the amount recommended for good health.\* Employees each record their daily step count (or swimming/cycling distance) on a website, which tracks participants' individual achievements and calculates the distance travelled by the team as a whole, plotting a course 'around the world' showing the team's progress on a map. The website and supporting emails to participants also contain nutritional and health information. The cost in 2011 is £49 per participant in the United Kingdom, and starts on 19 May – most employers cover the whole cost, but others choose to have employees contribute towards it.

In 2010 the average number of steps taken per participant in the GCC was 12,693 (this equates to walking a total of over 8km per day and burns off around 500 kcal); the average office worker is estimated to walk only 3,000 steps per day, so this is a four-fold increase. This significant increase in daily physical activity, coupled with advice on better nutrition, has an impact on the health and well-being of GCC participants that continues well beyond the end of each GCC. Independent health screening by Monash University for the Foundation for Chronic Disease Prevention has verified significant reductions in participant waist measurements as well as both systolic and diastolic blood pressure.<sup>26</sup>

From 2010, each company's support of the GCC has also sponsored a team of children aged 8–12 years to enter a free 50-day Global Children's Challenge,<sup>27</sup> encouraging children both to be physically active and to use physical activity to learn about health and (through the website) geography and social science. The Children's Challenge is a not-for-profit organisation and in its first year over 90,000 children took part.

The GCC combines competition with personal achievement, and can be a real motivation to change behaviour. The aim of the GCC is for exercise levels to increase not only during the four months of the Challenge, but also that this length of time is sufficient for the increase in physical activity to become a habit, with participants continuing to do greater amounts of physical activity following the end of the Challenge. A survey of GCC participants found that 94 per cent of those who took part said that they would continue the same higher level of physical activity after the conclusion of the Challenge: a long-lasting lifestyle change with the potential for significant and long-term health benefits.

\* 10,000 steps is about 8km (5 miles), depending on stride length – the equivalent of walking briskly for about 90 minutes.



## BUILDING PEACE AND PLAYING SOCCER IN UGANDA

– Soccer project for boys and girls in Gulu, Uganda, improves mental and physical health – and builds peace in the community

With thanks to Justin Richards, University of Oxford DPhil student, and OA Projects

Gulu, in Northern Uganda, is a city of about 140,000 people, in a region that has only recently emerged from over 20 years of civil war, during which one in three of all boys and one in six of all girls are thought to have been abducted, many of whom were forced to serve as child soldiers.<sup>28</sup> A new programme – the Gum Marom Kids League – has been set up to engage the local community, build a more robust peace, and improve the physical and mental health of children aged 10–14 years.



Registering for a football team

‘I have learned some soccer skills, like fair play, and about my rights and ways to solve conflicts’

– 14-year-old girl footballer

‘The girls and boys love playing football ... It makes them fitter and stronger ... It also frees their minds to work harder during class and improve their school work’

– Michael Aloya (aged 25), League Logistics Co-ordinator

The first season of the intervention, which took place from September to November 2010, established four football (soccer) leagues (boys’ and girls’ under-12s and under-14s teams) – 32 teams in all. There were league games and tournament games each Saturday, with team training after school on at least one evening a week. Before or after each game or training session, peace-building activities were organised, including conflict management and health awareness, presented through a range of genres including poetry, role-play and debate. Thirty-two local adults were trained as football coaches and peace-building educators, and 400 local children (240 boys and 160 girls) took part. The project was promoted on local radio and in schools, and proved very popular as it was the only community-based sports league in Gulu for this age-group – it could not accommodate all the children who wanted to play in 2010.

The project, which cost USh25,000,000 (US\$10,400) for the first season, was a partnership between a local community-based organisation, the Youth Coalition for Peace, with funding primarily from Canada-based NGO OA Projects<sup>29</sup> and some support from The Kids League, a Kampala-based NGO. Schools and local government (primarily the local Sports Office and Education Officer) were involved in designing the project to ensure maximum local support, and there were carefully delineated roles for all the participants – coaches, staff members and players.

Evaluation of the mental and physical health of the children, and the impact of the peace-building and gender-equity aspects, was a key component of the project. The evaluation was carried out by a research team that worked with local schools. Mental health was measured using a locally developed tool, and physical health using a ‘beep’ test, standing jump and BMI-for-age. Preliminary analysis of data collected at the start of the project suggests normal growth patterns, but identified a population-wide deficit in physical fitness and persistent mental-health challenges. Final results describing the impact of the intervention are due in summer 2011, and will be posted on the OA Projects website.

The project is designed to be sustainable – local staff are planning to launch the next season with minimal external management support, and OA Projects (while continuing to fund the project in 2011) is working towards complete local ownership with financial and logistical support from local government and community groups.



