Director of Public Health
Annual Report
2010

HSC Public Health Agency


breastfeeding
OBESITY
smoking in pregnancy
Travellers
Roots of Empathy
improving health
BOWEL SCREENING
reducing inequalities
MENTAL HEALTH
FUEL POVERTY
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Foreword

Dr Carolyn Harper

'The real brain drain' – that's the term that's been used to describe the impact on a child's brain development from 'adverse experiences' during pregnancy or the first five years of life. Those years have recently been called the 'foundation years' because they create the foundations on which the rest of life is built.

We imagine that others have had the same life experiences as us, but too many children are born into circumstances that make it harder for them to thrive. Mental health problems in one or both parents, alcohol or drug misuse, domestic violence, emotional, physical or sexual abuse, a cold, damp overcrowded home in a neglected neighbourhood where antisocial behaviour and criminality are commonplace – it's those types of adverse experiences that can delay child brain development.

Brain development

A child's brain develops rapidly during pregnancy and is 80% formed by three years of age and almost completely formed by the time a child is primary school age. Poor experiences impair brain development. Once formed, they cannot be reversed.

Children who have adverse experiences in childhood – and as a consequence, impaired brain development – are more likely to be involved as teenagers and adults in risky sexual behaviour, alcohol and drug misuse, and antisocial behaviour. They are also three times more likely to be depressed.

Health sense

In adulthood, those problems are harder to treat and are more resistant to change. Economists, including Nobel prizewinner James Heckman, have demonstrated that investment in pregnancy and the first years of life makes economic as well as health sense, as modest investment in those years brings a 9–10 fold return on every £1 invested.

The return comes through a more highly educated, skilled and motivated adult workforce, and through avoiding the costs associated with criminal behaviour, unemployment, alcohol, drug misuse, child abuse and a range of other poor health and social outcomes.

Northern Ireland is facing unprecedented financial challenges. Less of the same will not help us to move up the league tables in any number of quality of life indicators. I would argue that we should accept the international evidence from economists, psychologists, child development specialists and others, and prioritise investment in services that provide intensive support during pregnancy and the first five years of life.

New approach needed

My report highlights two programmes in particular – Family Nurse Partnership (FNP) and Roots of Empathy – which, if introduced across Northern Ireland and as a minimum to 40% of our children, would enable every child to fulfil their potential.

The Scandanavian countries – Sweden, Norway, Denmark, Finland – have long been the envy of other developed countries in terms of their performance on a range of indicators. We can achieve the same at modest cost and with huge benefit economically and socially. It's time for a new approach.

Further information

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Introduction

This, the second *Annual Report* of the Director of Public Health (DPH) for Northern Ireland, describes the main public health challenges in the region. It also presents a snapshot of work from the broad range of activities undertaken by the Public Health Agency (PHA) and its partners in 2010 to improve the health and social wellbeing of the population.

Report structure

The report structure reflects the main areas of public health action:

- improving health and reducing inequalities;
- improving health through early detection;
- improving health through high quality services;
- protecting health.

For ease of reference, the sections are colour coded.

On page 77, the report also lists core tables for 2009 relating to key statistical data on, among others, population, birth and death rates, mortality by cause, life expectancy, immunisation and screening.

The tables themselves are available as a portable document format (PDF) file on the PHA website at www.publichealth.hscni.net

Background

The PHA was established to:

- protect public health and improve the health and social wellbeing of people in Northern Ireland;
- reduce inequalities in health and social wellbeing through targeted, effective action;
- build strong partnerships with key stakeholders to achieve tangible improvements in health and social wellbeing.

The PHA takes direct public health action and commissions or facilitates action by others, including a wide range of community, voluntary and statutory partners across all sectors.

Improving health and reducing inequalities

Overview

As we face a difficult economic climate, inequalities may worsen over the coming period. For this reason the PHA will redouble its efforts, working with partners in many different sectors, as well as directly with communities, to ensure we make best use of our collective efforts and resources.

In this our second year of operation, the PHA has been systematically examining the evidence of best practice and effectiveness to ensure that investment and joint working will bring clear benefits.

We are setting out four key themes to our work:

- Give every child and young person the best start in life: Investment in early years brings significant benefits later in life across areas such as health and wellbeing, education, employment, reduced violence and crime. We are committed to pursuing strongly evidenced programmes to build resilience and promote health and wellbeing.

- Ensure a decent standard of living for all: Lower socioeconomic groups have a greater risk of poor health and life expectancy. We will focus efforts in a number of areas where, working with partners, we can impact on achieving a decent standard of living for all.

- Build sustainable communities: The views, strengths, relationships and energies of local communities are essential in building effective approaches to improving health and wellbeing. We are committed to community development, engaging people in decision making and in shaping their lives and social networks.

- Make healthy choices easier: Creating an environment that encourages and supports health is critical. We are committed to working across a range of settings to ensure that healthier choices are made easier for individuals.

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Give every child and young person the best start in life

Family nurses offer young mothers a bright future

Public health challenge

What happens during pregnancy and in the first years of a baby's life has a major influence on his or her subsequent behaviour, education, employment, health and other life chances. From international research on child development, the PHA identified and subsequently introduced the FNP programme in Northern Ireland.

Actions

FNP is an intensive preventive programme for vulnerable, first time young parents. It covers from early pregnancy until the child is two.

This licensed programme, developed at the University of Colorado, is thoroughly evaluated and has tangible outcomes evidenced through 30 years of research.

The programme taps into every parent's instinctive desire to protect and do the best for their child, which is particularly strong in pregnancy and around the birth of their baby.

Parents receive regular home visits from a specially trained nurse. These visits are structured, and cover areas such as personal health, environmental health, life course development, maternal role, family and friends, and health and human services. The approach and materials used are rooted in theories of attachment, self-efficacy and human ecology.

The first phase of FNP is being introduced across the Western Health and Social Care Trust (HSCT) area. The family nurses have been recruited and initial training completed. The programme was made available to eligible mothers from 24 November 2010, and several young women now receive this new service.

Outcomes

This innovative programme achieves remarkable outcomes for both parents and children. These include better educational attainment, less antisocial behaviour, less child abuse and fewer young people entering the criminal justice system.

The programme also supports other priorities including breastfeeding, smoking in pregnancy, obesity prevention, reducing inequalities, and supporting relationships.

FNP has been shown not only to be cost-effective, but cost-saving, with every £1 spent on the programme producing savings of £2.88 in the longer term.

Olivia McDade, from left, Supervisor of Family Nurse Partnership, Western HSCT, with Family Nurses Emma McCurry, Kathleen McDevitt and Alice MacKenzie.

Next steps

The Department of Health, Social Services and Public Safety (DHSSPS), PHA and Western HSCT are in the early stages of implementing this programme, supported by colleagues at the Department of Health (DH), London.

Key facts

- FNP is a voluntary preventive programme for teenage mothers.
- FNP offers intensive and structured home visiting, delivered by specially trained 'family nurses', from early pregnancy until the child is two.
- The aim of FNP is to improve the health and wellbeing of our most disadvantaged families and children and prevent social exclusion.
- FNP is being tested across England, Scotland and now on one test site in Northern Ireland.
- Around 2,600 children are born each year to first time mothers in more vulnerable circumstances.

Further information

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Delivering Roots of Empathy in classrooms

Public health challenge

Building emotional resilience in children is a key challenge for public health, both for children's own mental health and wellbeing and the impact that this has into adult life.

At the launch of Roots of Empathy are, from left: Mary Gordon, founder of Roots of Empathy; Leslie Boydell, Associate Medical Director, Belfast HSCT; Hugh McCaughey, Chief Executive, South Eastern HSCT; Denise Smith and baby son Aidan, who are helping to deliver the programme at Wheatfield PS, Belfast; Dr Carolyn Harper, Director of Public Health, PHA; Kate Thompson, Director of Children's Services, South Eastern HSCT; and Colm McKenna, Chairman, South Eastern HSCT.

Roots of Empathy is an evidence-based classroom programme which has been shown to reduce levels of aggression among school children, while also improving social and emotional competence and increasing empathy. Significantly, it provides an effective approach to reducing the risk factors which cause violence.

Actions

At the heart of the programme is a baby and parent from the local community, who visit the classroom on a monthly basis throughout the year. A trained instructor coaches students to observe the baby's development and to label the baby's feelings.

This "emotional literacy" lays the foundations for more safe and caring classrooms. Children become more competent in understanding their own feelings and the feelings of others (empathy) and are therefore less likely to physically, psychologically and emotionally hurt each other through bullying.

Roots of Empathy
Racines de l'empathie

South Eastern HSCT and Belfast HSCT, together with local stakeholders, have secured agreement with 27 primary schools to deliver Roots of Empathy. Some 584 children are participating in this pilot phase, which has a strong focus on schools serving more disadvantaged communities.

Outcomes

A number of randomised controlled trials have found that children already identified as having bullying and aggressive behaviours, and who participated in Roots of Empathy, had a reduction in these behaviours of 88%, compared to those identified children who did not receive the programme. The latter group had an increase in aggression and bullying behaviour of 50%. The reduction continues for at least three years after completion of the programme.

Next steps

Queen's University Belfast (QUB) has been commissioned to undertake an evaluation of the pilot phase during 2010–11 and this is expected to inform the wider roll-out of the programme. A submission has also been made to the National

Institute for Health Research (NIHR) for an evaluation of the programme over time.

The PHA is working with trusts and education boards to plan the rollout of Roots of Empathy to other areas.

Key facts

- 26% of year 6 pupils said they had been bullied once or twice in the "past couple of months" and 17.1% said they had been bullied "two or three times a month" or more often during the past couple of months.[1]
- 37% of all respondents to the *Young Life and Times Survey* in Northern Ireland (16 year olds) said they had been bullied in school.[2]
- Children's sense of wellbeing and life satisfaction in the United Kingdom (UK) falls well behind other European countries.[3]
- Investment in children's targeted services brings significant financial benefits: for every £1 invested in early intervention forecasts, benefits between £7.60 and £9.20 can be expected to be generated.[4]

Further information

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Building an upward trend in breastfeeding rates

Public health challenge

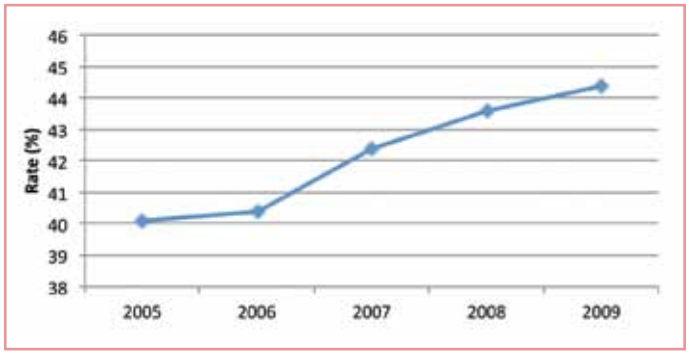
The short and long-term health benefits of breastfeeding are well evidenced:

- Formula-fed infants are more likely to need hospitalisation for treatment of gastroenteritis and lower respiratory tract infections.
- Breastfed babies are at less risk of sudden infant death syndrome, childhood obesity and type 1 and 2 diabetes.[5,6]
- Mothers who breastfeed for more than a few months also benefit from reduced risk of breast cancer, ovarian cancer and osteoporosis.[5,6]

The challenge is to continue to increase breastfeeding rates by improving support for breastfeeding mothers and babies across Northern Ireland.

Barbara Spratt, right, Breastfeeding Coordinator, Mater Hospital, Belfast, celebrates BFI achievement with Lisa Copeland and son Johnny.

Figure 1: Northern Ireland breastfeeding rate (%) at discharge, 2005–09



Actions

The PHA has developed a thematic action plan for breastfeeding with the aim of ensuring evidence-based approaches are taken to breastfeeding programmes and initiatives are delivered at regional and local level.

As part of the Focus on Health Inequalities events in November, the PHA and DHSSPS held a successful seminar, Breastfeeding: The Way Ahead. This was attended by over 100 delegates from the statutory and community sector. Important feedback will be used to inform the development of an updated breastfeeding strategy for Northern Ireland.

Outcomes

The National Institute for Health and Clinical Excellence (NICE) recommends that UNICEF UK Baby Friendly Initiative (BFI) standards are implemented within the health service.[7] We are supporting trusts and Sure Start projects to implement BFI best practice standards:

- 61% of births in Northern Ireland are now in BFI hospitals, the highest proportion in the UK, but well short of the near 100% in Sweden.
- Royal Jubilee Maternity Service, Mater Hospital and Erne Hospital were awarded BFI accreditation.
- Gold Community Partnership Sure Start and southern sector of Western HSCT also received the prestigious BFI award for the first time.

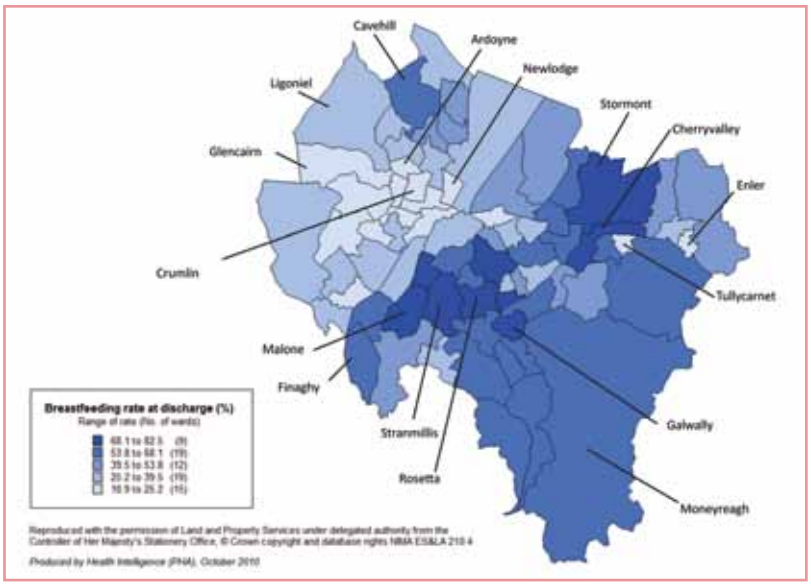


Figure 2: Belfast LCG breastfeeding rate at discharge by electoral ward, 2007–09

Next steps

The importance of mother-to-mother support is acknowledged in evidence of effective interventions for breastfeeding.[7] We are working in partnership with local peer support programmes to develop a regional training programme which will be certified by Open College Network Northern Ireland and launched in spring 2011.

Key facts

- Northern Ireland has one of the lowest breastfeeding rates in the UK. New figures detailed in a PHA breastfeeding heath intelligence briefing paper show an encouraging upward trend.[8]
- The majority of women now start to breastfeed, but most stop in the first few weeks.
- Those least likely to breastfeed include young mothers and those on low incomes.
- Mothers living in the 20% least deprived wards here are on average almost twice as likely (1.9 times) to be breastfeeding at time of discharge from hospital than mothers living in the 20% most deprived wards.[8]
- The *Northern Ireland Breastfeeding Strategy* has been a vital and effective framework for promotion and support of breastfeeding.[9]

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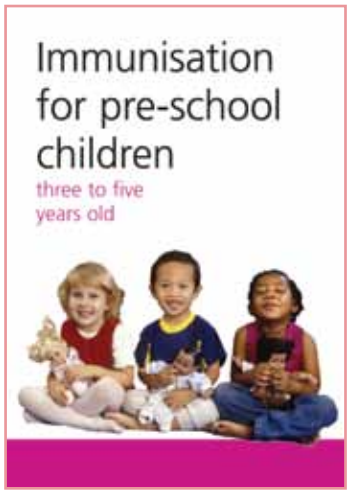
Programme immunises against 11 diseases

Public health challenge



The childhood immunisation programme now protects children against 11 diseases and runs from two months of age through to the booster given to children before they leave secondary school. Once common and serious diseases are now extremely rare or do not occur at all here because of immunisation. The programme has become more complex over recent years as more vaccines have been added to give children ever more protection.

