



Tayside

Joint Public Health Protection Plan 2012-2014

Table of Contents

Introduction	3
Executive summary.....	4
1.0 Overview of NHS Tayside and its three Local Authorities	5
2.0 Health protection: national and local priorities	10
2.1 National and local priorities.....	10
2.2 Lessons learned from incidents and outbreaks.....	10
3.0 Health Protection Resources and Operational Arrangements.....	11
3.1 NHS Tayside Health Protection Team staffing.....	11
3.2 Roles and responsibilities	12
3.3 Tayside Local Authorities' staffing.....	13
3.4 Local authority activities.....	13
3.5 Tayside Local Authorities Out of Hours Arrangements.....	14
3.6 Competent Persons.....	14
3.7 Maintaining knowledge and skills.....	145
3.8 Capacity and resilience.....	15
3.9 Information Technology and Communications Technology	15
4.0 Health protection: planning infrastructure	17
4.1 Health Protection Plans	17
4.2 Local authority health protection plans.....	18
4.3 Delivering the health protection function in Tayside	19
4.4 Joint working	23
5.0 Mutual aid arrangements.....	25
6.0 Health protection: public involvement and feedback.....	26
7.0 Recommendations	27

Introduction

In Scotland, many public health services including health protection services have a strong basis in Scotland's civic history and rely on coordinated strategic efforts between various organisations. The introduction of the Public Health etc (Scotland) Act 2008 updates and replaces legislation directing this health protection effort dating from as far back as 1897. The importance of this integration of effort is as great today as it has always been.

Consequent to the Public Health etc (Scotland) Act 2008, I am pleased to present Tayside's second Joint Public Health Protection Plan for the period 2012-2014, which has been written jointly by NHS Tayside, Angus Council, Dundee City Council and Perth and Kinross Council.

The plan provides an overview of health protection (communicable disease and environmental health) priorities, provision and preparedness within Tayside.

The plan describes how the Board and the Local Authorities deal with a range of health protection topics and outlines areas we have identified that require further work. A particular undertaking is to review NHS Tayside health protection ways of working and specifically to relate the findings of the Health Protection Stocktake Working Group final report to Tayside. Under this plan all parties will work together to continuously improve health protection working in Tayside.

What the recent past demonstrates is that the health protection function is subject to sporadic and often unpredictable challenges. An overarching aim of this plan is for Tayside's health protection function to be robust to currently unforeseeable events; ensuring there is sufficient capacity and resilience within Tayside is essential to this aim.

Dr Drew Walker
Director of Public Health
NHS Tayside

December 2012

Executive summary

NHS Boards have a health protection function mostly relating to the control of communicable diseases and diseases arising from contact with substances hazardous to health. A significant proportion of the health protection function of boards relates to statutory duties. Other aspects of the function are the co-ordination of immunisation programmes, and working to reduce the burden of infectious disease in the community.

Similarly, local authorities have a health protection function, which is predominantly delivered through the local authority environmental health services. In practice, health board and local authority functions are co-ordinated to ensure that the health of people in Tayside is as thoroughly protected as possible from the range of infectious and environmental hazards to health.

The Public Health etc (Scotland) Act 2008 (hereafter referred to as 'The Act') consolidates and updates public health legislation relating to 'protecting public health from infectious diseases, contamination or other such hazards, which constitute a danger to human health.' Part 1 of the Act requires each health board area to develop a Joint Public Health Protection Plan (JPHPP) to provide an overview of health protection (communicable disease and environmental health) priorities, provision and preparedness.

Tayside's JPHPP for 2012-14 has been written jointly by NHS Tayside, Angus Council, Dundee City Council and Perth and Kinross Council and will be renewed every two years. The JPHPP provides an overview of the geography and demography of Tayside and identifies health protection risks associated with these specific features. The plan describes health protection activities in Tayside and the resources with which the health protection function is delivered.