Training the coaches



## 'RUN FOR A CURE' FOR BREAST CANCER IN NIGERIA

– Annual walk and run in Lagos to raise awareness of the importance of physical activity and early detection in tackling breast cancer

With thanks to Joseph Ana, Medical Adviser, CS-DON's Calabar Women and Children's Hospital, Calabar, Nigeria

The 'Run for a Cure' initiative, held annually since 2009 in Lagos, Nigeria, is a fundraising and awareness-raising event that brings together two key aspects of tackling breast cancer: physical activity and early detection. Physical inactivity is a risk factor for many cancers, with a risk reduction for breast cancer of approximately 20–40 per cent for those who do vigorous physical activity for 30–60 minutes on five days each week.<sup>30</sup>



The start of the 2010 Run

'Run for a Cure' in Lagos was established by a local NGO, the Child Survival and Development Organisation of Nigeria (CS-DON), which was set up in 2002 with the prevention of NCDs as one of its objectives. The aim of the event, which is publicised by local media and online, is to raise awareness of the importance of breast self-examination, registering for mammogram screening, and leading a healthy lifestyle. It is held early in the morning and takes participants along a 6km route in Lagos, which they can either walk or run, highlighting the importance of physical activity for good health; each runner pays N7,000 (US\$45) to enter.

Men and women of all ages and from Lagos and further afield (including, in 2009, the crew of the US Navy ship, the USS Nashville) take part – many wearing pink T-shirts, which are provided for those who register in advance; 600 people participated in 2009, rising to over 900 in 2011.\* \$5 per entrant is donated to one of the partner organisations, the Susan G. Komen for the Cure Foundation.<sup>31</sup>

The Run is followed by a fundraising dinner and lecture – corporate sponsors and VIPs (including, in 2009, the former American ambassador, and in 2010 the First Lady of Lagos State) are invited to both events. The fundraising linked with the event has been successful, with over N15 million (US\$97,000) raised in 2010. Two mammogram machines have been installed following the 2009 and 2010 events – one in the Women and Children's Hospital in Calabar and one in the Lagos University Teaching Hospital. The donations were made in partnership with the American International School of Lagos. In future, the Run hopes to use part of the funds raised to subsidise treatment for underprivileged women to receive treatment for breast cancer.



\* The 2011 event was held in March, and more information will be available online soon.





## MAKING IT EASIER TO CYCLE IN ENGLAND

– Work by Sustrans and Transport for London to increase cycling and evaluate the cost-benefits of increased physical activity

With thanks to Philip Insall, Director, Health, Sustrans, and Hannah White, Senior Cycling Officer, Delivery Planning, Transport for London

In England, the need for ‘active travel’ – walking and cycling – to be included in strategies to tackle obesity and NCDs is explicitly recognised by the government: the 2010 White Paper on public health states that ‘active travel and physical activity need to become the norm in communities’.<sup>32</sup> Currently, only 39 per cent of men and 29 per cent of women build the recommended amount of physical activity into their everyday lives.<sup>33</sup>



One of the National Cycle Network's dedicated walking and cycling paths



Using London's new cycle-hire scheme



Opportunities for cycling, in particular, are multiplying in the UK, through the work of organisations such as Sustrans, an NGO that co-ordinates partnerships with local transport authorities and public-health teams, NGOs and over 3,000 regular volunteers, which has invested £500 million since its establishment in 1977. Sustrans' National Cycle Network – which won the WHO Counteracting Obesity Award in 2006 – consists of over 20,000km of dedicated bike paths and traffic-calmed roads, and aims to increase the proportion of journeys under five miles that are cycled from its current level of around 2 per cent to 20 per cent. Sustrans' Bike It initiative encourages more school children to cycle to school, and in Bike It schools trips by bike have more than trebled to around 10 per cent.

Other organisations are also working to make it easier to cycle – for example there have been significant increases in cycling in London, with the number of people entering central London by bicycle during the weekday morning peak growing by 123 per cent between 2001 and 2009 – and by 15 per cent in 2008–09 alone. Despite this rise, by the end of 2009 fatalities and serious injuries to cyclists had fallen 24 per cent compared with the rate in 1994–98; such injuries fell by 3 per cent in 2009 alone.<sup>34</sup> This increase is due to a variety of factors, including the introduction of a Congestion Charge for motor vehicles, improvements to cycling infrastructure and the recent establishment by Transport for London and Barclays Bank of a fleet of 5,000 hire bicycles (3 million journeys were made on the bikes in the first eight months of operation).

Participation in these schemes shows that, given the chance, millions of people will change their travel behaviour to healthier, safer and less-polluting options.

Since 2000, Sustrans has been evaluating the benefits of its projects, with striking results<sup>35</sup>: 407 million journeys were made on the National Cycle Network in 2009 (6% up on 2008), with an estimated health benefit from cycling of £288 million. This cost-benefit of improving cycling infrastructure is estimated as being nearly 4:1 over just 10 years, mainly derived from improved health due to the increase in physical activity.<sup>36</sup> The environmental impact, too, is significant: the use of the National Cycle Network is already estimated to reduce CO<sub>2</sub> emissions by over 600,000 tonnes a year, compared to if each journey had instead been taken by car.