Actions

The PHA has set up and leads a childhood immunisation group that includes representation from trusts, general practice, paediatrics, the DHSSPS and Health and Social Care Board (HSCB) as well as specialties from within the agency itself. This group has taken a number of actions to further improve vaccine uptake levels including:

- identifying areas with relatively low uptake rates and meeting with professionals from these areas to see how rates can be improved;
- offering vaccines to children in year 1 at school if they missed out previously;
- changing the age at which first measles, mumps, rubella (MMR) vaccine is given from 15 months to 13 months to bring us in line with the rest of the UK.

Outcomes

In Northern Ireland we have high vaccination uptake levels. By 12 months of age, over 97% of children have received all of the vaccines that they are due. This compares with 94% for the UK overall.[10] At two years of age, nearly every child here (99%) has had all three doses of the diphtheria, tetanus, pertussis, polio and Hib vaccine.

The MMR vaccine does not have quite such good uptake – a legacy of the scare stories surrounding it, although subsequently discounted. However, uptake at two years has risen to 92.2% and at five years is over 97% for one dose and over 92% for two doses – higher than the UK average.[10]

Next steps

Rates will be monitored closely at both a regional and local level so that any problems can be identified early and corrective action taken.

All GPs are being fed back their individual uptake rates on a regular basis so that those with below average uptake can look at ways to address this.

Education of professionals and the public is key to maintaining good uptake and we will continue to make this a high priority.

Table 1: Current childhood immunisation schedule

When to immunise	Diseases vaccine protects against	How it is given
2 months old	Diphtheria, tetanus, pertussis (whooping cough), polio and Hib	One injection
	Pneumococcal infection	One injection
3 months old	Diphtheria, tetanus, pertussis, polio and Hib	One injection
	Meningitis C	One injection
4 months old	Diphtheria, tetanus, pertussis, polio and Hib	One injection
	Meningitis C	One injection
	Pneumococcal infection	One injection
12 months old	Hib and meningitis C	One injection
13 months old	Measles, mumps and rubella	One injection
	Pneumococcal infection	One injection
3 to 5 years old	Diphtheria, tetanus, pertussis and polio	One injection
	Measles, mumps and rubella	One injection
Girls 12 to 13 years old	Cervical cancer caused by human papillomavirus types 16 and 18	Three injections over six months
14 to 18 years old	Tetanus, diphtheria and polio	One injection

Key facts

- The childhood immunisation programme now protects children against 11 diseases.
- Vaccine uptake rates are at an all time high in Northern Ireland – 99% for primary immunisations by two years of age.
- MMR uptake has recovered well and is now back up to its highest levels – 97.1% for one dose and 92.2% for two doses at five years of age.
- Once common diseases are now rare.

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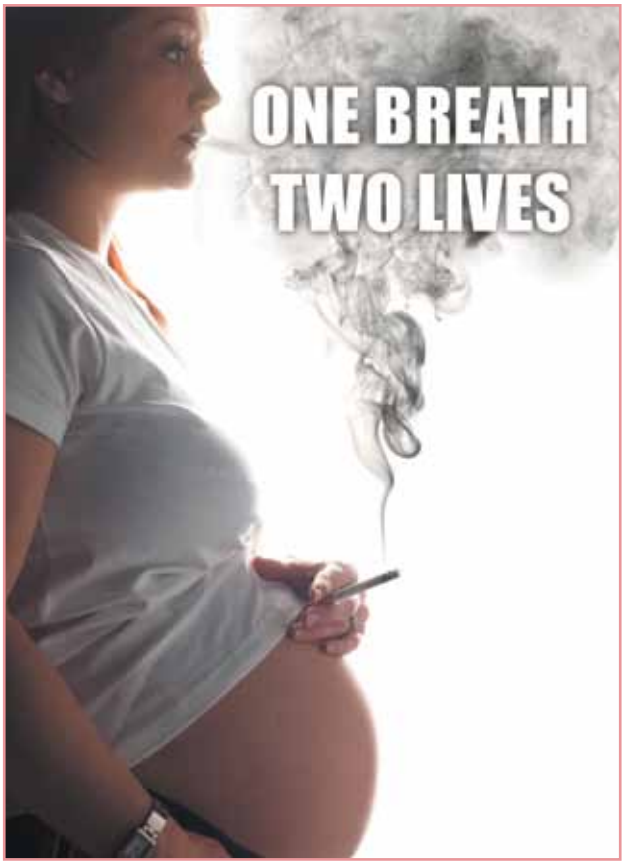
Service emphasis on smoking in pregnancy

Public health challenge

Smoking in pregnancy is associated with a range of negative outcomes. Women who smoke are at higher risk of having a miscarriage, ectopic pregnancy (pregnancy outside of the womb), placental difficulty, premature or low birth weight baby, stillbirth, perinatal death (death in the first four weeks of life), sudden infant death syndrome (cot death) and baby with a cleft lip and palate.

Smoking in pregnancy can also compromise breastfeeding because women who smoke are less likely to breastfeed, produce less milk and of poorer quality, and feed for a shorter period of time.[11] In addition, the children born to smokers are more likely to suffer from wheeze, asthma, severe ear, nose and throat problems, including glue ear (*otitis media*).



Psychological problems such as attention deficit, hyperactivity and disruptive and negative behaviour are also more common.[12,13] Smoking in pregnancy has a strong social class gradient and contributes to health inequalities. Low birth weight is related to poor health outcomes and death in infancy.

The costs to the National Health Service (NHS) of smoking in pregnancy have been estimated at between £8.1m and £64m for maternal consequences and £12m–£23.5m for infant outcomes.[14]

Actions

The PHA has been working with the HSC trusts to develop new or enhance existing specialist smoking cessation services for pregnant women. NICE guidance will be implemented in all trusts.[15] All trusts are required to develop protocols of care for pregnant women who smoke, and to ensure pregnant women are advised and supported to stop smoking – not simply to cut down.

An increased focus on smoking in pregnancy is being promoted through Sure Start projects, the FNP programme and with community partnerships. A pilot programme offering incentives to women who stop smoking during pregnancy is to be piloted in Colin Neighbourhood Sure Start, Belfast.

Outcomes

In 2009–10, 598 pregnant women availed of the specialist support available for smoking cessation, with 52.5% of these successfully quitting.[16]

Next steps

The target is to increase the number of women successfully quitting smoking in pregnancy by 20% in 2010–11.

Key facts

- Smoking in pregnancy is associated with a range of negative outcomes.
- Smoking in pregnancy can also compromise breastfeeding.
- In 2005, there were 32% of women who smoked in the year before or during pregnancy and 18% continued to smoke throughout pregnancy.[17]
- Smoking in pregnancy is much more common in more disadvantaged groups: 8% of professional women smoke in pregnancy compared to 34% in women who have never worked.[17]

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Ensure a decent standard of living for all

Partnership investment to address fuel poverty

Public health challenge

"A household is in fuel poverty if, in order to maintain an acceptable level of temperature throughout the home, the occupants would have to spend more than 10% of their income on all household fuel use."[18]

Improving the homes of those vulnerable to fuel poverty therefore plays an important role, as cold, damp housing can cause respiratory diseases, hypothermia and may contribute to additional winter deaths among older people.

Dr Eddie Rooney, left, Chief Executive, PHA, and Pat Austin, Director, NEA Northern Ireland, at the joint PHA/NEA annual seminar on Fuel Poverty – Improving Health and Wellbeing.

Actions

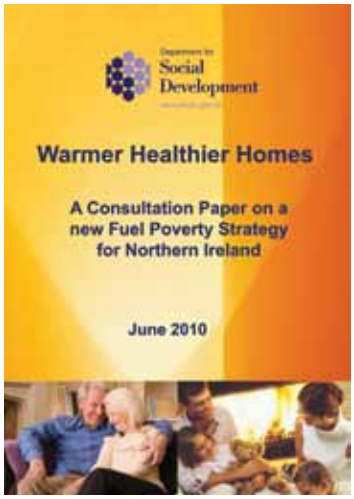
Across Northern Ireland, the PHA is working in partnership with the public, private, community, voluntary and academic sectors to research, evaluate and deliver a range of local and regional initiatives to alleviate fuel poverty and maximise income for those living in fuel poverty.

We have established a regional fuel poverty and health network to develop a more strategic approach to fuel poverty and health across the region.

In partnership with National Energy Action (NEA), we hosted a regional conference on fuel poverty and health in November.

A priority was to engage with frontline HSC staff and highlight their key role in identifying vulnerable households and in signposting to relevant support services and grants.

Outcomes



Fuel poverty investment has provided assistance, including energy efficiency advice, insulation measures, 'whole house solutions', awareness raising activity, referrals to grant schemes, access to benefits and development, and implementation of local action plans to tackle fuel poverty.

Benefit maximisation schemes across Northern Ireland have also significantly improved household incomes. These schemes, part of our fuel poverty programmes, take referrals from HSC; they aim to reduce poverty within vulnerable groups and to promote health and wellbeing.

Next steps

The PHA is investing £447,500 in 2010–11 to combat fuel poverty. Working in partnership, this investment has also attracted additional funding.

This includes energy efficiency grants through the Northern Ireland Electricity sustainable energy fund and the warm homes scheme, and £707,000 from the Department of Agriculture and Rural Development (DARD), to alleviate rural poverty and isolation.

The regional fuel poverty and health network, chaired by the PHA, will contribute to the production of the new Department for Social Development (DSD) fuel poverty strategy for Northern Ireland, *Warmer Healthier Homes*.

Key facts

- In 2006, 34% of households in Northern Ireland were fuel poor compared to 24% in 2004 and 27% in 2001.[19]
- Rural areas have been shown to have particular problems:
  - almost 24% of rural households did not have any form of cavity wall insulation;
  - 19% did not have double glazing;
  - almost 8% had no roof insulation.
- Tackling fuel poverty will impact on the environment as fuel poor households often use more polluting fuels, causing emissions of carbon dioxide and other noxious gases.[19,20]

Further information

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Accessing support in alleviating poverty

Public health challenge

Poverty is an important risk factor for illness and premature death. It affects health directly and indirectly in many ways, eg financial strain, poorer housing, living environments and diet, and limited access to employment, services and opportunities. Poor health can also cause poverty.[21]

In Northern Ireland, research on poverty carried out in 2006 found that 20% of the population was living in relative income poverty (where the household income is less than 60% of the median UK household income for the year in question) over the period 2002/03–2004/05.[22]

Actions

Across Northern Ireland, the PHA is working in partnership with voluntary and statutory sector partners on a range of initiatives to support vulnerable groups who may not traditionally access services.

Through the Advice 4 Health project, a collaboration between the PHA's Northern Investing for Health (IfH) Partnership and the Citizens Advice Bureau (CAB), four specialist workers support vulnerable groups across a range of HSC settings such as community rehabilitation centres, GP surgeries and the local inpatient mental health units.

At the Advice 4 Health: Support and Benefits Maximisation project seminar are, from left: Dr Eddie Rooney, Chief Executive, PHA; Health Minister Michael McGimpsey; and Sharon Dillon, CAB Manager, Dungannon.

A programme funded by DARD and coordinated by the PHA aims to improve the health and wellbeing of people living in the top 30% rurally deprived super output areas (SOAs) by making them aware of, or helping them access, local services, grants or benefits.

Outcomes

Since 2006, advice has been provided to over 35,000 people across the Northern HSCT area through the Advice 4 Health project – resulting in a minimum of £3.4m income maximisation being recovered for patients and clients.

Next steps

The Advice 4 Health project is sharing good practice with other stakeholders with a view to considering how this effective, integrated services model could be developed and expanded across Northern Ireland.

Key facts

- Both poverty and economic inequality are bad for health.
- Persistent poverty in Northern Ireland (21% before housing costs) is double that in Great Britain (GB) (9%).
- In January 2010, 43,000 children in Northern Ireland were living in severe poverty.[23]
- There are four main reasons for higher persistent poverty in Northern Ireland:[23]
  - high levels of unemployment;
  - high rates of disability and limiting long-term illness;
  - low wages;
  - poor quality part-time jobs and obstacles to working mothers.

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Build sustainable communities

Allotments at heart of neighbourhood renewal

Public health challenge

Allotments are being recognised as a catalyst for encouraging sustainability, healthier living and social interaction as well as a resource for local food growing.

Research has shown that contact with the natural environment and green space promotes better physical and mental health, and self-esteem.[24] Allotment schemes themselves are typically low-cost compared to the benefits they bring.

Dr Eddie Rooney, from left, Chief Executive, PHA, Tony Doherty, Co-Chair, WIFH, and Jarlath McNulty, Project Manager, Cairde, at the launch of the Strabane community allotment.

Actions

The IfH team in the western area launched an allotment strategy in 2008 in partnership with key stakeholders. The overall objective was to increase the number of people using allotments and 'grow your own' schemes, promoting the wider health and social wellbeing benefits.

This comprised five target areas: developing and delivery of training/skills base, promoting allotment gardening, encouraging sustainability, cultivating good administration, and maintaining adequate resources. Funding has been provided to community allotment schemes to develop this theme.

Outcomes

The PHA's Western Investing for Health (WIFH) Partnership invested almost £12,000 to establish Strabane community garden and allotment site to provide local regeneration for the wider community. The scheme is led by Cairde ex-prisoners group, and of the 56 plots, 39 are used by local organisations (9 plots) and residents (30 plots).

Key benefits of community allotments are:

- Mental health: a form of 'horticulture therapy' improving health and wellbeing, raising self-esteem, and developing social skills.
- Physical activity: digging and shovelling can burn up to 360 calories per 30 minutes.
- Nutrition: vegetables are rich in nutrients; children involved in growing their own fruit and vegetables are more likely to eat them.
- Social interaction: giving a focus for communities by promoting inclusion, integration and acceptance.
- Environment: reducing 'food miles' – it is estimated that food consumed each year in the UK has been transported 18 billion miles.
- Skills: providing hands-on learning to engage and motivate young people and those with learning difficulties and limited qualifications.
- Economical: growing your own fresh fruit and vegetables saves money.
- Intergenerational: involvement of older people in training schemes promotes intergenerational relationships.

Next steps

Following initial investment by the PHA, community organisations are expected to be self-sustainable. The PHA is working with local councils in the north west (including Donegal) to attract up to £1m in additional investment into the allotment concept in the region.

Key facts

- The development of allotments is an innovative approach to community engagement.
- Allotments provide a broad range of benefits to the community and to the environment.
- This is the second year the PHA has funded community allotment schemes with partners in the Western HSCT area.
- In September 2010, applications were invited from community organisations to develop allotments in the Omagh and Fermanagh areas.