Further work is required to develop an action plan to address the recommendations which derive from our local priorities. These are:

- Formalise and implement a robust on call arrangement for appropriate Local Authority personnel
- Ensure health protection management protocols are in place for priority communicable diseases and environmental hazards
- Update key emergency response plans, including multi-agency pandemic influenza plans
- Implement robust procedures for acting on lessons learned from health protection incidents occurring at a Tayside, Scotland and international level
- Address capacity and resilience issues for health protection services in Tayside
- Implement local aspects of the Health Protection Stocktake Final Report, including networking and/or mutual aid arrangements as relevant
- Implement Tayside elements of A TB Action Plan for Scotland 2011
- Undertake exploratory work to assess and identify the health protection contribution to addressing climate change, from an NHS Tayside and Local Authority perspective

1.0 Overview of NHS Tayside and its three Local Authorities

Population

In 2010, with an estimated total population of 402,641¹, Tayside NHS Board covers an area of 7,508 sq km, which includes the three local authority areas, Angus, Dundee City and Perth & Kinross (Figure 1).

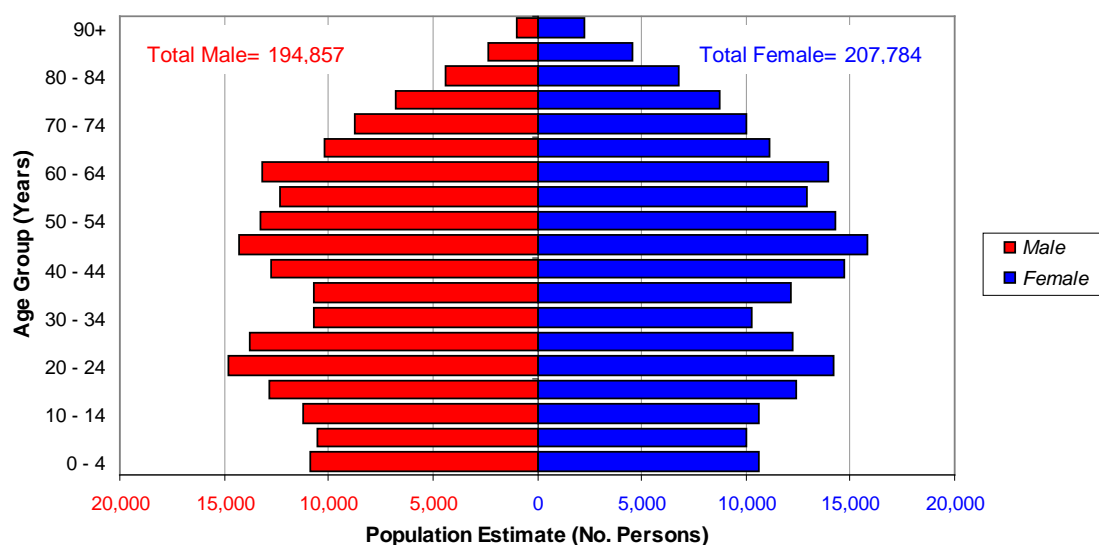
Figure 1. NHS Tayside: Land area and population density², 30 June 2010

Administrative Area	Estimated Population 30 June 2010	Area ^a (sq km)	Density ^b (Persons per sq km)
Tayside	402,641	7,508	54
Angus	110,570	2,182	51
Dundee City	144,290	60	2,412
Perth & Kinross	147,780	5,286	28

Notes: 1. Figures may not add exactly because of rounding. 2. Persons per sq km calculated using actual, not rounded areas.

By 2015, the population of the region is projected to increase by 3.5% overall, to 416,934 persons, with the proportion of the population aged over 65 years increasing by 11.9%³ to 77,023 individuals of that age. The projected increase in this older age group is most notable in Angus (15.4%) and Perth & Kinross (14.8%), compared with Dundee City (5.7%) by 2015. This increase is expected to continue, with a projected over 65 population in Tayside by 2035 to be 117,499, a 52.6% increase from the current 2010 estimates.

In 2010, the overall gender distribution in the Tayside region was 48.4% male and 51.6% female, but ratio depends on the age cohort under consideration (Figure 2). In terms of age and gender, the populations of both Angus and Perth & Kinross reflect that of Tayside as a whole, while Dundee City, due to its large student population, has a significantly greater proportion of 20-24 year olds, in 2010 representing 9.5% of the Dundee population, compared with Angus (5.2%) and Perth & Kinross (6.5%) of their populations.



¹ GRO(S) Mid year population estimates, 2010.