An important part of the UK government's Olympic legacy of the 2012 London Games is to encourage 2 million more people to take up physical activity. In 2009, the National Cycle Network helped over 2 million people to be more physically active (and 42% of Network users reach the recommended level of physical activity): this initiative alone has already fulfilled the government's commitment.

# DIET AND NUTRITION CASE STUDIES

Much of the world is undergoing a nutrition transition, moving away from the consumption of traditional foods towards a diet that is higher in salt, sugar and fat. While this has meant that, in most countries, fewer people are now underweight, it has also led to the rise of a new form of malnourishment: overweight and obesity are rising fast, with diets that are not only too high in calories, but also not high enough in essential nutrients. There are now **over a billion people in the world who are overweight or obese**, as well as a billion who go hungry.



For example, in many countries, consumption of fresh fruit and vegetables is well below the minimum 400g per day that is recommended<sup>37</sup> – up to 2.7 million lives globally each year could potentially be saved if fruit and vegetable consumption were sufficiently increased, as it reduces the risk of some NCDs such as type 2 diabetes and heart disease. Salt (sodium) consumption is too high in many countries; high levels of salt are linked to high blood pressure, which can lead to stroke and heart disease. In the United Kingdom, for example, reducing daily salt intake from 9g to 6g could prevent an estimated 20,000 premature deaths each year.<sup>38</sup>

Alcohol use, even at relatively low levels of consumption, is also increasingly recognised as being a major cause of many NCDs such as cardiovascular disease and breast cancer.<sup>39</sup> Around 2.5 million deaths each year are due to the harmful use of alcohol – nearly 4 per cent of all deaths (6.2% of all male deaths are related to alcohol, and 1.1% of female deaths).<sup>40</sup> In addition, it is responsible for 4.6 per cent of global disability-adjusted life-years.<sup>41</sup> In May 2010, the World Health Assembly approved the Global Strategy to Reduce the Harmful Use of Alcohol,<sup>42</sup> which sets out ten key areas of policy options and interventions at national level (including regulating availability, price and marketing of alcohol, and encouraging appropriate health service responses) and four priority areas for global action (including public health partnerships and knowledge dissemination).

To tackle poor diet, healthy food needs to be affordable, accessible and attractive, which requires action by organisations including food retailers and manufacturers, as well as ensuring that consumers have clear information available on the health benefits of a good diet. The role of government in creating incentives for eating particular foods – such as the imposition of taxes on products high in salt, sugar or fat – is also increasingly being debated.

The case studies presented here cover three key areas:

- child nutrition – an initiative providing a daily healthy meal and nutrition education to 130,000 primary-school children in Osun State, Nigeria;
- the food industry – the HeartSAFE partnership between food companies and the National Heart Foundation to reduce levels of salt in processed foods in New Zealand;
- the government – efforts to restrict unhealthy food products imports into the Pacific Islands, with the example of a ban on turkey tails in Samoa.

## OSUN STATE CHILD NUTRITION PROGRAMME IN NIGERIA

– Healthy meals for primary-school children to foster both short- and long-term health in Nigeria

With thanks to Kingsley Akinroye, President, and Joy Unegbu, Communication Manager, Nigerian Heart Foundation

Providing children with a healthy diet is essential not only in preventing malnutrition and short-term ill-health, but also to help to protect against heart disease and other NCDs in later life.<sup>43</sup> In Osun State, Nigeria, the state government and local governments have been working with the Nigerian Heart Foundation to provide all 130,000 children in state-run primary schools (aged 3–7 years) with a healthy meal every day, described as ‘a model of good practice amongst other school feeding initiatives in Nigeria’<sup>44</sup>: the Osun State Home Grown School Feeding Programme (OSHSFP).



‘A healthy diet in childhood has the potential to make a major and cost-effective contribution to the prevention and control of NCDs, and in the long term have a significant impact on bridging the life-expectancy gap between developed and developing countries’

– Dr Kingsley Akinroye, President, Nigerian Heart Foundation

The school feeding project was launched in December 2006, following a seed grant from the Federal Government of Nigeria to Osun State – and is ongoing today (2011). The cost of feeding each child is currently around N23 a week (US\$0.15), and is funded by the state government and local governments, covering materials and operational costs. The children are educated about the importance of good nutrition (see photo) and sanitary practices, so that they can take what they have learned back to their families. The initiative may also increase the level of education reached by the children, as the offer of a free school meal increases enrolment in school: the Osun State Special Adviser suggested in 2010 that school enrolment has as much as doubled.

Children preparing a healthy meal



The initiative also has economic benefits for the wider community, with 3,000 women employed as school cooks (each of whom undergoes three months of training, and is responsible for the food budget), and local small-holder farmers providing goods such as cocoa and poultry products.