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BME communities beset by health inequalities

Public health challenge

The proportion of black and minority ethnic (BME) communities living in Northern Ireland has significantly increased in the past decade, with 2009 figures reporting a four-fold increase from the 2001 census figures.[25,26] This is as a result of in-migration of individuals from eastern European EU accession countries seeking work, and of an increase in the number of non-EU nationals, refugees and asylum seekers.[27]

BME communities are a disadvantaged group in society, and health inequalities are reported.[28] Higher infant mortality rates, pregnancy complications, rates of cardiovascular disease and diabetes have all been shown in certain BME communities.[29]

Such health inequalities are multi-factorial:

- BME communities are a heterogenous group – diverse in religion, culture, language and country of birth.
- They have difficulties accessing healthcare, beyond just the language barrier.
- Mental health, children's health (including vaccination coverage) and women's health all bear a disproportionate burden.
- Wider determinants of health, such as poverty and housing, further impact on the health inequalities.

Actions

The PHA is taking steps to address the inequalities between BME communities and the local population. We have established a regional steering group, responsible for coordinating and future planning for BME communities.

A mapping exercise has been undertaken led by Belfast HSCT and in collaboration with Belfast City Council to assess the health needs of this community. The report *Barriers to Health: Health and Wellbeing in the Migrant Population in Belfast* was launched on Human Rights Day, 10 December 2010.[30] A literature review has been carried out on health protection issues prevalent in BME and new migrant communities, and a workshop for stakeholders on such issues was held.

At the launch of the *Barriers to Health* report are, from left: Leslie Boydell, Associate Medical Director, Belfast HSCT; Mary Black, Assistant Director Public Health (Health and Social Wellbeing Improvement) PHA; Dr Jillian Johnston, Specialty Registrar, Public Health, PHA; Dr Ian Adamson, Belfast City Council; Eileen Evason, Vice Chair, Belfast HSCT; and Lillian Vellum, Bryson One Stop Service for Asylum Seekers.

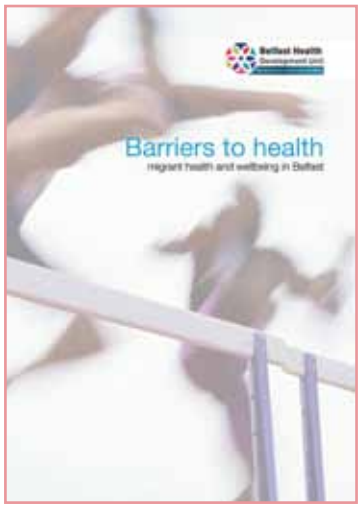
Outcomes

There is now a regional approach for tackling health inequalities, and the PHA sits on the ethnic monitoring forum. There is greater recognition of the BME communities living in Northern Ireland, and improved understanding of the health issues and public health challenges.

Next steps

It is challenging to provide sensitive and culturally appropriate health care services, but priorities have been identified: improving access to healthcare, further increasing awareness and training for HSC professionals, and enhancing

inter-agency working with the statutory and voluntary sectors. A one-stop service in Belfast for new migrants is in the early stages of planning.



There are plans to expand the Belfast mapping report to a Northern Ireland-wide report, and we are aiming to develop a repository for professionals to access information on health issues relevant to the BME communities.

Key facts

- Population of Northern Ireland in 2009 = 1.789 million.[31]
- BME population of Northern Ireland in 2009 = 73,000 (4.1%).[25]
- BME population of Northern Ireland from 2001 census = 0.85%.[26]
- Approximately 30,000 migrants are from the accession countries (37% of the total BME population), with the Polish community accounting for some 60%).[32]

Further information

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Traveller health advocacy project signposts services

Bridgie McCann, from left, Barbara Fitzgerald and Brigid McDonagh attend the celebration event for Northern Ireland peer researchers and coordinators of the AITHS.

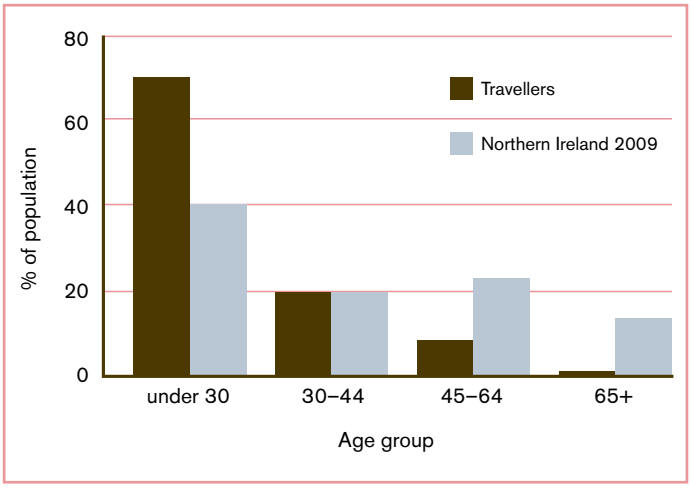
Public health challenge

The *All Ireland Traveller Health Study* (AITHS) details research activity from 2007 to 2010 and identifies Travellers as a group at significant disadvantage in health status.[33]

The age profile of the Traveller community in Northern Ireland is markedly different from that of the general population, with 70% of people under age 30 and only 1% over 65. This reflects in part a higher birth rate and higher mortality rates.

Causes of death in the Traveller population significantly relate to early onset of respiratory and cardiovascular disease or strokes, as well as high suicide rates relative to the settled population.

Figure 3: Population structure of Traveller community compared with Northern Ireland general population



Actions

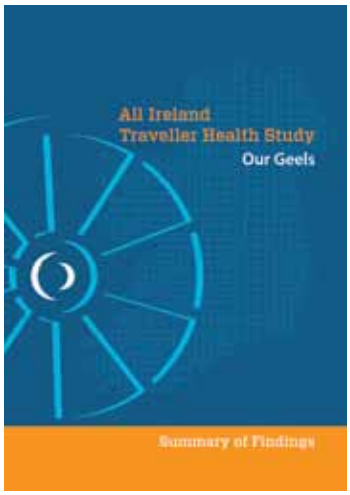
A health improvement programme is being delivered with and by Travellers in north and west Belfast through An Munia Tober. This investment supports men's health, physical activity and healthy eating programmes. In the western area, a DVD has been commissioned that raises awareness of factors impacting on the health of Travellers in particular.

Belfast HSCT is taking forward a Traveller health advocacy project involving Travellers who support and encourage their community to access primary care and acute services. PHA staff have also been supporting a Cross-Border and Working Together (CAWT) social inclusion project addressing the health and social needs of Travellers living in border counties.

Outcomes

Over 100 Travellers regularly participated in the health improvement programme delivered by An Munia Tober. A mapping exercise has been undertaken in the Western and Southern HSCT areas, and staff and programmes are now in place through the CAWT project. Belfast HSCT has produced a *Traveller Health and Wellbeing Action Plan*.

Next steps



A regional forum has been established to develop integrated action across the PHA, HSCB and trusts on the challenges outlined in the AITHS. Recommendations from the health study which will be the subject of focus and actions include:

- a multi-level education campaign to break down the stigma and stereotypes surrounding the Travelling community;
- a module on Traveller health and customs as a standard element in the under- and postgraduate curricula for health and education professionals;
- routine induction on Travellers and guidelines on management of Traveller families in hospitals with a significant Traveller catchment population, and in GP practices with Traveller lists.

Key facts

- A high proportion of adult Travellers have no formal qualifications although this is improving slightly in the younger age groups.[34,35]
- Mortality among Travellers in the Republic of Ireland is 3.5 times higher than in the general population for both genders and across ages.
- For male Travellers, life expectancy at birth is 61.7 years – 15 years less than the general population.[33]
- For female Travellers, life expectancy at birth is 70.1years – 11 years less than the general population and equivalent to that of women in the early 1960s.

Further information

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Improving health and reducing LGB&T stigma

Public health challenge

A person's sexual orientation does not in itself predict an increased risk of experiencing health inequalities. However, research suggests that discrimination has a negative impact on the health of lesbian, gay, bisexual and transgendered (LGB&T) people in terms of lifestyles, mental health and other risks.

Health inequalities experienced by LGB&T individuals include sexually transmitted infections (STIs), homelessness and increased risk of some cancers. Same-sex attracted young people aged 16 are under greater pressure regarding alcohol, tobacco, weight loss and drugs; they are prone to greater levels of stress and bullying in school, and have higher levels of self-harm.[36]

Actions

The PHA has worked with the LGB&T sector to develop an action plan to take forward a range of initiatives including:

- increased sexual health outreach provision in the Belfast area;
- representation on the regional LGB&T consultative forum;
- additional training and resources to support the work of the LGB&T sector throughout Northern Ireland.

Outcomes

There are increased resources to help address some of the issues impacting on the health and social wellbeing of individuals who identify as LGB&T.

Work is ongoing with the Police Service of Northern Ireland (PSNI) in the Western HSCT area to implement the Foyle Protocol to improve the police response to crimes against the LGB&T community. This has encouraged more reporting of hate crime incidents.

As part of the response to Anti Homophobia Week on 10–17 November 2010, we supported the Rainbow Project's Enough campaign which was launched at an event in Parliament Buildings.

Supporting The Rainbow Project's Enough campaign as part of Anti Homophobia Week in Belfast, are PSNI representatives of 'B' District, Community Safety Unit, with, from left: Eva Grosman from Unite Against Hate; John O'Doherty, Director, The Rainbow Project; and Charo Lanao Madden, Commissioner, Northern Ireland Human Rights Commission.

The PHA response to the Office of the First Minister and Deputy First Minister (OFMDFM) *Programme for Cohesion, Sharing and Integration* consultation document included an emphasis on LGB&T issues.[37] It is hoped that the revised document, due to be published early in 2011, will provide an invaluable opportunity for the LGB&T sector to be more involved in a shared and better future for all members of our community.

Next steps

The PHA will ensure that needs of LGB&T communities are fully taken into account and addressed within and across the wide range of health and social wellbeing improvement action plans.

Specifically, we will focus on supporting HSC professionals in recognising and dealing with issues that face LGB&T people; commissioning services which provide direct support; and working with partners to reduce the stigma and discrimination experienced by LGB&T people in Northern Ireland.

Key facts

- Over one quarter of young same-sex attracted men (27.1%) have attempted suicide and over two thirds (71.3 per cent) have thought about taking their own life.[37]
- Over one third (34.4%) of young same-sex attracted men have been diagnosed with a mental illness at some time in their lives.[38]
- It is estimated that LGB&T young people represent 30% of the young homeless population in urban areas.[39]
- LGB&T communities exhibit high risk behaviour regarding drugs, alcohol, smoking and sex, with increased risk of cancer among gay men.[40]

Further information

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Make healthy choices easier

Children encouraged to get a life, get active

Public health challenge

The prevalence of overweight and obesity has increased dramatically in Northern Ireland and the serious implications for health and wellbeing are well documented.[41,42] These include an increased risk of medical conditions, a negative impact on emotional and psychological wellbeing and self-esteem, and a reduction in life expectancy by up to nine years.[43]

During a break at the PHA childhood prevention workshop at the Lough Neagh Discovery Centre, Christophe Roy, from left, Coordinator, EPODE European Network (EEN), Dr Eddie Rooney, Chief Executive, PHA, and Health Minister Michael McGimpsey watch a young visitor enjoy the slide.

Actions

During 2009–10 the PHA developed a thematic action plan for obesity to ensure evidence-based approaches for the development and delivery of programmes and initiatives at both regional and local levels.

A public information campaign on physical activity, which aims to encourage children to be more active, was launched in September. Parents and carers are encouraged to visit the website www.getalifegetactive.com, and to plan activities as a family.

We have worked in partnership with district councils, the Food Standards Agency (FSA), *safe*food and the Chartered Institute of Environmental Health (CIEH) to develop a healthier eating catering award for catering establishments across Northern Ireland.

We continue to work in partnership with primary and secondary care, leisure services and healthy living centres to provide physical activity/exercise referral schemes.

In partnership with *safe*food, the Department of Education (DE) and DHSSPS, we produced a new leaflet, *Are You Packing a Healthy Lunch*? which was distributed to every child in primary school. A booklet *Healthier Lunch Boxes* was also provided to all schools to show how they can support healthier food choices in packed lunches.

Outcomes

In partnership with community dietitians and the FSA, we delivered a further course leading to the Royal Society for Public Health (RSPH) Diploma in Nutrition and Health. To date, over 60 participants from education and library boards,

health improvement and environmental health have been awarded the diploma, and this year one of the candidates was awarded first place across the entire UK.

Next steps

We are working with a range of partners to investigate the implementation of the Ensemble, Prévenons L'Obésité des Enfants (EPODE *Together, Let's Prevent Obesity in Children*) methodology in Northern Ireland. With colleagues from the statutory and voluntary sectors, we are adapting the Cook it! programme for use with people with learning disabilities. This will be piloted in spring 2011 and then made available for use across Northern Ireland.

Key facts

- Rates of obesity tend to rise with increasing disadvantage across developed countries, particularly among women.[44]
- The risk of developing type 2 diabetes is increased by 12.7 times in obese women and by 5.2 times in obese men.[43]
- Among adults, 35% are overweight and a further 24% are obese.[41]
- In 2006, 18% of children aged 2–15 years were reported to be obese; provisional data in 2008–09 showed that 22.5% of children entering year 1 were already overweight (17%) or obese (5%).[41,45]

Further information

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Improving wellbeing through peace of mind

Public health challenge

Poor mental health affects at least one in five of the adult population in Northern Ireland.[46] The current economic downturn has led to an increase in unemployment, fears of redundancy and money worries – all of which have an impact on the mental health and wellbeing of individuals, families and communities in Northern Ireland.

Actions

The campaign to promote Lifeline continued throughout the year and has led to increased public awareness of the Lifeline number 0808 808 800. A website www.lifelinehelpline.info was launched to raise the profile of the service.

The PHA's award-winning public information campaign encouraging young men to open up and talk about their feelings was re-run during the year. In June we held an event with key stakeholders to help inform the development of phase three of the mental health public information campaign.

The next phase of the campaign will include a focus on issues which can have a negative impact on the mental health and wellbeing of individuals, families and communities, including the economic downturn.

Responding to a request from the Irish Congress of Trade Unions (ICTU), we facilitated training for 36 union representatives from across Northern Ireland to help build their skills and confidence in supporting colleagues in a range of workplace settings. Participants attended mental health first aid (MHFA) training and applied suicide intervention skills training (ASIST).

Dr Eddie Rooney, Chief Executive, PHA, Health Minister Michael McGimpsey and Liz Mayne, a judge for the Mind Mental Health media awards.