² GRO(S) Mid year population estimates, 2010 (Table 9)

³ GRO(S) Projected populations Council and NHS Board Areas (2010-based)

Figure 1 NHS Tayside: Population distribution by age and gender, 2010

Using the current version of the Scottish Index of Multiple Deprivation (SIMD 2009 v2)^{4,5}, as a measure of deprivation, Tayside has 16.4% of the area's population living in datazones ranked in the most deprived quintile compared to the rest of Scotland (quintile 1). Across Tayside's three local authorities, Dundee City has a much higher proportion of its population (36.9%) living within this most deprived quintile compared with Angus (5.1%) and Perth & Kinross (4.7%), (Figure 3). The highest population proportion for both Angus and Perth & Kinross live within the more affluent quintile 4, 35.3% and 45.1% respectively, in comparison with 16.5% of the Dundee population classified within this quintile.

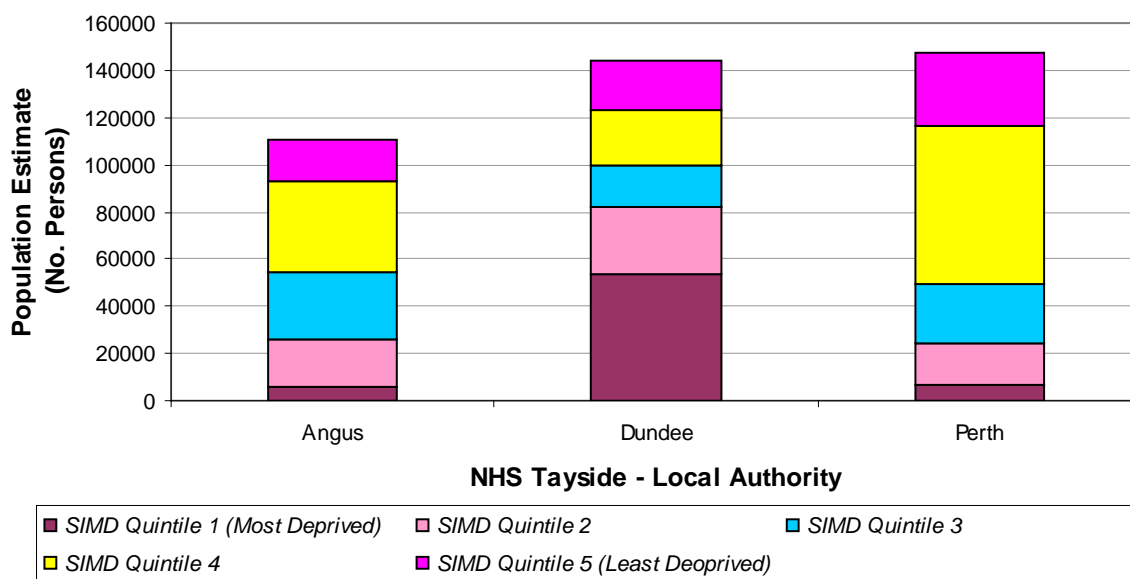


Figure 2 NHS Tayside: Population distribution (SAPE 2010⁵) by local authority and deprivation quintile (SIMD 2009v2)

Tayside Local Authorities

Angus Council

In 2010, Angus has an estimated population of 110,570¹ (population density 51 persons per sq km) and also has a significant number of migrant workers. The area comprises the largely remote and rural Angus Glens, small market towns and busy coastal towns, including two harbours. The coastal towns contain around half the Angus population. People aged 65 or over make up 20.2% of the population in 2010, with a projected population in 2035 estimated to increase by 59.9%. There are approximately 400 private water supplies, serving about 1000 premises, including a hospital. Approximately 10% of these supplies serve a public or commercial building or a domestic population of 50 or more persons. Carnoustie regularly hosts major golf tournaments, including 'The Open' twice in the past 10 years.