In September 2009, the Nigerian Heart Foundation commenced collaboration with OSHSFP on awareness-raising and advocacy, and the Foundation also began, in September 2010, to assess the impact of the programme on children’s health and attendance at school, the impact that it has had on parents, and the added value and sustainability of the project. Lack of funding meant that the evaluation was curtailed, but there is evidence of the success of the project in increased school enrolment and anecdotal evidence is that improved nutrition and sanitary practices have reduced health costs to families and the schools. A meeting in October 2010 hosted by the Osun State Millennium Development Goals Agency brought together a number of other NGOs, along with local pharmaceutical companies and government agencies, to discuss the project: it is hoped that evaluation will recommence soon.

The programme is now being adopted by other state governments in Nigeria, and two more state governments have completed pilot studies and hope to implement the programme soon.





## HeartSAFE: SALT REDUCTION IN NEW ZEALAND

– Food companies working together with the National Heart Foundation to reduce the salt in their products

With thanks to Rachel Campbell, Business Manager – Food Reformulation, National Heart Foundation, New Zealand

A healthy diet is dependent on access to good-quality food, which has led to calls for partnership with the food industry from the World Health Organization, the NCD Alliance and others. Working with the food industry to reduce salt, sugar and fat could make a big difference to health on a population level. But reformulating foods is not always easy – for example, it takes time for palates to adjust to lower levels of salt in products, so salt reduction requires long-term, concerted efforts.



HeartSAFE (Sodium Advisory and Food Evaluation) is an industry-led partnership in New Zealand, facilitated by the National Heart Foundation (contracted by the Ministry of Health), to reduce the levels of salt in food. Average salt consumption in New Zealand is approximately 9g a day; the aim of HeartSAFE is to assist in bringing this down to a maximum of 6g. Decreasing intake by 25 per cent could reduce the risk of heart attack or stroke by 20 per cent, saving the lives of 930 New Zealanders each year by 2018.<sup>45</sup>

HeartSAFE, launched in early 2010, builds on an earlier pilot project in the bread sector, Project Target 450,<sup>46</sup> which reduced salt in bread by about 15 per cent, removing 150 tonnes per year from the diet of New Zealanders. HeartSAFE is focusing first on processed meats and breakfast cereal; its working group brings together individual companies (such as Kellogg's, Sanitarium, Tegel and Heinz Wattie's), several food industry associations (including the New Zealand Food and Grocery Council), the National Heart Foundation and an independent communications agency that is experienced in working with the food-industry sector. They share experiences through case studies and encourage greater levels of food reformulation. The Ministry of Health provides the National Heart Foundation with the resources for two full-time employees.

An innovative part of the initiative is a voluntary mentoring scheme, in which HeartSAFE offers the expertise of those with food-reformulation expertise to food companies that have not yet begun to address lowering salt levels.

Guidelines for gradual salt reduction (to allow consumer tastes to adapt) have been set – for example, best-practice guidelines have been set for processed meat (such as bacon and ham) for 2013 and 2015. Early signs are good, with 7.5 tonnes of salt removed from major breakfast cereal brands in the last six months of 2010 (supermarket 'own brands' will be evaluated soon). Continuous evaluation of the changes is an essential aspect of the initiative, which will be verified by monitoring of nutrients, undertaken by external organisations such as the Ministry of Agriculture and Forestry.

Up-to-date information about the evaluation of the HeartSAFE project, as well as its current tools, will be published on the National Heart Foundation website.<sup>47</sup>

## RESTRICTING UNHEALTHY FOOD IMPORTS IN SAMOA

– Using regulation to ban the import of turkey tails in Samoa

With thanks to Anne Marie Thow, Associate Lecturer, and Ruth Colagiuri, Director, Health and Sustainability Unit, Menzies Centre for Health Policy, University of Sydney



The 'nutrition transition' from traditional foods to diets high in salt, sugar and fats has been particularly extensive in the Pacific Islands – with major impacts on the weight and health of the population. Commonwealth nations such as Samoa and Tonga, for example, have among the highest rates of obesity in the world – in Samoa, 32 per cent of men and 63 per cent of women are estimated to be obese; in Tonga the figures are 47 per cent and 70 per cent.<sup>48</sup>

The need to tackle diet-related diseases is clear: in Tonga, by 2000, doctors were estimating that up to half of hospital resources were being used on diet-related NCDs<sup>49</sup> such as diabetes, prevalence of which is now 18 per cent. Concerns were growing that 'low-quality' foods high in fat were being 'dumped' on the islanders by other countries, but attempts to stop importation face significant challenges: a proposed ban in 2004 in Tonga on importing any product that provides over 40 per cent of its energy from fat was never put into place because of fears that it could jeopardise the country's efforts to become a member of the World Trade Organization.<sup>50</sup>

As early as 2002, the prime minister of Samoa noted at the World Food Summit that 'the lowering of trade barriers has resulted in an influx of inferior food imports, which is having an impact on the health of lower-income families' and, in 2007, he proposed a ban on the importing of turkey tails. Turkey tails are a particularly unhealthy cut of meat – around a third of its calories come from fat. In a survey of small groups (for example, church youth, village women's committee members and workers at a local business), selected as being representative of the diversity in the Samoan community, only two people did not eat the product, with consumption highest among lower socio-economic groups.