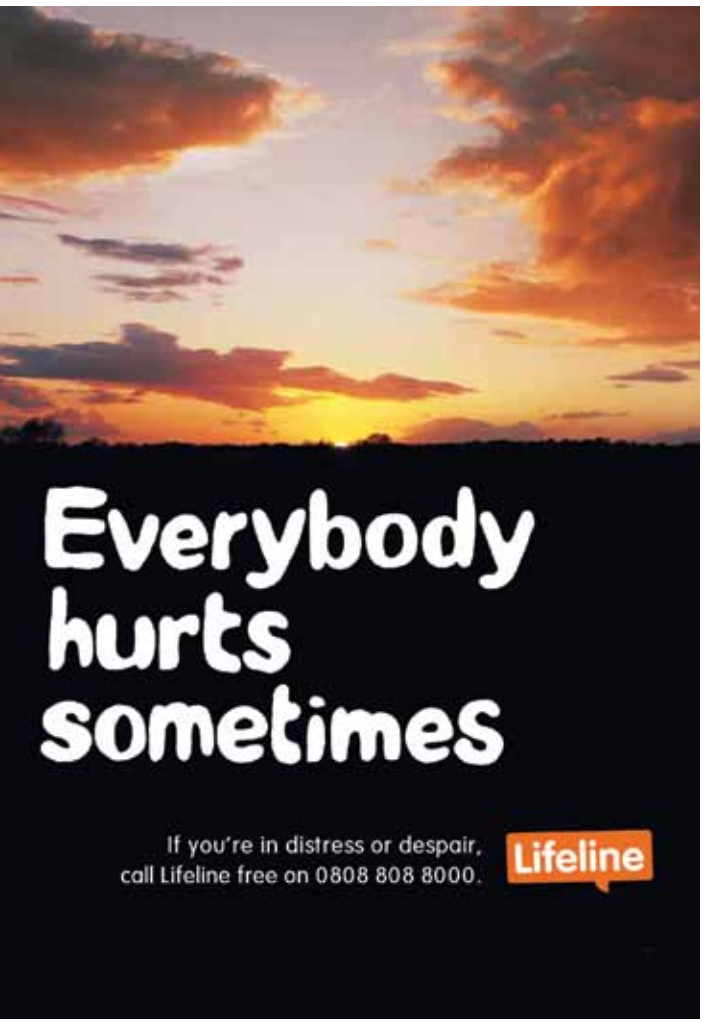
Outcomes

ICTU plans to re-run both training programmes as part of its ongoing calendar of training next year.

Next steps

The development of the new mental health public information campaign is underway, with implementation scheduled for 2011–12.

We will continue to support the regional rollout of the MHFA training and take forward the recommendations from the all island evaluation of the ASIST programme.



Key facts

- At least one in five adults in Northern Ireland may suffer from some form of common mental health disorder in any year.[46]
- Research into public sector sickness absence highlighted that stress, depression, mental ill health and fatigue accounted for 23% of lost working days, at a cost of around £5.3m.[47]
- In the *Health and Social Wellbeing Survey*, 19% of the Northern Ireland population aged 16 and above scored four or more on GHQ12, indicating possible psychiatric morbidity.[48]
- It is estimated that the rate of mental health problems in Northern Ireland is 20–25% higher than in the rest of the UK.[49]
- In 2009 there were 260 registered deaths by suicide in Northern Ireland of which 205 were of males and 55 were of females.[50]

Further information

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Emerging drugs of concern present major challenges

Attending a film screening to raise awareness around substance misuse by Carlisle House, a substance misuse treatment centre in Belfast supported by the PHA, are, from left, Rob Phipps, Head of Drugs Strategy, DHSSPS; a service user group member; Tim McCullough, Educational Shakespeare Company; Mary McMahon, Chairperson, PHA; and Davis Turkington, Drugs and Alcohol Coordinator, PHA.

Public health challenge

The emergence of legal highs in the latter part of 2009 and 2010 presented major challenges for the PHA in ensuring that targeted and accurate information was available for the general public and our wide range of partners.

Mephedrone – colloquially known as Miaow, Meph and TopCat – grew quickly in popularity and was widely available for purchase online. It is hard to fully determine the risks of legal high substances with any accuracy because their toxicity and metabolism are still largely unknown, unlike other stimulant drugs such as cocaine and ecstasy.

Actions

We consistently and strongly lobbied for legislation which would allow for emerging drugs of concern to be banned immediately. We are pleased that the Home Office has now confirmed plans to give ministers the power to immediately ban new drugs and chemicals for a year until they have been properly assessed for health risks.

Recent research with mephedrone users in England found that most of them had first heard about it in the media, and this highlighted the need to provide information on legal highs through a targeted approach.[51]

In light of this, we undertook the following actions:

- developed a legal highs factsheet for parents and those working with young people, and produced a bulletin on mephedrone;
- issued regular press statements on emerging drugs of concern that emphasised the message that legal does not mean safe;
- supported local communities, groups and schools by providing information and advice through the wide range of additional drug and alcohol services that we fund;


Legal highs factsheet

HSC Public Health Agency DHSSPS

- developed materials for young people on legal highs, in partnership with the Forum for Action on Substance Abuse;
- funded specific training programmes on legal highs and other emerging drugs of concern for practitioners and communities.

Outcomes

Our legal highs factsheet and mephedrone bulletin have been distributed to over 300 organisations. Working in partnership, we have supported and provided information on emerging drugs of concern through local community events. We have delivered 28 specific training programmes on legal highs to date to over 1,000 participants from the statutory, voluntary and community sectors.

Next steps

The PHA will continue to closely monitor the situation and take effective actions to reduce the risks from emerging drugs of concern.

Key facts

- A legal high is a drug that is not controlled under the Misuse of Drugs Act and is therefore legal to possess.
- On 16 April 2010 mephedrone was made a Class B illegal drug.
- On 23 July 2010 naphyrone (NRG1) was made a Class B illegal drug.
- On 4 November 2010 the import of a chemical identified in samples of the legal high-branded product Ivory Wave was banned.

Further information

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Alcohol – sleepwalking into a major crisis?

Public health challenge

Alcohol has never been more affordable or available. A combination of rising disposable income and stable alcohol prices means it is now 65% more affordable to buy alcohol than 20 years ago.[52]

It is estimated that we are spending approximately £680m annually in Northern Ireland addressing alcohol misuse. This includes costs to healthcare, policing, probation and prison services, social services, and workplaces through absenteeism.[53]

Northern Ireland has seen a notable increase over the past 15 years in both the number of people drinking alcohol and the number drinking in excess of the weekly recommended levels. The change in licensing laws in 1996, the effects of the peace process, and the rapid growth of the leisure industry in Northern Ireland as a result, are possible reasons why consumption in Northern Ireland has increased at a much greater pace than the rest of the UK.[54]

Our drinking is not yet out of control but we are potentially sleepwalking into a major crisis.

Actions

There is a strong body of evidence to show that making alcohol less affordable has the biggest impact in reducing consumption levels and therefore in reducing health and social harms.

Attempts to increase the cost of alcohol through levying higher taxes have not been successful because retailers, particularly supermarkets, have tended to absorb the cost of the increased taxes and have sold alcohol as a loss-leader.

Focus has therefore shifted to the possibility of introducing a minimum price for alcohol. This would ensure that retailers cannot sell alcohol below a certain baseline cost. The minimum price would be set per unit of alcohol, termed 'minimum unit pricing'.

Launching the CAWT Time 4A Change border region alcohol project are board members, from left: Caitriona Mullan, Time 4A Change project manager; Barbara Ward, Coordinator, Western Drugs and Alcohol Coordination Team, Western HSCT; Edel O'Doherty, Deputy Chief Officer, CAWT; Eamon O'Kane, Project Director, North West Alcohol Forum; Fiona Teague, Director, Derry Healthy Cities; and Yvonne McWhirter, Head of Mental Health Specialist Services, Western HSCT.

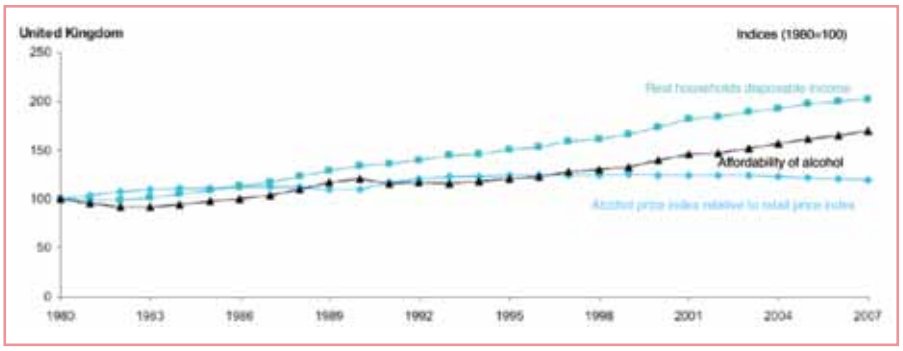
Outcomes

The PHA has placed its support firmly behind measures proposed by the Northern Ireland Assembly to control the consumption of alcohol by introducing minimum unit pricing and bans on irresponsible drink promotions.

Next steps

We need to continue to lobby for local measures to restrict the availability of alcohol. Reducing alcohol consumption will reduce the impact on health and other public services and there has never been a more urgent time to do so, given the increasing pressure on public finances.

Figure 4: Affordability of alcohol measured against disposable income and alcohol price, using 1980 as a base



Key facts

- The majority of alcohol-related harm is attributable to excessive or hazardous drinkers and not those with severe alcohol dependence.[55]
- Alcohol is the third most significant risk factor for ill health and premature death in the EU, behind tobacco and high blood pressure.[56]
- Of those who drank alcohol in the week before a 2008 survey, 10% had a problem (ie dependency) and 81% exceeded the recommended daily drinking guidelines.[57]
- Research carried out with 11–16 year olds in 2007 showed that over half had drunk alcohol, and over half of these had been drunk on at least one occasion.[58]

Further information

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Improving health through early detection

Overview

Bowel cancer screening programme is launched

PHA leads implementation of new screening policy

Breast screening uptake the challenge for future

Diabetic retinopathy focus shifts to quality assurance

Baby heel prick test achieves high coverage

New AAA screening programme in pipeline

Overview

Early detection of disease often produces better outcomes for patients. At this stage, treatment may be more effective, avoiding significant ill health and in some cases premature death.

Population screening programmes have a key role to play in early detection of disease. A range of programmes are available in Northern Ireland and the PHA has responsibility for commissioning, coordinating and quality assuring these programmes.

However, screening is not suitable for every condition. Organised screening programmes are only established on the recommendation of the UK National Screening Committee (NSC) and according to the best available evidence. Any condition being considered for a screening programme must meet a number of stringent criteria before it is recommended by the committee.

Bowel cancer screening is the newest programme to be introduced in the UK, with the Northern Ireland programme being successfully rolled out from April 2010. It is already demonstrating its impact on the population with early cancers being detected. Plans are now also underway to prepare for the introduction of an abdominal aortic aneurysm (AAA) screening programme.

More established screening programmes undergo a process of continuous quality improvement. Significant achievements in 2010 include:

- implementation of a new policy on age range and screening intervals for cervical screening;
- development of new data linkages in the breast screening programme;
- introduction of electronic transfer of data from GP practices to the diabetic retinopathy screening programme;
- establishment of a regional quality improvement group for newborn blood spot screening.

This chapter describes the above developments in more detail.

Further information

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Bowel cancer screening programme is launched

Public health challenge

Bowel cancer is a significant cause of ill health and premature death in our community. Symptoms often develop late in the disease, leaving limited scope for treatment and potential cure. The benefits of bowel cancer screening programmes are early detection and treatment, significantly improving outcomes for those with the disease.[59]

Screening programmes are likely to prevent about one in every six deaths from bowel cancer and have been rolled out across the UK in recent years. Last year I reported that work was underway to develop a similar screening programme here, aimed at men and women aged 60–69.

Actions

I am now delighted to report that the Northern Ireland bowel cancer screening programme was launched by the Minister for Health in April 2010. This was the culmination of two years of work led by the PHA and involving many individuals from a range of organisations and disciplines.

Implementation is underway on a phased basis, with screening now available in the Northern, Western and South Eastern HSCT areas.

Outcomes

After only six months, we have already seen the benefits. To mid October 2010, 8,584 individuals had completed a bowel cancer screening test kit, 237 had received a positive screening result, and 14 had been diagnosed with screen-detected cancer, some of which were identified at a very early stage of disease. Another 30 people, considered to be at high or moderate risk of cancer, had been entered into a surveillance programme for follow-up colonoscopy.

Laboratory technicians analyse samples from the bowel cancer screening test kit.

Provisional data over the initial few months suggest that approximately 45–49% of people invited for screening subsequently complete a test kit. This is encouraging for such a new programme and is a similar level to that seen elsewhere in the UK.

Next steps

Work is ongoing to complete the roll out of the programme to all areas of Northern Ireland.

We then intend to run a public information campaign to raise awareness of the benefits of screening. We will establish the monitoring processes and structures to coordinate and support the quality assurance of the programme.

With the trusts, we are planning for year two of the programme to ensure that adequate assessment and treatment services are in place for timely management of individuals with a positive screening result, and those requiring surveillance.

Key facts

- Each year about 1,000 people are diagnosed with bowel cancer in Northern Ireland and 400 die from it.[60]
- 45–49% of people invited for screening completed a test kit.
- 8,584 people participated in the first six months of the programme, with 14 cancers detected.
- 54% of those who used the home testing kit are women, 46% are men.

Further information

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PHA leads implementation of new screening policy

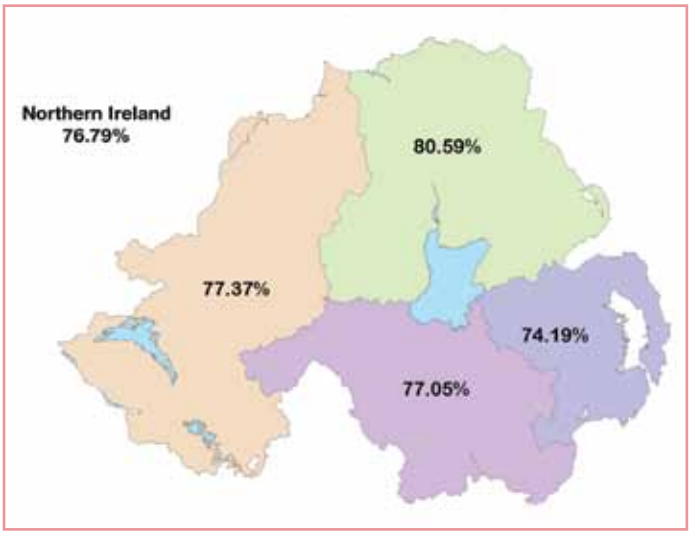
Public health challenge

Although a cervical screening programme has been in place in Northern Ireland for over 20 years, we are constantly working to improve the quality of the programme and ensure it is as effective as possible. During this time, women aged 20–64 have been invited for a smear test every five years.

However, it has become increasingly evident that screening women under the age of 25 is likely to do more harm than good.[61,62] In light of this, the DHSSPS announced in July 2010 that the age range and interval for the cervical screening programme would change.[63]

Women aged 25–49 will be invited for screening every three years, and those aged 50–64 every five years, in line with the screening programme in England.

Figure 5: Cervical screening coverage, 2009–10

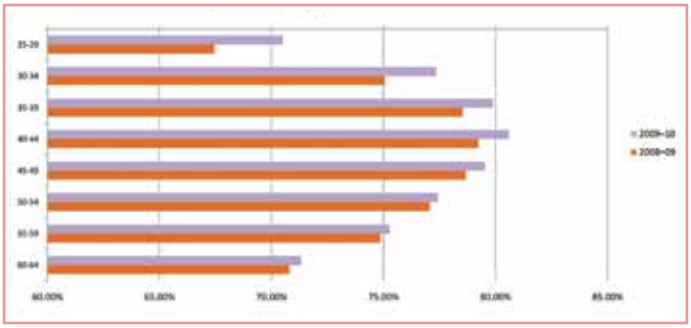


Actions

Implementation of the new screening policy was led by the PHA. This involved:

- resetting the age range and screening frequency parameters on the call-recall information system which is managed by the Business Services Organisation (BSO);
- providing information on the new arrangements to all GPs, practice nurses and family planning staff who take screening samples;
- developing new public information leaflets for the programme.