Dundee City

The Dundee City area covers 60 sq km, and is geographically the smallest local authority area in Scotland. It is however the largest population centre within the Tayside Health Board region, having an estimated resident population of 144,290¹ in 2010 and a population density of 2,412

⁴ Scottish Government – SIMD 2009 v2

⁵ GRO(S) - Small Area Population Estimates (SAPE), 2010

(persons per sq km), the largest compared with its Tayside counterparts. It is bordered by Perth and Kinross to the west, and by Angus to the north and east. Dundee continues to serve as the regional centre for this area and for northeast Fife. The city is a major employment and retail centre and has a sizeable student population, being home to the University of Dundee, the University of Abertay and Dundee College. In 2010, it was estimated that 63% of the Dundee City population were of working age, approximately 20% of these were full time students². It is estimated that approximately 400,000 people of working age reside within one hour's drive of the city centre⁶. The proportion of Dundee's population whose lives are affected by poverty and who are classed as socially excluded is almost the highest in Scotland. Dundee City is one of the top five local authorities that have the largest proportion (30.2%) of their data zones classified within the 15% most deprived, exceeded by only Glasgow City (43.5%) and Inverclyde (38.2%)⁷.

Perth and Kinross

Perth and Kinross is the fifth largest geographical area in Scotland with a 2010 estimated population of 147,780¹ (population density 28 persons per sq km). In terms of 'All Ages' Perth & Kinross has second⁸ highest projected population growth rate in Scotland estimated at a 32.1% increase between 2010 and 2035, placing increasing demands on services and infrastructure. The demographic projected percentage changes are largest in the number of 'school age' (0-15yrs) and 'working age' individuals compared with other local authority areas in Scotland, projections of 31.7 and 32.7 respectively. Perth and Kinross also has the third highest level of migrant workers in Scotland, after Edinburgh and Glasgow. It is a diverse area comprising many discrete communities, each with its own distinct challenges and opportunities, with almost one third of the population living in the City of Perth. At the other extreme, remote communities like Kinloch Rannoch pose many challenges in terms of access to, and delivery of, essential services including basic infrastructures such as water supplies. There are approximately 2000 private water supplies in Perth and Kinross, mainly located in the northern part of the area. As in Angus, approximately 10% of these supplies serve a public or commercial building or a domestic population of 50 or more persons. In terms of employment the service sector is the main employer with tourism the fastest growing sector overall. Approximately two million tourists per year visit the area.

Specific features of areas of Tayside associated with health protection risk

The geography of Tayside results in certain risks associated with particular features of the local area. The community risk register lists a number of health risks for which a response is required across the Category 1 responders in Tayside e.g. Pandemic flu. Tayside also hosts a number of COMAH sites and major pipelines (Shell and BP). Plans are in place to address these risks, but these plans require regular review to take account of learning from actual incidents and exercises.

Local authorities have a major role in health protection mainly discharged through their environmental health (EH) services. Within each of the three Councils there is a common set of core functions carried out by all the EH services. However, there can be significant variations between Councils in the range of activities carried out by their EH services for the following reasons:

- Many other Council functions have an underlying health protection purpose and as a result may be allocated to the EH function in one Council but not in another.
- Specific features within the different local authority areas may produce particular demands (e.g. major facilities or events).

⁶ Dundee Economic Profile January 2010. Dundee City Council, City Development Department

⁷ *SIMD 2009 v2 – General Report*

⁸ *East Lothian estimated increase of 33.1% (All Ages) between 2010-2035*

- The demands and expectations within different communities also shape EH service delivery.

These factors are outlined below for each Council area:

Dundee

Dundee is a wholly urban area with a relatively high population density and high levels of deprivation. It has the biggest percentage of flatted property per head of population in Scotland, which results in a wide range of environmental health problems requiring resolution.

The city's industrial legacy means that there are many former industrial sites zoned for development. Screening for contaminated land with a view to remediation is a major Environmental Health function.

Dundee has air quality targets for PM₁₀ and NO₂ which are not being met in the city centre and around major arterial routes. The city is listed by Audit Scotland as one of twelve Scottish Councils which have air quality problems.

Dundee City Council is the Port Authority for the city's seaport and Riverside Airport, with both facilities accommodating international traffic.

Dundee's large number of temporary residents includes students from across the UK and international locations. Infectious diseases common to other areas of the world can therefore present in temporary residents. A good example of this is the small but significant number of cases of Tuberculosis infection that occur amongst temporary residents.

Being a regional centre it has a relatively high number of workplaces and commercial activities requiring regulation.