The ban was a cross-government initiative: it was approved by cabinet in April 2007, designed by the Ministry of Revenue and implemented by the Customs Department. Television and radio were used to inform consumers about the restrictions (and the importance of tackling obesity). Around half of consumers switched to other cheap meats such as chicken and mutton, and about a quarter replaced turkey tails with lower-fat meat or seafood.<sup>51</sup>

While Samoa has shown that it is possible for politicians to build health into trade policy, it also highlights the challenges faced by this approach: Samoa remains under pressure to abandon its turkey-tail import restriction as it negotiates to join the WTO. It is essential that further research is carried out into the impact of such policies on population health, and that policy-makers and public-health advocates work closely with experts in trade law, in Samoa and elsewhere, to ensure that health remains a priority.





# CASE STUDIES ADDRESSING SEVERAL RISK FACTORS

The projects that can be most successful in changing health behaviour can be those that simultaneously address a number of different risk factors. Many of the case studies in this section address individual behaviour change and also structural changes – in other words, how to alter the environment in which we live in ways that make it easier for each person to make healthy choices. Some of the initiatives address all the major risk factors; others are focused on the risk factors for obesity – namely, poor diet and lack of physical activity. The interventions are run by researchers, local government, community organisations and the private sector.



All the examples in this section are ongoing, and their impact is being assessed. The initiatives are already making a difference to the health of those directly affected, and the learning from them will enable them to be adapted and spread more widely.

The case studies move from the local, to the national, to the regional:

- the STOP Diabetes initiative in Victoria, Australia, works with pregnant women at risk from diabetes to help them to understand their health risks and set achievable health goals;
- Community Interventions for Health is working throughout a community in Kerala, India, to create a more health-supporting local environment;
- Healthy Alberta Communities has launched four successful projects in Canada that are acting as exemplars for other community-based projects in the country;
- Discovery Health's Vitality programme provides incentives and rewards for choosing a healthy lifestyle in South Africa;
- Malta's National Obesity Campaign is aimed at the whole population and primary-school children in particular, and is based around four simple diet and physical-activity messages;
- the annual Caribbean Wellness Day has been running since 2008, and acts as a catalyst for a variety of health initiatives at national level.

## STOP DIABETES AMONG PREGNANT WOMEN IN AUSTRALIA

– Providing personalised information about health risks empowers pregnant women to make healthy choices

With thanks to Ronan L'Heveder, BRIDGES Project Co-ordinator, IDF, and Helena Teede, Director of Research, The Jean Hailes Foundation for Women's Health

When women are pregnant, they are often very conscious of their own health, and are particularly amenable to health messages targeted at themselves and their baby. The STOP Diabetes project in Victoria, Australia, is designed to reduce the risk of type 2 diabetes by increasing pregnant women's own understanding of their health (in particular, identifying the barriers that prevent them leading healthier lifestyles) and by developing personalised goals to make it easier for them to make healthy choices. Reducing unhealthy behaviour such as poor diet can not only have long-term health benefits: short-term health can also be improved, particularly among women at risk of gestational diabetes mellitus (GDM: diabetes that develops in pregnancy), which affects around 6–10 per cent of pregnancies and which can lead to problems for mother and child at birth and later in life.<sup>52</sup>

'Learning more about how women perceive their risks is an important step: the STOP Diabetes study will help us gain insights and important information'

– Dr Linda Siminerio, chair, IDF Bridges Review Committee

The STOP Diabetes intervention worked with 210 women, who were all at high risk of developing GDM. The project ran from January 2008 to December 2010, led by the Jean Hailes Foundation for Women's Health, with partners Southern Health and evaluators Monash University. The project, which cost over US\$360,000, received funding support from the International Diabetes Federation's BRIDGES\* project.<sup>53</sup>



The intervention involved a series of four sessions with each woman to assess their health status, teach them about the risks and benefits of lifestyle choices, and establish what behaviour changes are most needed and would have most effect. The women then chose their own health goals, and received tailored advice on how best to achieve them. For example, this could be to improve their diet (such as committing to eat fresh fruit and vegetables every day) or increase their physical activity to five days each week.

Although the full evaluation is not due to be published until 2012, early results show that, without intervention, high-risk pregnant women reduce their physical activity in pregnancy and gain excess weight. Results show improved physical activity and reduced weight gain with the intervention. Some of the key barriers to pregnant women succeeding in changing their health behaviour are psychological – such as anxiety and depression. Clear, accessible health information is essential for women to assess their own risk and make appropriate decisions about their health and the health of their baby.