Figure 6: Cervical screening coverage by age, 2008/09–2009/10



Outcomes

The new policy, to be introduced in January 2011, will offer women at least 12 opportunities for screening during a lifetime, compared to nine screens per lifetime under the previous policy.

They will have access to information leaflets which will help them to make fully informed decisions about attending for screening.

Next steps

We will monitor the impact of the new policy on the screening programme over the coming years.

A new information management system will be rolled out to all colposcopy units during 2011 to support the continued delivery of the programme to national quality standards.

Key facts

- 76.7% of women in Northern Ireland aged 25–64 have had a cervical screening test in the past five years (to March 2010).
- Each year, about 80 women in Northern Ireland are diagnosed with cervical cancer and 20–30 die from it.[64]
- Early detection and treatment can prevent 7 out of 10 cases of this cancer.
- Most cervical cancers are caused by infection with high risk types of the human papillomavirus (HPV) – a sexually transmitted infection.
- HPV vaccine protects against only two of the high risk types of the virus.

Further information

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Breast screening uptake the challenge for future

Public health challenge

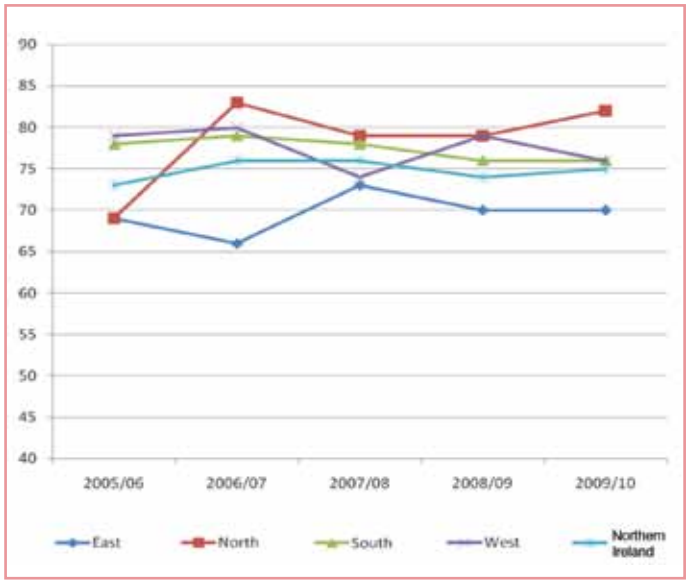
A major challenge for the breast screening programme is ensuring that all eligible women can make an informed choice about attending for screening. In Northern Ireland, women aged 50–70 are invited to attend for screening every three years. However, about 25% of women invited do not attend.

There are a variety of reasons why some women may not attend for breast screening, including the way the programme is organised, poor communication or because of individual factors, eg personal circumstances.[65,66]

The minimum standard for the uptake of breast screening is 70% ie that at least 70% of women sent an invitation actually attend.[67] The target is 80%. In 2009–10 the overall uptake was 75.4%. Uptake has remained consistently around this level for a number of years.

Uptake tends to vary between areas, with the Eastern breast screening unit having a slightly lower uptake. The Eastern unit covers the Belfast and South Eastern HSCT areas. This variation does not seem to be associated with deprivation.

Figure 7: Northern Ireland breast screening % uptake rate (50–64 years) by breast screening unit



Actions

A well organised system for inviting women to attend for breast screening improves uptake.[68] In Northern Ireland we have had a good call and recall computer system operating for many years. This is known as the National Breast Screening System (NBSS). In order to produce invitation letters, the NBSS needs to be able to identify women who are aged 50–70 and have up-to-date contact information. Until recently, this information was cross-checked manually with the information held by GPs.

In November 2010 an electronic link was established between the NBSS and the computer system that supports primary care. The link means that the most up-to-date contact details are now readily available to the breast screening programme.

The whole process, of course, depends on the GP computer system being completely accurate, ie having the correct details for women in the target group. It is important, therefore, that women tell their GP when their details change, eg they move house.

Outcomes

The link will help to ensure that as many eligible women as possible receive a breast screening invitation. It will also help us make sure women receive an invitation to attend within three years of their last appointment.

The demands on staff working in breast screening and in primary care have been reduced as a result of switching from the manual to an electronic system.

Next steps

We are continuing to look at other ways of improving uptake, especially among disadvantaged or hard to reach groups.

Key facts

- Uptake in much of the greater Belfast area is below the minimum standard of 70%. This does not appear to be associated with deprivation.
- Since March 2009, women aged 50–70 are invited to attend breast screening. Women aged 50–64 were previously invited.
- The breast screening programme invites women by GP practice every three years, ie a woman might be aged 50, 51 or 52 when she receives her first invite to attend. The first invitation will be before the age of 53.
- In order to be invited, women must ensure that their GP has their correct name and current address on their computer system.
- Women aged over 70 are encouraged to make their own appointment to attend by contacting their local breast screening unit.

Further information

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Diabetic retinopathy focus shifts to quality assurance

Public health challenge

Diabetes is a common condition affecting approximately 3% of the population, with around 60,000 people in Northern Ireland diagnosed with the condition.

One of the possible complications of the disease is diabetic retinopathy, which can cause visual loss and blindness. Diabetic retinopathy is the most common cause of blindness in people of working age.

Research shows that if retinopathy is identified early, for example through retinal screening, and treated appropriately, blindness can be prevented in the majority of people with diabetes.

Actions

The chief medical officer (CMO) directed that a diabetic retinopathy screening programme (DRSP) be implemented in Northern Ireland, with a target date of April 2008.

A comprehensive screening programme was developed to achieve coverage across the region, and the first full year of screening was 2008–09. Screening is offered to all people with diabetes aged 12 years and over.

The DRSP regional centre is based in Belfast HSCT but screening is carried out across Northern Ireland. Primary care practices have registers of patients with diabetes, and the information from these registers is used to identify the people who need to be invited for screening.

This information was initially collated manually at primary care level and then shared with DRSP, but this system was time-consuming and cumbersome. During 2009–10, DRSP developed and implemented a software programme in GP practices across Northern Ireland to provide electronic transfer of data between primary care and the regional centre.

Outcomes

The electronic transfer of data from primary care to DRSP is now fully in place. This has streamlined the process for both primary care and DRSP and reduces the risk of mistakes.

As the screening programme moves into its second and third complete year, processes become refined and the focus can move to ensuring quality assurance of the programme.

Next steps

A key development will be to allow the direct referral of patients who require assessment or treatment into the hospital ophthalmology services. Currently, when screening identifies a person who needs assessment or treatment, DRSP informs the GP who will refer the patient to hospital. Direct referral from DRSP to ophthalmology will reduce delays and reduce the risk of errors. This will improve the service for patients.

Table 2: Percentage uptake per LCG, April 2009–March 2010

Area	Total invited	Total attended	% attended
Belfast LCG	8,134	6,109	75
South Eastern LCG	7,805	6,040	77
Northern LCG	10,042	7,951	79
Southern LCG	8,430	6,529	77
Western LCG	10,920	6,623	61
Northern Ireland	**45,331**	**33,252**	**73**

Key facts

- Electronic data extracted October 2009–October 2010
  - 307 GP practices
  - 62,441 details on individual patients extracted
- Over 45,000 people were invited for diabetic retinopathy screening in 2009–10.
- 73% of those invited attended.

Further information

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Baby heel prick test achieves high coverage

Public health challenge

In the first week after birth, all babies in Northern Ireland are offered screening for a range of inherited conditions including phenylketonuria (PKU), congenital hypothyroidism (CHT), cystic fibrosis (CF) and medium chain acyl coA dehydrogenase deficiency (MCADD). This is often referred to as the 'heel prick' test.

Most babies screened will not have any of these conditions but, for the small number who do, the benefits of screening are substantial. The programme makes a major contribution to the prevention of disability and death in our community, through early diagnosis and effective interventions.

Actions

Newborn blood spot screening is a complex programme involving a wide range of services, from highly specialised laboratories through to individual staff in the community and in hospitals, working closely together. The PHA and partner organisations are responsible for ensuring that the population has access to safe, effective, high quality and equitable screening programmes.

As part of this function for newborn blood spot screening, the Northern Ireland programme participates in a national (UK) system of quality assurance and performance management.

Outcomes

The screening programme in Northern Ireland has demonstrated:

- the highest level of performance of any region in the UK in relation to a number of national standards, including timely sample collection and completeness of coverage of the programme;
- consistent performance across the four legacy board areas in 2007–08 and 2008–09;
- improvement over time.

Next steps

A regional quality improvement group for newborn blood spot screening has been established to support further improvement and compliance with national standards. A work programme has been developed to address specific areas including timely sample despatch, use of the unique patient identifier and enhanced tracking of blood samples, and quality of blood spot samples.

Key facts

- About 1 in 6,000 babies born in Northern Ireland has PKU. Babies with this condition are unable to process a substance in their food called phenylalanine. If untreated, they will develop serious, irreversible mental disability.
- About 1 in 3,000 babies born in Northern Ireland has CHT. Babies with CHT do not have enough of the hormone, thyroxine. Without thyroxine, they do not grow properly and can develop serious, permanent physical and mental disability.
- About 1 in 2,500 babies born in Northern Ireland has CF. This condition can affect the digestion and lungs. Babies with CF may not gain weight well, and have frequent chest infections.
- About 1 in 10,000 babies born in Northern Ireland has MCADD. Babies with this condition have difficulty breaking down fats to make energy for the body. This can lead to serious illness, disability or even death.

Further information

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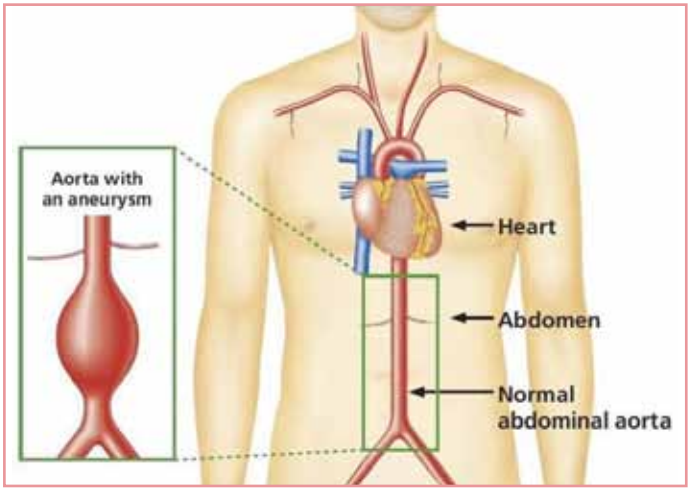
New AAA screening programme in pipeline

Public health challenge

An AAA is a widening of the main artery in the body as it passes through the abdomen. The walls of the artery weaken, causing it to balloon out. It is more common in older men, smokers, people with high blood pressure and people with other cardiovascular diseases.

By the age of 65, about 1 in every 25 men will have an AAA. The aneurysm usually causes no symptoms and most people are not aware they have it. However, about a third of these aneurysms will rupture if not treated. This is usually fatal and each year 80–100 people in Northern Ireland die from a ruptured aneurysm.

The challenge is to reduce mortality from an aneurysm by diagnosing and treating the condition before a rupture occurs.



Aorta with an aneurysm compared with a normal aorta.

Actions

A simple ultrasound scan of the abdomen is the easiest way to check whether a man has an AAA.

Screening for AAA using an ultrasound scanner.

It is recommended that this should be provided as part of a population screening programme.[69] This would offer an ultrasound scan to all men during the year they turn 65.

The risk of rupture is greatest in men with large aneurysms (≥ 5.5 cm). Men with aneurysms this size will be referred to the vascular surgical service to have it repaired.

We are working to ensure that the vascular service in Northern Ireland can meet the demands of an AAA screening programme. Surgical repair of an AAA is a highly specialised procedure and there is evidence that those hospitals that do more of these procedures can reduce the risks of surgery.[70]

Outcomes

Research shows that screening men aged 65 will reduce the death rate from a ruptured aneurysm by around 50%.[71]

Next steps

We are planning for the introduction of an AAA screening programme in Northern Ireland.

Key facts

- Less than 1% of women have an AAA.
- AAA causes 2% of deaths in men aged over 65.
- AAA is largely preventable.
- The risk of developing an AAA is reduced by not smoking, a healthy lifestyle and having blood pressure and cholesterol checked.
- Screening men aged 65 can reduce the death rate from a ruptured AAA by 50%.

Further information

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Improving health through high quality services

Overview

Kidney donors give of themselves to help others

FAST action important when a stroke strikes

Tackling the burden of cardiovascular disease

GPs at the forefront of management of COPD

Overview

The PHA supports the commissioning and performance management processes of the HSCB and its five local commissioning groups (LCGs) by providing high quality, independent public health advice. By having a key role in these decision-making processes, the PHA can promote the provision of high quality services which contribute to improving the health and wellbeing of the population and reducing inequalities.

Successful commissioning requires close cooperation and collaborative working between the organisations and this is reflected in the development of an annual commissioning plan for HSC in Northern Ireland. Joint working teams are now being established to focus on specific service areas.

PHA staff provide particular expertise on service evaluation and review, assessment of the health and wellbeing needs of the population, and evidence-based practice. They also have a key role in supporting the development, implementation and evaluation of regional service frameworks.

This chapter describes some examples of the range of work being led by the PHA within the area of service improvement. It includes an update on developments in kidney transplant and services for people with stroke. It also outlines progress on ongoing work on the service frameworks for cardiovascular and respiratory disease.

Further information

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Kidney donors give of themselves to help others

Public health challenge

A diagnosis of end stage renal disease indicates that a person has irreversible loss of kidney function. This will be fatal if not treated. Treatment is either haemodialysis (HD), peritoneal dialysis (PD) or kidney transplant. Over 800 patients in Northern Ireland are receiving regular dialysis, usually three times per week.

For most people, kidney transplantation provides better long-term survival than staying on dialysis. In Northern Ireland, 262 people are on the transplant waiting list – an increase from 100 in 1997. Until recently, the majority of transplants used kidneys from deceased donors. However, there is increasing emphasis on donated kidneys from living donors.

Actions

In 2009, funding was provided for a new consultant nephrologist at Belfast City Hospital with the aim of streamlining the process to assess patients and potential donors for live transplants. I am happy to report that the time to complete the extensive clinical assessment has been radically reduced and that more potential donors have come forward than expected.

Belfast HSCT has also expanded the surgical live donor programme. In 2010 for the first time, the number of live donor transplants has exceeded the deceased donor cases. This trend has significant positive implications for patients' survival and quality of life.