Dundee has one top tier Control of Major Accident Hazards (COMAH) site.

Perth & Kinross

There are many rural communities in Perth & Kinross. The working and residential environments are associated with an increased exposure to farm and wild animals, soil and untreated water sources. Agricultural and rural exposure to environmental pathogens may result in a range of infectious diseases e.g, *Cryptosporidium*, *E.coli* O157, Lyme disease.

Amongst the agricultural workers of Perth & Kinross there are a large number of migrant workers and travellers. The specific health needs of these groups are well described in the scientific literature. In relation to health protection, specific health needs result from the infection risk associated with poor standards of accommodation, transient use of primary health care services and imported infections.

Potential exists for the chemical and biological contamination of private water supplies affecting permanent and temporary residents of the area. An estimated 7,175 people are exposed annually to the risk of infectious diseases including *E.coli* O157 and *Cryptosporidium* resulting from private water sources.

There are a number of COMAH sites throughout Perth & Kinross. Port health related issues are relevant to Perth harbour.

The thriving tourist industry of Perth & Kinross results in many visitors to the area. These visitors may develop infections typically associated with holiday populations e.g. Norovirus. Perth & Kinross hosts one of the largest annual music festivals in Scotland, T in the Park, with campsite facilities providing accommodation to an estimated 65,000 people over four days. Potential risks at T in the Park include outbreaks of communicable disease and are well described in the planning documented for this event. Other large commercial gatherings include the Perth Game Fair and Rewind Festival at Scone Palace.

Angus

There are many rural communities in Angus including a significant population of migrant workers, in common with Perth & Kinross. The standard of residential accommodation for these workers has been a concern especially where caravans are used. The coastal location of Angus carries particular significance for health protection because of its harbour at Montrose. Shell and BP Onshore Pipeline Systems are located in Angus.

Again in common with Perth & Kinross, Angus regularly hosts a number of major outdoor events, including 'The Open' golf tournament and Angus has a thriving tourist industry. Campsites throughout the area may be associated with, for example, *E.coli* O157 risk from the use of livestock fields.

Other health protection risks and challenges relate to:

- The potential for chemical and biological contamination of private water supplies – affecting permanent and temporary residents of the area
- Montrose harbour – port health issues e.g. ammonium sulphate storage
- The health of migrant workers – the issues are described extensively in publications relating to this area
- Agricultural and rural exposure to environmental pathogens resulting in a range of infectious diseases e.g. *Cryptosporidium*, *E.coli* O157, Lyme disease
- Wastewater Treatment Works at Hatton, including pumping stations
- Local hazards and nuisances e.g. large populations of gulls in urban areas
- A recent increase in proposals for the construction of wind farms and large individual wind turbines with potential nuisance/health effects

2.0 Health protection: national and local priorities

2.1 National and local priorities

The national priorities for health protection in Scotland in the period 2008-10 were listed in a Scottish Government letter from the Chief Medical Officer, Dr Harry Burns in January 2008⁹.

These remain:

- Pandemic influenza;
- Healthcare associated infections;
- Vaccine preventable diseases;
- Environmental exposures which have an adverse impact on health and
- Gastro-intestinal and zoonotic infections.

In terms of population demography and geography, Tayside might be considered a microcosm of Scotland. As a corollary of this, health protection challenges broadly mirror those for Scotland as a whole.

Local priorities for health protection work in Tayside include:

- Ensuring joint working arrangements to deliver an effective response (including out of hours), which is consistent with the provisions of the Public Health etc (Scotland) Act 2008
- Developing protocols that are consistent with the provisions of the Public Health etc (Scotland) Act 2008 and which respond to new and emerging infections and health risk states
- Reviewing and revising existing emergency plans
- Learning from the incidents and outbreaks that have recently occurred in Tayside and elsewhere
- Implementing the A TB Action Plan for Scotland

2.2 Lessons learned from incidents and outbreaks

In any one year, a number of incidents and outbreaks occur: these vary in severity and in the degree to which new lessons are learned about how services can better respond in future. Reports of incidents and outbreaks are presented to the Tayside Health Protection Network so that implementation of actions arising from lessons learned is subject to appropriate governance. Early lessons can be learned during on going 'hot reviews' as an incident develops or at the close of an incident. 'Hot reviews' enable matters to be dealt with, which do not require the in depth study needed to produce a report. Very often such lessons can be very valuable if captured fresh and are often concern issues such as communication. This can be useful when final reporting of such incidents does not occur rapidly.