The project has faced, yet overcome, challenges – particularly around encouraging participation, as pregnant women are often time-constrained and may not feel able to continue to take part. But the results of the study, once evaluated and published, will be used to develop further projects and materials that will help to empower pregnant women to assess and take control of their own health.

\* BRIDGES – Bringing Research in Diabetes to Global Environments and Systems – was established to help overcome a particular challenge: translating what the evidence shows works medically to reduce the impact of diabetes into actual behaviour change. It is an IDF project supported by an educational grant from Lilly Diabetes.



## COMMUNITY INTERVENTIONS FOR HEALTH IN INDIA

– Piloting diet, tobacco and physical activity interventions in a range of local settings in Trivandrum, Kerala

With thanks to K R Thankappan, Professor and Head, Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, Kerala

Trivandrum, Kerala, in India, is the site of an ongoing project to assess the health impacts of a range of interventions on diet, physical activity and tobacco use in schools, healthcare centres, workplaces and the community in local rural villages. It is part of the Community Interventions for Health initiative – a project that compares the effects of taking action on the major risk factors across five different countries.<sup>54</sup> Each country project consists of an intervention site and a control site, so that the effects of the interventions can be compared.\*



Girls begin their bicycle training in schools

Children act in their own anti-tobacco play, written with support from their teachers



In Kerala, the CIH initiative began with thorough baseline surveys of the local environment and the health of the population, which were completed in 2009 (assessing, for example, the location of food shops, parks and schools, and gathering health information such as BMI and blood pressure). Various activities are now taking place.

- Tobacco initiatives have been put in place, such as policy documents and posters for schools and healthcare settings. These locations should already be tobacco-free (as set out in the 2003 Tobacco Control Act), but the CIH project is advocating for stricter enforcement of the legislation.
- Food choices in hospital and workplace canteens have been altered to reduce salt and sugar and to improve the range of healthy snacks, and posters highlighting the importance of a healthy diet have been produced.
- Physical activity is also key, with all 23 schools in the intervention area providing cycle training to girls. Sports goods have been distributed to schools, healthcare centres, sports clubs and selected workplaces across the intervention area.

The health and environmental surveys will be repeated in mid-2011 to measure behavioural and health changes.

The project has been successful in engaging a wide variety of local people and organisations – teachers, the local education department, employers in local industry, local health directors and health professionals, and local government, as well as community leaders. It has faced challenges – for example, the belief that being overweight is a sign of good health, or that traditional healthy foods are not seen as an attractive choice compared with many processed foods. Although the results of the initiative will not be published until later in 2011, there are already indications that it is both popular and sustainable – organisations have put forward proposals to the provincial government that would extend the CIH approach to other areas.

The aim of CIH is to provide strong evidence of the effectiveness of locally based initiatives, which can then be adapted and rolled out in other communities.<sup>55</sup>

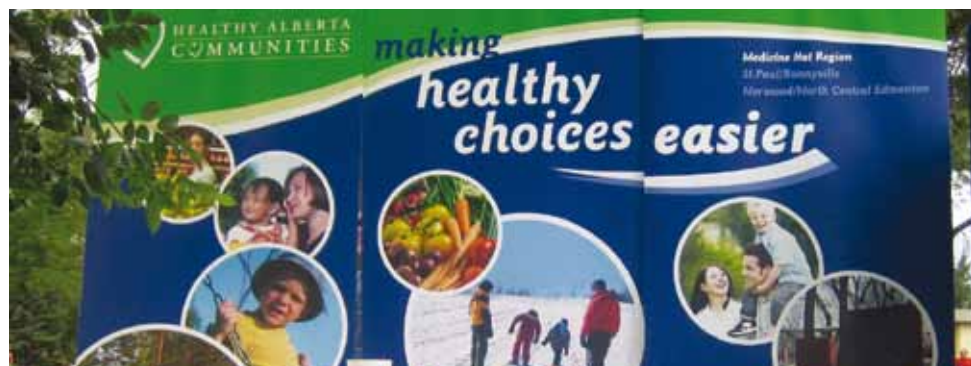
\* The control site will also receive the interventions, but they have been delayed until a later date.



## HEALTHY ALBERTA COMMUNITIES IN CANADA

– Healthy community projects – focusing on diet and physical activity – in four neighbourhoods in Alberta

With thanks to Kim Raine, Professor, Centre for Health Promotion Studies, School of Public Health, University of Alberta



The Healthy Alberta Communities (HAC)<sup>56</sup> project in Canada is a partnership between local communities, academic researchers and government to ‘prevent chronic disease and improve health by helping to influence environments and build communities that promote and support healthy choices’. It was established with an investment of C\$3 million in 2005 (equivalent to C\$2 per year for each person in the intervention areas), half of which is dedicated to establishing a solid evidence base that will allow for the health impacts to be accurately evaluated.