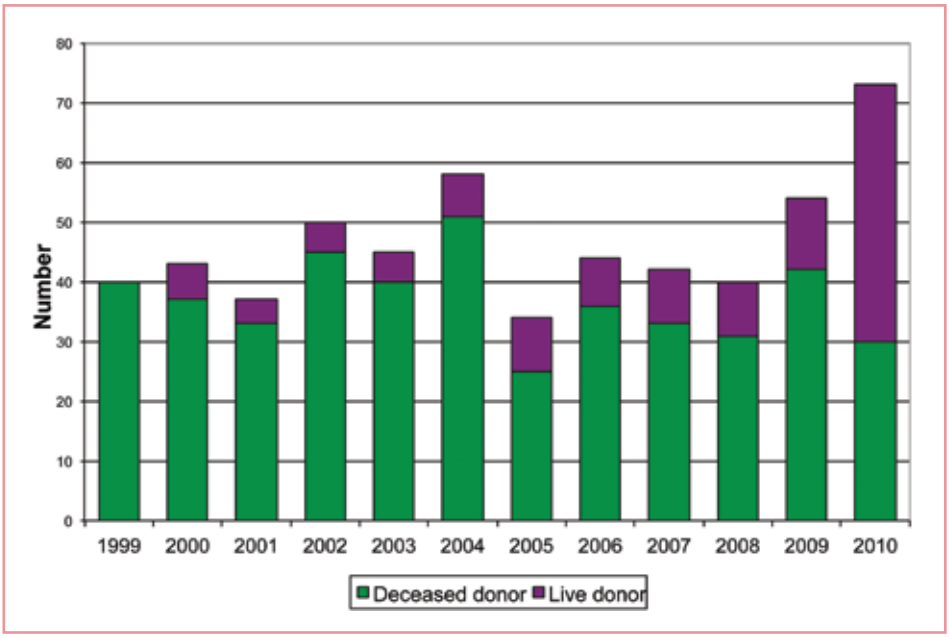
If a patient's partner or close relative is not a match, a national database can allow local donors to give a kidney to a matched patient elsewhere in the UK. In return, that patient's relative donates to the patient in Northern Ireland.

Belfast couple Ruth and Ronnie White were involved in a complex six-way 'domino' donor kidney transplant procedure in January 2010. This living donor system matches up several groups of people at one time and aims to circumvent the problem of altruistic donors ending up in arbitrary allocation systems where only a single patient's needs are served. Ruth had been on dialysis for two years when husband Ronnie (1) donated his kidney to a stranger (2) in Coventry. That person's relative (3) donated their kidney to someone (4) in Portsmouth, whose relative (5) in turn donated their kidney to Ruth (6).

Outcomes

During 2010–11, more than 50 people from Northern Ireland are expected to receive a live donor kidney. This will cost more than £1.3m.

Figure 8: Number of transplants in Northern Ireland, 1999–2010



However, this expenditure will be recouped in the following year as the costs of treatment for these patients will fall dramatically compared with the cost of ongoing dialysis.

Next steps

The expansion of the live donor programme does not remove the need to continue to receive as many deceased donor kidneys as possible. The chief executive of the PHA chairs the Northern Ireland organ donation taskforce which coordinates action to increase donation rates.

All trusts now have local clinical lead consultants and donor committees. Relatives will be asked if they would be willing to donate in cardiac death cases as well as the more usual brain death donations.

Key facts

- Transplantation provides a better quality and quantity of life than dialysis treatment for most patients with end stage renal disease.
- On average, a kidney from a live donor will last twice as long as one from a deceased donor. Patients who receive live donor kidneys also live longer.
- Donation from deceased donors remains important for all the patients who cannot have a live donation.
- The challenge is to increase the kidney transplant rate in Northern Ireland and, in particular, to increase the rate of live transplants.

Further information

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FAST action important when a stroke strikes

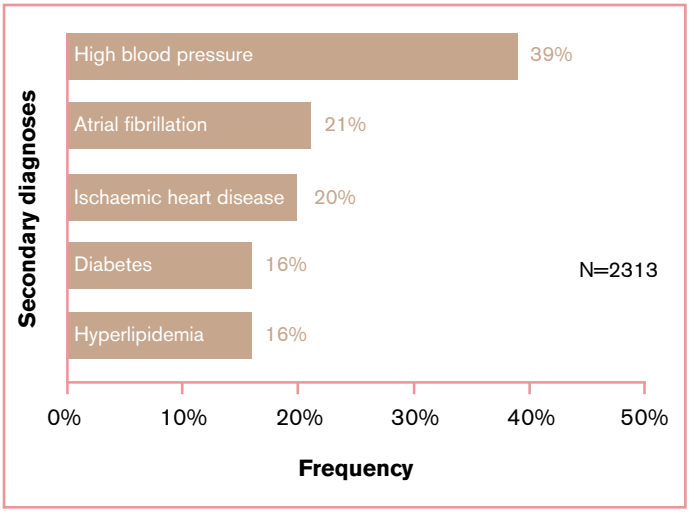
Public health challenge

A stroke results from an interruption of the blood supply to part of the brain. Every year in Northern Ireland there are 2,300 emergency admissions for stroke, and general practice provides ongoing support to 32,000 stroke survivors.[72,73]

A transient ischaemic attack (TIA), or 'mini-stroke', is caused by a temporary interruption in the blood supply to part of the brain, usually as a result of a clot in one of the arteries supplying the brain. TIAs are a warning sign that an individual is at risk of a stroke, so should not be ignored.

Many strokes can be prevented. When the records of emergency stroke admissions are examined, many risk factors for stroke are evident.

Figure 9: Emergency hospital admissions for stroke 2009–10, Northern Ireland – risk factors present among patients



These figures illustrate that the most important modifiable risk factors for stroke are high blood pressure, atrial fibrillation (an irregular heart beat), high blood cholesterol, diabetes, smoking, heavy alcohol consumption and drug use, lack of physical activity, obesity and poor nutrition.

Actions

The Northern Ireland stroke strategy sets out the changes required to improve outcomes for stroke patients and how strokes can be prevented.[74] Since its publication in 2008, huge progress has been made in the organisation and delivery of stroke care. All hospitals in Northern Ireland which admit emergency stroke patients now have stroke units.

During 2010, the PHA has continued to work with trusts to improve the care of stroke patients. By April 2011, all trusts will have arrangements in place for the early assessment and initiation of treatment of TIA. These arrangements will include the early assessment (within 24 hours) and investigation of high risk TIAs as calculated by the ABCD score.[73]

Outcomes

Stroke units are a proven intervention that improves stroke outcomes such as reducing the likelihood of dying, increasing the likelihood of living independently following discharge and returning home after a stroke.

Early assessment and treatment of TIAs are associated with an 80% reduction in the risk of early recurrent stroke.

Next steps

From 1 April 2011, all trusts will have arrangements in place to provide thrombolysis treatment to people with a stroke. This is often called clot-busting treatment and will benefit up to 10% of all new stroke patients.

An Act FAST multimedia campaign is planned for April 2011 to raise awareness of what to do if someone has had a stroke.

Key facts

FAST is an acronym for:

- **F**ace: Has the face fallen to one side? Can they smile?
- **A**rms: Can they raise both arms and keep them there?
- **S**peech: Is their speech slurred?
- **T**ime: To call 999 if you see any single one of these signs.

Further information

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Tackling the burden of cardiovascular disease

Public health challenge

The death rate from coronary heart disease (CHD) has fallen steadily over the past few decades. Despite this, CHD still causes over 16% of all deaths in Northern Ireland. People living in more deprived circumstances are twice as likely to die from CHD as those living in the most affluent areas of Northern Ireland.

Figure 10: Comparative death rates at LGD for IHD or stroke 2006–08 (Northern Ireland = 100)

While those living in poorer socioeconomic circumstances carry a higher burden of cardiovascular disease, they remain less likely to attend GP or hospital services for preventative treatment and are instead more likely to be admitted for emergency care, ie after suffering a heart attack.

Risk factors that increase a person's risk of CHD include smoking, being physically inactive, eating unhealthily, being overweight, having high blood pressure and high cholesterol. These risk factors can be changed by adopting a healthy lifestyle and making use of preventive services provided by GPs, such as blood pressure checks.

Actions

The cardiovascular service framework (CVSFW) seeks to ensure that services to help people stay healthier and access treatment for cardiovascular disease are of high quality and accessible to all people in Northern Ireland.[75]

Since my last report, work has continued to implement the standards for good practice in preventing and treating cardiovascular ill health in HSC services in Northern Ireland.

Outcomes

GPs in Northern Ireland are expected to measure blood pressure in patients aged 45 years and older every five years to identify and treat high blood pressure. This year, GPs in Northern Ireland already achieved the target set for 2012.

However, there is variation in performance between GP practices and we will work with GPs to address this and ensure equal access to services.

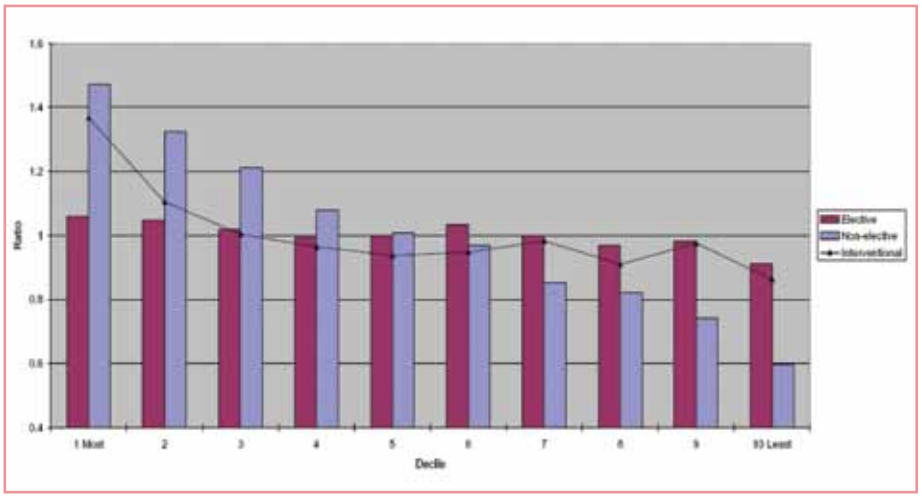
Next steps

The PHA in collaboration with the Institute of Public Health (IPH) and inter-sectoral partners has been assessing how the CVSFW will impact on the health and wellbeing of people in Northern Ireland.

Findings from a comprehensive consultation have highlighted measures such as:

- implement a ban on smoking in open spaces, in cars and in the presence of young people;
- work in partnership with local councils to increase people's access to green infrastructure;
- advocate a reduction in the amount of salt in food.

Figure 11: Standardised admission rates for elective and non-elective cardiology patients, and patients receiving interventional cardiology, by economic deprivation decile 1998/99–2006/07



Source: Belfast Health and Social Care Trust: A report on patterns and trends in the use of hospital services in Northern Ireland 1998/9 – 2006/7

Key facts

- CHD causes over 16% of all deaths in Northern Ireland.
- Risk factors that increase a person's risk of CHD can be changed by adopting a healthy lifestyle.
- Those living in poorer socioeconomic circumstances carry a higher burden of cardiovascular disease.
- GPs provide good quality preventive services such as blood pressure checks.

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GPs at the forefront of management of COPD

Public health challenge

Chronic obstructive pulmonary disease (COPD) – formerly called chronic bronchitis and emphysema – is the single most common cause of severe respiratory (lung) disease in Northern Ireland.

In most cases, COPD is caused by cigarette smoking which damages the airways in the lung, causing coughing and phlegm. This narrows the airways, making it more difficult to breathe.

Figure 12: Indicative rates of how many people have COPD in the Northern Ireland Assembly areas (rates are indicative because they cannot yet be age sex standardised)

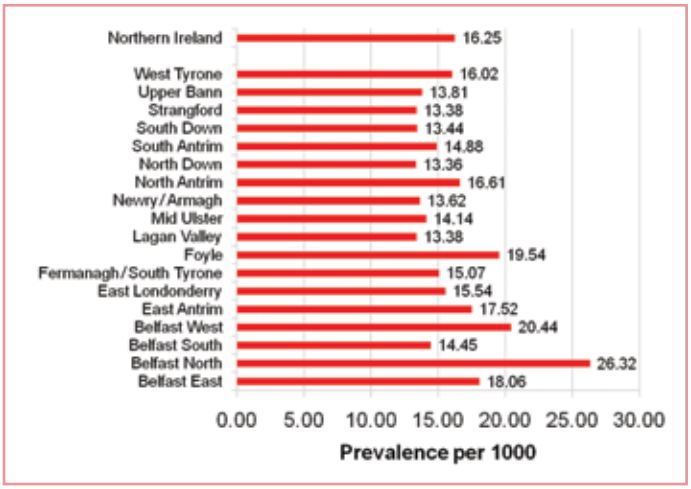
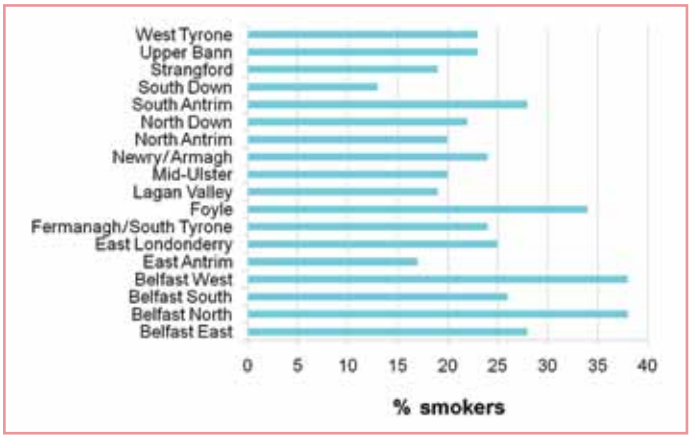


Figure 13: Areas which appear to have the highest rates of COPD also have the highest rates of smoking



Actions

GPs now have registers of people with COPD to help them to target management of the disease. GP practices are funded through the quality and outcomes framework (QOF) to provide evidence-based management of COPD.

There is also an additional scheme – a directed enhanced service (DES) – for GPs and practice nurses to provide a higher level of service for patients with COPD. GPs taking part in DES:

- ask all patients whether they are smoking and provide help and support to stop smoking, including referral to specialist smoking cessation services;
- provide education on COPD and self-management plans for patients, including advice on how to deal with any acute worsening of the condition;
- refer patients to pulmonary rehabilitation programmes throughout Northern Ireland which can improve the symptoms of COPD;
- assess whether people with COPD are in the palliative phase of their illness, and provide care to improve symptom control and quality of life.

The *Regional Service Framework for Respiratory Health and Wellbeing* was published by the DHSSPS in November 2009.[76] This includes a number of standards relating to COPD, from prevention through to palliative care, in addition to standards for GP practices.

Outcomes

As part of QOF, last year over 85% of people with COPD had their annual flu immunisation and over 90% had a review of their condition.[77]

Nearly all GP practices in Northern Ireland take part in providing DES for people with COPD. It is estimated that 78% of all practices currently provide all these additional aspects of services to more than 80% of all people with COPD in their practices.[78]

Next steps

The service framework is being implemented across all trust areas. Reports on how services are meeting standards will be available in 2011.

Key facts

- There are 30,282 people on GP registers with COPD in Northern Ireland.
- In most cases COPD is caused by smoking.
- The best way of preventing COPD from getting worse is to stop smoking.
- GPs have registers of people with COPD to help them to target management of the disease.
- COPD can be confirmed by spirometry, a breathing test involving a device that shows if airways have narrowed.

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Protecting health

Overview

Hand hygiene is focus of fight against HCAIs

PHA takes prompt action to control measles outbreak

Regional TB action plan for control in development

Multi-agency role in carbon monoxide leak

Joint working approach to outbreaks of *E. coli*

Meningitis remains a public health challenge

Overview

Health protection focuses on protecting the population from serious health threats such as infectious diseases or major disasters. In our work we aim to prevent infectious diseases and also to respond to major events such as infectious disease outbreaks, clusters of meningitis cases and chemical incidents.