⁹ [http://www.sehd.scot.nhs.uk/cmo/CMO\(2008\)00a.pdf](http://www.sehd.scot.nhs.uk/cmo/CMO(2008)00a.pdf)

3.0 Health Protection Resources and Operational Arrangements

NHS Tayside's health protection activities are as follows:

- Surveillance, prevention and control of communicable diseases and environmental health;
- Provision of specialist advice and support to primary care, hospitals, and other relevant organisations, and agreeing with them how health protection should be delivered locally;
- Investigation and management of a full range of health protection incidents (including outbreaks of diseases like meningitis and food poisoning)
- The conduct of clinical audit and undertaking of continuous professional development relating to health protection

NHS Tayside Health Protection Activities

Topic areas include: -

- Immunisation;
- Blood borne viruses;
- Respiratory infections (including TB and pandemic influenza planning);
- Gastrointestinal and waterborne infections;
- Infection control in the community;
- Port health;
- Environmental health.

3.1 NHS Tayside Health Protection Team staffing

The NHS Tayside health protection function is continuously operational 24/7. In hours (Monday to Friday) a small multidisciplinary team operates to deliver the full range of services. The out of hours service is covered by an on call medical team where a Consultant in Public Health Medicine (CPHM) is always on call and at times there is also a Specialist Registrar on call. A voluntary out of hours agreement is informally in place with a small number of administrative staff.

Table 1 Monday to Friday (In Hours) Health Protection Team

Designation	FTE
(Communicable Disease and Environmental Health)	2.2 plus cover from other CsPHM
Advanced Specialist Nurse (Health Protection)	3.0
Personal Assistants	2
Surveillance/Notification Assistants	1.5

Table 2 Out of Hours Health Protection Team

Designation	Periods covered
Consultants in Public Health Medicine	24/7 evenings and weekends
Specialist Registrars in Public Health Medicine	Evenings & weekends for 3 days per week only
Personal Assistants	Voluntary cover on an <i>ad hoc</i> basis

A Consultant in Pharmaceutical Public Health provides *ad hoc* input on health protection issues when required. The Health Protection Team also benefits from access to the Public Health Officer Team who provide research, evaluation and database management expertise.

NHS Tayside Competent Persons

Seven Consultants in Public Health Medicine are designated as NHS Competent Persons under the provisions of the Public Health etc (Scotland) Act 2008.

3.2 Roles and responsibilities

Consultants in Public Health Medicine

The CPHM role is:

- *Surveillance*: Monitoring the health of the population and the hazards and exposures affecting it.
- *Investigation*: Investigating why and how people fall ill because of exposure to hazards and what can be done to prevent this.
- *Risk assessment*: Estimating the probability of the health of a community being damaged from exposure to a hazard
- *Risk management*: Putting in measures that reduce the risk of exposure to hazards and the impact they have on health.
- *Risk communication*: Informing the public about the risks to their health and what the individually or collectively can do to reduce these.

The CsPHM provide public health advice to patients and relatives, staff and the public from an NHS base, home or other agency site. A CPHM leads the management and coordination of the public health response, in liaison with local NHS senior management, others e.g. other NHS Board areas, Health Protection Scotland, Scottish Government and other national agencies. A Consultant in Public Health Medicine convenes an incident/outbreak management team on the basis of clinical judgement in order to ensure protection of the public health.

Health Protection Nurse Specialists (HPNS)

The Health Protection Nurse Specialists provide nurse specialist advice on health protection issues including communicable diseases, infection control, immunisation and environmental health, implementing the public health response in relation to health protection incidents and leading strategically on the control of communicable disease and environmental health issues through agreed projects and in relation to broad policy areas in Tayside.