The HAC interventions themselves aim to transform aspects of the environment in four communities.

- In Bonnyville, the **Healthy Choice! Restaurant Program** makes it easier to make healthy choices in local restaurants. A dietician from Alberta Health Services worked with three local restaurants to develop criteria for healthy food, the healthy foods were identified as such on the menus (using a ‘Healthy choice’ logo – see picture), and the project was then promoted locally through newspaper and radio advertisements, and expanded further to local restaurants in neighbouring communities.
- In St Paul, the **Do More, Watch Less Challenge** encourages children to go out and play – partners included the St Paul Community Health Services, sponsors who provided access to kit and facilities, and student leaders who led activities in local playgrounds in summer.
- The **Coalition for Active and Alternate Transportation** in the town of Medicine Hat has been promoting healthy alternatives to taking the car, encouraging upgrading of sidewalks and rethinking neighbourhood design to make it easier to walk and cycle.
- The **Good Food Project** in Norwood and North Central Edmonton is a social enterprise in a culturally diverse neighbourhood, which addresses food insecurity as a barrier to healthy eating. It delivers weekly boxes of healthy foods, with a proportion of the revenue going towards reducing the cost of the boxes for low-income families. This model is now sustainable, and the project is run by a non-profit corporation, Live Local.

Key individuals and organisations were identified from the outset, and the project has focused on building up these local resources, to ensure that the projects can be continued in the future. It is too soon definitively to assess the health impacts of HAC, but there are already some positive signs: slight falls in overweight, obesity, blood sugar levels and blood pressure between 2006 and 2009.<sup>57</sup>

HAC hopes to spread its success to other areas, and has produced an interactive, online tool for other communities to use to assess local health and to provide insights and suggestions on how to improve it.<sup>58</sup> The tool is being used by 100 other communities in Alberta to adapt aspects of HAC for their local community.

## VITALITY: INCENTIVES FOR HEALTH IN SOUTH AFRICA

– Assessing the impact of incentives and rewards on individual behaviour change

With thanks to Craig Nossel, Head of Vitality Wellness, Discovery, and Tal Gilbert, Head of Research and Development, PruHealth

Over the last 15 years, faced with ever-increasing healthcare costs, a few health-insurance companies have moved away from simply managing diseases and begun to encourage their members to adopt more healthy lifestyles: increasing physical activity, tobacco-cessation and improved diet. This, it is hoped, will help to prevent disease in the future, protecting the health of individuals and the bottom-line of the companies.



Discount at Pick 'n' Pay

In 1998, South Africa-based Discovery Health established the voluntary 'wellness' programme, Vitality, which today provides 1.3 million people (for a small monthly fee) with a system of incentives to adopt healthy lifestyles. Each member is provided with a clinical evaluation and a personalised plan based on their individual risk factors, and is then encouraged to change behaviour in four key areas: getting active, assessments and screening, healthy choices and health knowledge (including an online health-awareness tool). There are financial incentives in each area, and rewards such as discounted airline tickets are offered where members can show that they have undertaken the healthy activities, such as proven regular gym attendance.

Vitality partners with other companies to provide the incentives. For example, its members get discounts on 9,000 healthy products at Pick 'n' Pay supermarkets (with greater reductions – of up to 25% – for members who have taken an online health check), and members have access to reduced-cost gym membership, weight-management and smoking-cessation courses.

The company has also undertaken a series of studies to assess Vitality's cost-effectiveness, working with researchers from the University of Cape Town's Sport Science Institute of South Africa and others. Assessment of data of members of the scheme (normalised for NCD status, age, etc.) found that those who are 'highly engaged' in the programme (15% of participants) have lower admission rates to hospital in, for example, cardiovascular disease (7.4% lower) and endocrine and metabolic diseases (20.7% lower), as well as shorter stays in hospital and lower costs per patient.<sup>59</sup> In addition, looking only at the 'getting active' aspect of the programme, medical claims costs among those who attended gym one or more times per week were around 17 per cent lower than the inactive group.<sup>60</sup> A further, longitudinal, study will be published in mid-2011.

There is still a challenge in how to encourage those not yet using the Vitality programme to become more engaged and take more control of their own health – for example by tailoring the incentives more closely to each individual's health risks and motivations, and better communicating the importance of healthy behaviour. However, the evidence to date shows an encouraging association between engagement in the programme and better health and lower healthcare costs.