In Northern Ireland we have a very successful childhood immunisation programme which achieves high uptake rates and our rates of these infections are very low. Nevertheless, during 2010 we experienced two outbreaks of measles, previously a very rare infection in Northern Ireland.

During 2010 our health protection service responded to a number of major incidents including an outbreak of *Escherichia coli* (*E. coli*) O157 at a children's nursery, cases of meningitis in university students and incidents of carbon monoxide poisoning. The response to these incidents is delivered by highly trained professional and technical staff.

On 10 August 2010, the director general of the World Health Organization (WHO) declared the end of the influenza (H1N1) pandemic. Although the pandemic is over, we expect to see further cases of H1N1 flu. This year's seasonal flu vaccine offers protection against three strains of flu virus including H1N1 strain.

Among our key priorities for 2011 are: update and test our pandemic preparedness plan; test our major incident plan; work to prevent healthcare-associated infection (HCAI); sustained work to maintain and improve immunisation uptake.

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Hand hygiene is focus of fight against HCAIs

Public health challenge

Infections that are acquired in hospital or as a result of healthcare interventions are referred to as HCAIs. The regional strategy *Changing the Culture 2010* sets out the actions required by the DHSSPS and HSC organisations to reduce the incidence of HCAIs.

Although it will never be possible to avoid all HCAIs, the ongoing collaborative efforts across all HSC organisations are aimed at avoiding all preventable cases of HCAI. Surveillance systems that monitor the rates of HCAI and identify risks of infection play a key role in targeting ongoing action.

At the launch of the second phase of the Clean Your Hands campaign are, from left, Dr Michael McBride, CMO, DHSSPS; Dr Lourda Geoghegan, Consultant in Health Protection (HCAI Service Lead); and Dr Lorraine Doherty, Assistant Director Public Health, PHA.

Actions

2010 has been an exciting year for the HCAI team in the PHA. The surveillance capability has been enhanced by the integration of staff from the former Northern Ireland Healthcare-Associated Infection Surveillance Centre (HISC) and the PHA's existing surveillance systems (from the former Communicable Disease Surveillance Centre (CDSC). Additionally, the PHA has been able to strengthen the nursing support to the HCAI team.

The HCAI team continues to work closely with colleagues across HSC trusts to support their ongoing efforts to minimise HCAI rates. Maintaining a focus on driving down the rates of *Clostridium difficile (C. difficile)*, the PHA has introduced enhanced surveillance of all community cases of *C. difficile*.

The HCAI team provided a series of five regional training events, for nursing and residential homes, during September and October 2010 – focusing on hand hygiene and the management of *C. difficile*. The HCAI team also provides support and training to individual nursing or residential homes in which residents have had *C. difficile* infection (CDI).

In June 2010, the cleanyourhands campaign was extended from secondary care settings to community and primary care settings.

Outcomes

Recent years have seen steady progress in reducing the rates of HCAIs including CDI, methicillin-resistant *staphylococcus aureus* (MRSA) bloodstream infections, and surgical site infections.

Figure 14: Northern Ireland MRSA episodes, 2003–10

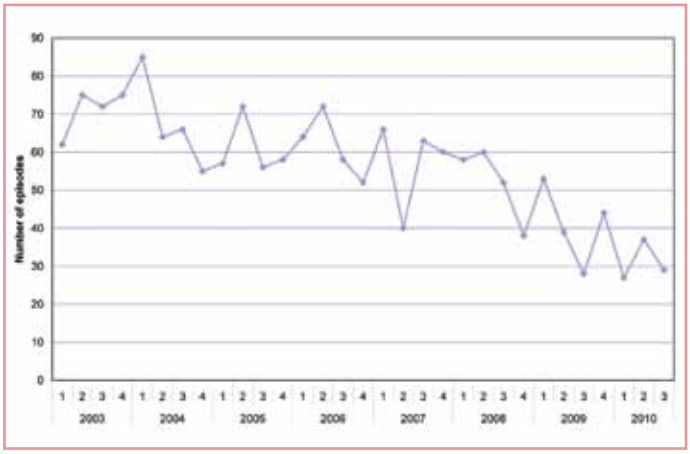


Figure 15: Northern Ireland *C. difficile* episodes per quarter among in-patients 65 years and over, 2005–10

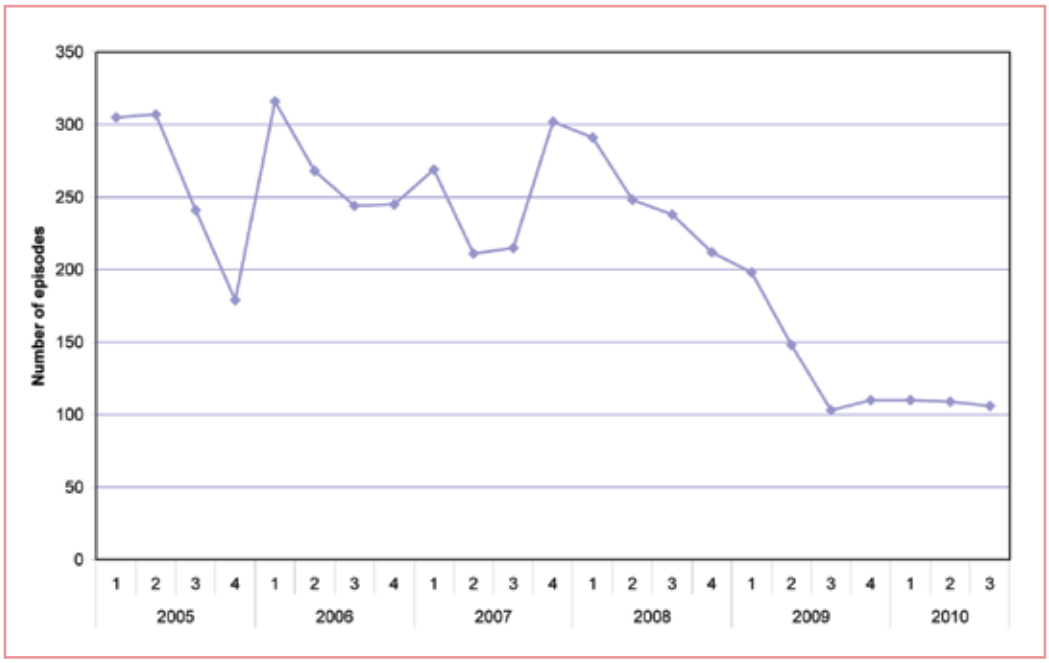
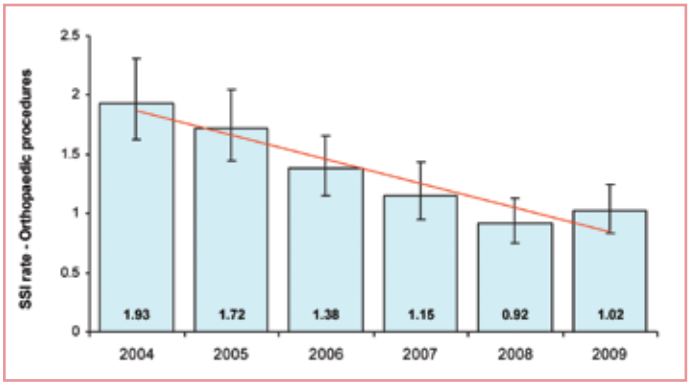


Figure 16: Orthopaedic procedures – surgical site infection rate, 95% CI and trend 2004–09



Next steps

The PHA's HCAI team is developing an action plan to address HCAIs in primary and community care settings, building on best evidence to inform future actions.

Key facts

- Cleaning, hand hygiene, appropriate antibiotic use, and early isolation of patients with symptoms are the most important factors in preventing HCAIs.
- *C. difficile* is the most serious cause of antibiotic-associated diarrhoea (AAD).
- Ribotype 078 is the most common type of *C. difficile* in Northern Ireland.
- The ribotyping service, based in the Royal Victorial Hospital laboratory, has been in operation for over a year.
- Trust laboratories are requested to send all CDI positive isolates for ribotyping.

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PHA takes prompt action to control measles outbreak

Public health challenge

While uptake of the MMR vaccine in Northern Ireland is significantly higher than the rate in the UK overall, there is no room for complacency. Recent outbreaks here have shown that even in areas with high vaccination uptake, there can be pockets of people who may be susceptible to measles infection.

Actions

Last year we reported on an outbreak of measles in the Craigavon area and the steps taken to successfully control it. We now report a second outbreak that took place in September and October 2010, affecting nine people linked in various ways to a large youth organisation.[79]

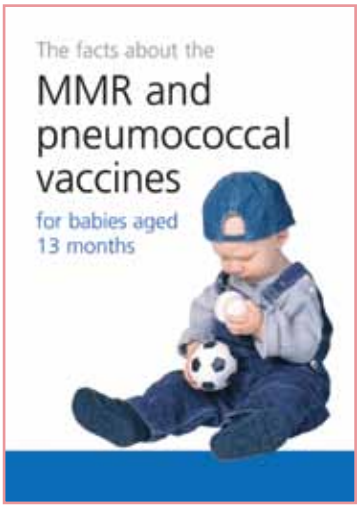
Those affected were aged between 12 and 24 years and lived mainly in the Belfast and Co Down areas. Only one person had had the recommended two doses of MMR vaccine. Cases had attended school, college and university while they were infectious.

Given the potential seriousness of measles and the fact that it can spread so easily from person to person, the PHA took prompt action. Letters were sent to the affected people and affected settings, highlighting the symptoms and the need for two doses of MMR for maximum protection. Similar messages for the general public were issued as press releases. Finally, letters raising awareness and giving guidance on vaccination and infection control were issued to GPs and hospitals.

Outcomes

We are pleased to report that, despite the infectiousness of measles, there was no further spread in any of these settings. This reflects the high uptake of MMR vaccine in Northern Ireland generally, and the potential boost to this from the PHA's intervention.

It is now recommended that the first dose of MMR is given at 13 months of age, rather than 15 months.[80] Uptake rates are well above the overall UK rate and now stand at 92.4% at age 24 months, 97.1% for the first dose, and 92.2% for two doses at five years of age.



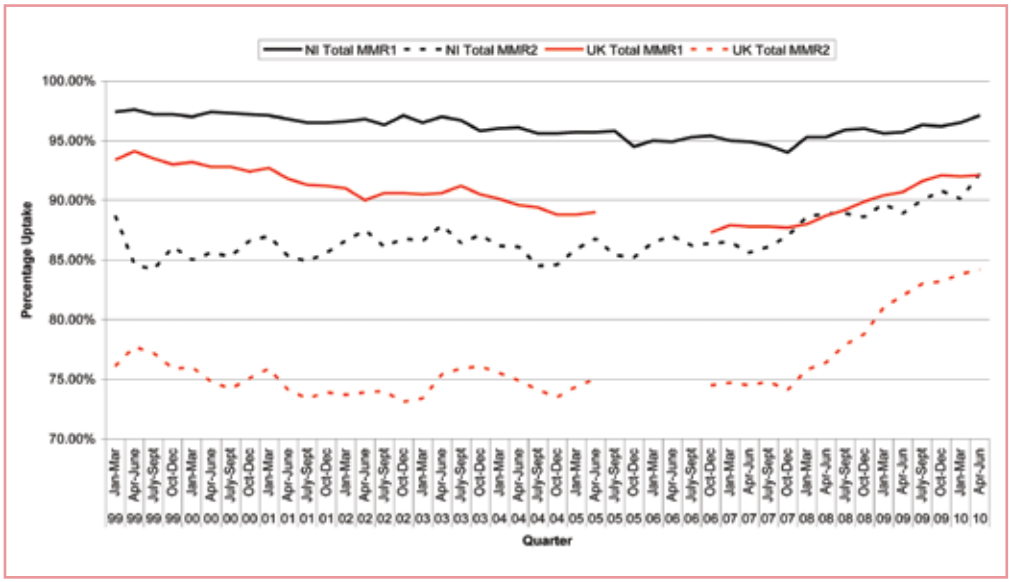
Next steps

As part of its ongoing commitment to improving still further the uptake of MMR, the PHA has identified geographic areas where uptake has been historically slightly lower than elsewhere, and is working with GPs and health visitors to see what can be done to increase uptake there.

Figure 17: MMR vaccination uptake rate at 24 months, Northern Ireland and UK, 1999–2010*

*UK totals incomplete for period April–June 05 to July–Sept 06

Figure 18: MMR vaccination uptake rate at 5 years, Northern Ireland and UK, 1999–2010*



*UK totals incomplete for period April–June 05 to Oct–Dec 06;
UK data up to Oct–Dec 06 relates only to England, Wales and Northern Ireland

Key facts

- Measles can be a serious illness and is one of the most easily spread infections.
- There have been two outbreaks of measles here in 2009 and 2010. These affected young people who have mostly not been vaccinated with the recommended two MMR doses.
- MMR vaccine uptake in Northern Ireland is higher than the UK overall, but it is lower than the uptake of other childhood vaccines here.
- The uptake of MMR vaccine in Northern Ireland needs to be further improved.

Further information

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Regional TB action plan for control in development

Public health challenge

Tuberculosis (TB) continues to present major public health challenges globally and locally.[81,82,83] Approximately half of the cases involve the lungs (pulmonary TB) and are potentially infectious. Most cases of TB respond to standard TB treatment but, if untreated, TB can result in prolonged illness and death.

The number of cases of active TB in Northern Ireland in recent years is shown in Figure 19. The proportion of cases in people born outside the UK or Republic of Ireland has increased in recent years (currently 53%).

Globally, an increasing proportion of cases are caused by infection resistant to treatment with standard drugs (multidrug-resistant TB (MDRTB)/ extensively drug-resistant TB (XDRTB)). These drug-resistant cases require much longer and more complex treatment and can be fatal. Most of the local cases of drug-resistant TB appear to have acquired the infection outside Northern Ireland but there is also evidence of transmission within this region.

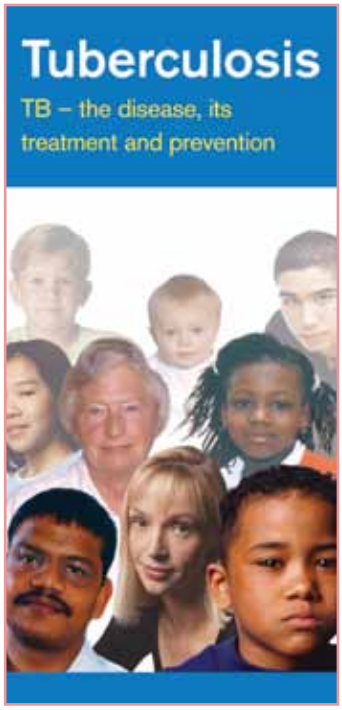
Actions

The PHA uses a range of public health measures to prevent and control TB. These include Bacillus Calmettte-Guérin (BCG) vaccination for at-risk individuals and TB screening for contacts of cases.

We are working with colleagues in trusts and primary care to develop a regional TB action plan to address aspects of control, including education, case management and screening.

Outcomes

The respiratory framework includes standards for prevention, control and management of TB. These will be monitored through the specific framework monitoring and regular surveillance arrangements.