## NATIONAL OBESITY CAMPAIGN IN MALTA

– Helping people eat better and exercise more, to reduce Malta's high obesity rates

With thanks to Paul Pace, President, Malta Union of Midwives and Nurses, and Charmaine Gauci, Director, Health Promotion and Disease Prevention Directorate, Malta

Malta, with a population of around 409,000 (2009), is facing an obesity epidemic. Obesity rates among adults, at 22.3 per cent, are the third-highest in Europe; overweight/obesity is currently at 29.7 per cent among children – no other country in Europe has a rate over 20 per cent.<sup>61</sup> In response to this urgent health threat, Dr Joseph Cassar, Minister for Health, the Elderly and Community Care, launched a €150,000 campaign on European Obesity Day 2010: **Piż Tajjeb għal Hajtek!** (Healthy Weight for Life!).<sup>62</sup>



Launch of the campaign on National Obesity Day

The four key messages of the campaign



Malta's obesity campaign encourages behaviour change among the whole population, and among primary-school children in particular, using four simple messages (see poster):

- make healthy food choices;
- enjoy nutritious foods prepared by you;
- eat in moderation; and
- more physical activity.

Television and radio have carried the messages, including a series of 13 TV programmes, 'Hekk Ajhar', developed in collaboration with the national Education Channel, on the impact of obesity and the importance of maintaining a healthy weight, which were aired from January to April 2011. In addition, new media such as Facebook<sup>63</sup> have been used to gather support for the campaign, and website banners advertising the campaign messages have been placed on a variety of websites. Promotional materials have been developed, including a laminated shopping-guide card to help people choose foods lower in fat, salt and sugar, and a booklet that addresses some of the myths around weight loss and food.

It is not enough simply to provide information, however; the campaign includes practical weight-loss help for people who want to make changes to their lifestyles. Free weight-management classes are now held in healthcare centres, and aerobics classes are being organised by local councils, with efforts being made to recruit new instructors for these classes. Ongoing outreach activities in workplaces and schools – such as working with health-economics teachers to promote healthy eating among children and parents – are also planned.

Awareness of the campaign is high, and the government is extending capacity within the ministry to ensure that there is the expertise to continue the campaign. Self-reported behaviour change is being evaluated using telephone surveys, which will be repeated in the future as ongoing evaluation of the initiative.



## CARIBBEAN WELLNESS DAY

– CARICOM countries' annual celebration of health and wellness, used to spark longer-term healthy behaviour

With thanks to T Alafia Samuels, CARICOM Consultant on NCD prevention and control, and Sir George Alleyne, Director Emeritus, Pan American Health Organization

In the 2007 Port of Spain Declaration 'Uniting to Stop the Epidemic of Chronic Non-communicable Diseases in the Caribbean Community (CARICOM)', the heads of government of CARICOM established the second Saturday in September as Caribbean Wellness Day (CWD).<sup>64</sup> Taking action is a priority, as NCD prevalence in the region is high – death rates from cardiovascular disease in Trinidad and Tobago, for example, are 84 per cent higher than in the USA and Canada, and diabetes mortality is 600 per cent higher. Obesity and high consumption of salt are the norm, and physical activity rates are well below the recommended levels. Alcohol abuse among men is also a growing public-health challenge – 4.5 per cent of deaths in the region are attributable to it, compared with 1.5 per cent globally.<sup>65</sup>

Caribbean Wellness Day aims to strengthen alliances within the community and create an environment that fosters behaviour change throughout the year. The messages are simple – no tobacco, exercise 30 minutes a day, eat less salt, less fat and less fried food, check your blood pressure, and no harmful use of alcohol – and are brought together under the slogan 'Love That Body!' It is a collaboration between the CARICOM Secretariat, the Pan American Health Organization/WHO and multi-sector CWD committees (including the faith community) within each country, and has attracted good participation and media coverage in the three years it has been held. Its multi-country and multi-sector approach is unique, and it highlights simple and fun steps that individuals and families can take to improve their health. Regional branding and reports are available on its website.<sup>66</sup>

National ownership is an important aspect of CWD, with each government allocating an average US\$22,000 (plus private-sector support) to promote the Day, tailoring the messaging to make it

relevant and adapting the literature and posters provided. In 2010,<sup>67</sup> for example, 19 countries took part. The Bahamas chose 'Love your body – portions count!' as its theme, and encouraged a full week of healthy-living activities, culminating in a 'Health Extravaganza' on Caribbean Wellness Day itself, bringing together a wide range of people and organisations responsible for various aspects of health, including a dawn walk-a-thon (held in conjunction with the Bahamas Cancer Society), cookery demonstrations (including information on both healthy eating and sensible portion sizing), and a variety of games, including hula-hoop and a watermelon-eating competition and a 'dance-off'. Other countries' initiatives included a six-month 'Biggest Loser' weight-loss competition for groups of employees in Grenada, and Barbados launched its Task Force on Physical Activity on CWD 2009.

Most countries have begun evaluation of the CWD, including budget, participation rates and plans for sustaining the activities, which is essential if long-term health benefits are to be achieved. Many countries have used the Day as a catalyst for the creation of year-round programmes – such as the 'Family Fitness Sundays' established in Diego Martin, Trinidad and Tobago, in which roads are closed for four hours to provide space for people to socialise, dance and eat healthy food – and others, such as St Lucia, have introduced physical activity in primary healthcare centres.



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