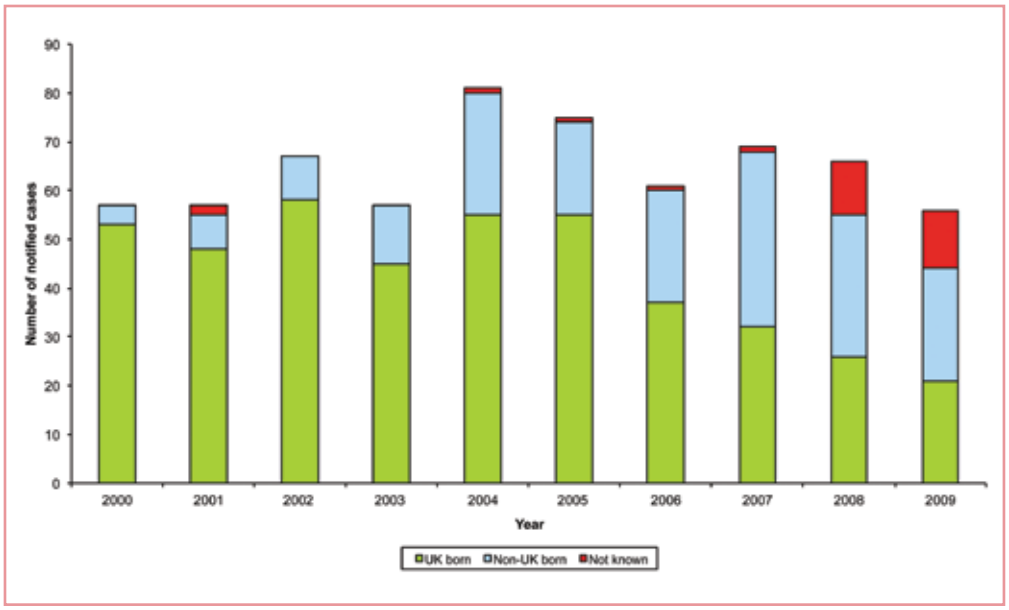


Next steps

While the incidence rates of TB in Northern Ireland remain substantially lower than those reported from the rest of the UK and the Republic of Ireland, the apparent transmission of drug-resistant TB underlines the need for vigilance and prompt action when required.

- Early identification, diagnosis and treatment of new cases of TB are the most important measures for prevention and control.
- All suspected cases of TB should be referred for urgent assessment by the designated TB physicians within each trust.
- TB is a notifiable disease and clinicians are required to report all confirmed or suspected cases to the PHA duty room to enable appropriate public health measures.

Figure 19: Number of TB cases in Northern Ireland by person's country of birth



Key facts

- There were 9.4m new cases of TB worldwide in 2008 with 1.8m deaths from TB in the same period, including 500,000 people with human immunodeficiency virus (HIV).[81]
- Worldwide, 5% of all TB cases have MDRTB.[81]
- Each year approximately 60 cases of TB are diagnosed in Northern Ireland.[83]
- Since 2004, there have been 10 cases of MDRTB in Northern Ireland.

Further information

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Multi-agency role in carbon monoxide leak

Public health challenge

Carbon monoxide (CO) poisoning is responsible for approximately 50–60 accidental deaths and over 200 cases of non-fatal injury in the UK each year. CO is produced when gas or fossil fuels such as coal, oil, petrol, paraffin and wood burn without enough oxygen.

On 2 September 2010, the health protection duty room in the eastern office of the PHA was contacted by the PSNI about an unfolding CO incident in east Belfast.

Actions

Local residents were evacuated for several hours from their homes and 10 residents and five firefighters complained of feeling unwell as a result of 'smelling gas'. Northern Ireland Ambulance Service (NIAS) clinically assessed these individuals at the scene.

One individual who exhibited mild signs of CO poisoning was advised to attend accident and emergency (A&E) for further investigation and all 14 individuals with symptoms were given public health advice.

As in all chemical incidents, the initial role of health protection is to provide public health advice based on an early risk assessment of the actual or likely impact the incident may have on public health. In this incident the health protection consultant attended the scene to carry out the risk assessment and give direct advice to the residents exposed and an information leaflet on CO poisoning.

Outcomes

The Northern Ireland Fire and Rescue Service (NIFRS) hazardous material monitoring equipment identified the presence of significant levels of CO inside three of the houses. Further investigation by NIFRS working with the utility companies established that this was related to arching of underground cabling and joints outside the houses. This combination and chain of events is very unusual.

The multi-agency response to a CO incident in east Belfast proves successful.

Good working relationships across agencies enabled the cause of the CO exposure to be identified very early and the problem to be addressed. Public health played a key role in the multi-agency response to this incident.

Next steps

The PHA has been working with the Health and Safety Executive for Northern Ireland (HSENI) and other partners in the campaign to raise awareness among the public of the dangers of CO.

Key facts

- CO is produced when fossil fuels such as gas, coal, oil, wood, petrol and paraffin burn without enough oxygen.
- The signs and symptoms of CO poisoning are often mistaken for other illnesses, such as food poisoning or flu, but without a raised temperature.
- Anyone who suspects they may be suffering from CO poisoning should immediately turn off all appliances, go outside and seek medical help from a qualified healthcare professional.
- It is advised that householders ensure that chimneys and flues are swept every year and that they install an audible CO alarm that meets British or European standards (BS Kitemark or EN 50291).
- Our website www.publichealth.hscni.net contains further advice on carbon monoxide poisoning.

Further information

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Joint working approach to outbreaks of *E. coli*

Public health challenge

As *E. coli* O157 is a disease of low incidence but high morbidity and mortality, it has generated significant public concern. *E. coli* are common, harmless bacteria found in the human large intestine. However, a group of *E. coli* called *VTEC* associated with animals can cause serious disease. VTEC O157 (*E. coli* O157) is the most prevalent strain.

Infection with *E. coli* O157 follows ingestion of contaminated food or water, or oral contact with contaminated surfaces. It is highly virulent with a very low infectious dose – less than 100 bacterial cells can be enough to cause illness. Infection is readily spread between family contacts and in settings such as children's day nurseries.

Actions

The PHA promptly investigates all cases of *E. coli* O157 to agreed national and local protocols. Each laboratory-confirmed case in Northern Ireland is communicated to the PHA duty room. The environmental health officer of the local council is contacted, and each case is followed up and assessed using a standardised questionnaire. If two or more presumptive cases of *E. coli* O157 infections from different households are identified with a potential common link, an outbreak control team is established immediately.

Outcomes

Successful joint working with partner organisations has resulted in the prompt follow-up of sporadic cases. The PHA has also been involved in the management and investigation of clusters of cases and outbreaks. Clusters of cases have been managed by a case manager, whereas outbreaks have been investigated by a multi-agency team chaired by a consultant in health protection.

Dr Lorraine Doherty, rear right, Assistant Director Public Health, PHA, visits an open farm to highlight the dangers of *E. coli* O157 to parents and children.

In both scenarios, every effort has been made to minimise the risk of further spread and reduce anxiety among the local community. Where childcare settings have been involved, infection control staff from both the local trust and PHA have worked to ensure that all those involved are made fully aware of the necessary preventative measures to protect this vulnerable age group.

Table 3: Cases of VTEC O157 in Northern Ireland 1997–2007

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
30	29	54	54	46	27	53	19	49	47	54

Next steps

PHA staff are involved in an educational programme for their environmental health colleagues to develop local standards and revised protocols. We have also established a working group to develop plans and protocols on best practice for childcare facilities.

Key facts

- *E. coli* O157 remains relatively uncommon in Northern Ireland compared to other bacteria such as salmonella.
- Around 50 people here are infected by this potentially serious illness every year.
- There have been no reported deaths from *E. coli* O157 in Northern Ireland in recent years.
- In September, the PHA incident team and partner organisations managed an outbreak of *E. coli* O157 at a children's nursery in the Lurgan area.

Further information

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Meningitis remains a public health challenge

Public health challenge

Whilst many cases of meningitis have been prevented following the introduction of the meningitis C vaccine, cases caused by meningococcus group B still remain a public health challenge.

People can carry meningococcal germs harmlessly, and only a very small number will go on to become infected and develop serious disease. Rates of disease are highest in infants and young children, with a second peak in teenagers.

Actions

The PHA engages in three distinct interventions to reduce the risk of meningitis and septicaemia: immunisation, surveillance, and prevention of secondary cases through contact tracing. Hib and pneumococcal immunisations have also contributed to significant reductions in the number of cases of meningitis due to these organisms.

We engage in local and national surveillance of meningitis and septicaemia. This helps us to spot links between cases and monitor disease trends. Local data is submitted to national surveillance programmes which support the development of immunisation policy.

PHA health protection staff are proactively involved in prevention of secondary cases of meningitis among contacts of the case. Close contacts are offered antibiotics as a precautionary measure to reduce the risk of them developing the disease and may also be offered a vaccine, depending on the strain of disease.

Occasionally, antibiotics may be offered to contacts outside of the household, eg within 24 hours of the identification of a cluster of cases in QUB, staff arranged for prophylactic antibiotics to be issued to over 300 students.

Queen's University Belfast

This involved calling an urgent outbreak meeting and enlisting the help of the university's senior medical officer to organise contact with relevant students, local trust nurses to assist with antibiotic distribution and answering questions, pharmacy colleagues to advise on antibiotic procurement and prescribing, as well as agreeing a media strategy in relation to the incident.

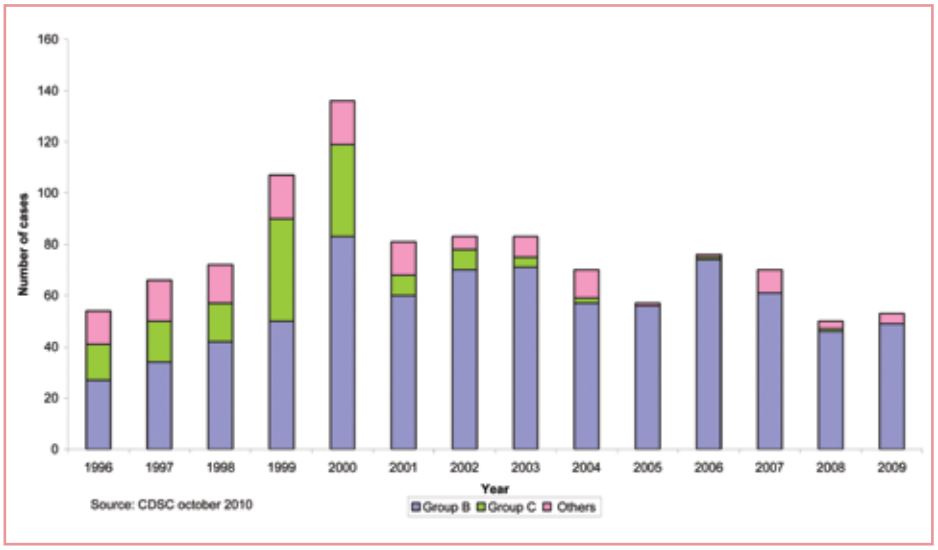
Outcomes

Letters and information leaflets are promptly sent to contacts of cases occurring in schools and nurseries.

No secondary cases, in close contacts, have been identified following notification of sporadic cases.

There have been three fatalities in Northern Ireland in 2010 which, unfortunately, highlights the rapid progression and potentially serious outcomes of this disease.

Figure 20: Invasive meningococcal disease by calendar year 1996–2009, Northern Ireland



Next steps

The PHA will aim to maintain our very high uptake levels for vaccines that prevent meningitis and will respond rapidly to calls.

Key facts

- Immunisation programmes have significantly reduced the number of cases of disease.
- Meningitis is a swelling of the lining of the brain. The same germs that cause meningitis cause septicaemia.
- Meningitis and septicaemia are both very serious – they can cause permanent disability and death.
- Rapid diagnosis and notification improves outcomes.
- Rapid contact tracing and prophylaxis reduces the risk of further related cases.

Further information

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These tables are available to download as a PDF on the PHA website at www.publichealth.hscni.net

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List of figures and tables

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Abbreviations and acronyms

A

A&E Accident and emergency

AAA Abdominal aortic aneurysm

AAD Antibiotic-associated diarrhoea

AITHS All Ireland Traveller Health Study

ASIST Applied suicide intervention skills training

B

BCG Bacillus Calmette-Guérin

BFI Baby Friendly Initiative

BME Black and minority ethnic

BSO Business Services Organisation

C

CAB Citizens Advice Bureau

CAWT Cross-Border and Working Together

C. difficile Clostridium difficile

CDI *C.difficile* infection

CDSC Communicable Disease Surveillance Centre

CF Cystic fibrosis

CHD Coronary heart disease

CHT Congenital hypothyroidism

CI Confidence interval

CIEH Chartered Institute of Environmental Health

CMO Chief Medical Officer

CO Carbon monoxide

COPD Chronic obstructive pulmonary disease

CVSFW Cardiovascular service framework

D

DARD Department of Agriculture and Rural Development

DE Department of Education

DES Directed enhanced service

DH Department of Health

DHSSPS Department of Health, Social Services and Public Safety

DPH Director of Public Health

DRSP Diabetic retinopathy screening programme

DSD Department for Social Development

E

E. coli Escherichia coli

EEN EPODE European network

EPODE Ensemble, Prévenons l'Obésité des Enfants –Together, let's prevent obesity in children

EU European Union

F

FNP Family Nurse Partnership

FSA Food Standards Agency

G

GB Great Britain

H

HCAI Healthcare-associated infection

HD Haemodialysis

HISC Healthcare-Associated Infection Surveillance Centre

HIV Human immunodeficiency virus

HPV Human papillomavirus

HSC Health and social care

HSCB Health and Social Care Board

HSCT Health and Social Care Trust

HSENI Health and Safety Executive for Northern Ireland

I

ICTU Irish Congress of Trade Unions

IfH Investing for Health

IHD Ischaemic heart disease

IPH Institute of Public Health

L

LCG Local commissioning group

LGB&T Lesbian, gay, bisexual and transgendered

LGD Local government district

M

MCADD Medium chain acyl coA dehydrogenase deficiency

MDRTB Multidrug-resistant TB

MHFA Mental health first aid

MMR Measles, mumps, rubella

MRSA Methicillin-resistant *staphylococcus aureus*

N

NBSS National Breast Screening System

NEA National Energy Action

NHS National Health Service

NIAS Northern Ireland Ambulance Service

NICE National Institute for Health and Clinical Excellence

NIE Northern Ireland Electricity

NIFRS Northern Ireland Fire and Rescue Service

NIHR National Institute for Health Research

NSC National Screening Committee

O

OFMDFM Office of the First Minister and Deputy First Minister

P

PD Peritoneal dialysis

PDF Portable document format

PHA Public Health Agency

PKU Phenylketonuria

PSNI Police Service of Northern Ireland

PYLL Potential years of life lost

Q

QOF Quality and outcomes framework

QUB Queen's University Belfast

R

RSPH Royal Society for Public Health

S

SOAs Super output areas

SSI Surgical site infection

STIs Sexually transmitted infections

T

TB Tuberculosis

TIA Transient ischaemic attack

U

UK United Kingdom

UNICEF United Nations Children's Fund

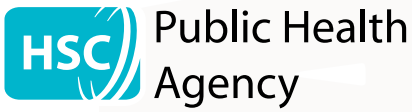
W

WHO World Health Organization

WIFH Western Investing for Health

X

XDRTB Extensively drug-resistant TB



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