HPNS take a lead role in the initial investigation of confirmed, probable and possible cases of infection and communicable disease (e.g. meningococcal meningitis, measles) and in the local control of specific outbreaks (i.e. gastro intestinal infections in care homes). The Health Protection Nurse Specialists take a lead role in providing specialist nursing advice and information and training to NHS professionals, local authority, private and voluntary organisations, educational establishments and the general public on health protection issues including communicable disease, environmental health, infection control and immunisation. The HPNS participate in regional and national health protection groups.

Surveillance Notification Assistants

The Surveillance Notification staff receive verbal, written and statutory notifications of infectious diseases, record these in appropriate databases, produce national returns on trends in notifications and monitor disease trends locally.

Health Protection Administrative and Clerical Staff

The health protection administrative and clerical members of staff provide a comprehensive administrative and secretarial support service to CsPHM and other professional staff within the Directorate of Public Health. This includes assisting staff in managing their working day and acting as the identified contact point for all callers to the office, by telephone or in person, dealing with enquiries, resolving difficulties and advising on the proper channels of communication to ensure that they minimise inappropriate interruptions whilst maintaining the continuity of the needs of staff and outside agencies.

3.3 Tayside Local Authorities' staffing

Angus Council

Angus Council has 17 full time equivalent (FTE) competent persons as designated under the Public Health etc (Scotland) Act 2008; in addition to two other Environmental Health Officer there are also 7 officers a Dog Warden and an Animal Health Inspector who contribute to public health protection functions.

Dundee City Council

The planned provisional staffing complement for the period of this Health Protection Plan is shown below and includes 17.8 FTE Environmental Health Officers (EHOs) (meeting the definition of competent persons under the Public Health etc (Scotland) Act 2008).

There are a further 29.2 FTE staff capable of being empowered under the Act as authorised officers, including; Food Safety Officers, Pest/Animal Control Technicians and Licensing Standards Officers.

Perth & Kinross Council

Perth and Kinross has 7.6 FTE competent persons as designated under the Public Health etc. (Scotland) Act 2008. In addition there are a further 19 FTE officers who contribute to public health protection functions.

Tayside Scientific Services

This laboratory is part of Dundee City Council and provides comprehensive scientific services to the Tayside Local Authorities, private business and government agencies. It does not interface with the general public, but provides a support service to local authority departments such as Environmental Health and Trading Standards. Their services include analysis and examination of air quality, contaminated land, and microbiological and chemical examination of food and water supplies. The work of the lab contributes greatly to the work of the Local Authorities within Tayside NHS area both in day-to-day terms and in outbreak or major incident situations.

3.4 Local authority activities

The main areas of local health protection activities carried out by Environmental Health and other professionals within local authorities are outlined below. Many are requirements of statute, in order to protect the health of individuals living in working in or visiting our communities.

- Effective enforcement of housing, (including caravans) public health and pollution control legislation to reduce the effects on health of poor housing standards, statutory nuisances poor air quality, unwholesome drinking water, contaminated recreational waters or other hazards
- Dealing with pest infestations, including the provision of pest control services
- Controlling environmental noise/ antisocial behaviour noise
- Identification, investigation and control of contaminated land
- Pandemic flu operational planning particularly in the context of business continuity in respect of the maintenance of critical Local Authority services
- Risk assessment, sampling and improvement of private water supplies to protect users from the risk of waterborne infections or diseases

- Effective enforcement of health and safety at work legislation to protect workers and those affected by work activities
- Effective enforcement of food safety legislation using inspection and sampling programmes to protect consumers from unsafe food supplies
- Inspections of ships and aircraft to protect crew and passengers, as well as potential communicable disease affecting local population
- Effective response to any notified diseases or food poisoning cases to identify and limit the spread of infection where necessary
- Minimising the risk of exposure to environmental incivilities such as dog fouling, illicit tipping and graffiti
- Minimising the risk of environmental tobacco smoke/ secondary exposure through inspection and the enforcement of smoke free legislation
- Regulation of sales of under age products e.g. tobacco, alcohol
- Regulation of alcohol sales through new licensing standards legislation – including enforcement, education and awareness raising work
- Disposal of human remains where no relatives, or other persons, are in a position to do so.

3.5 Tayside Local Authorities Out of Hours Arrangements

Each local authority has an out of hours facility, which holds contact details for key staff. This information is held by:

- NHS Tayside Health Protection Team
- Emergency Planning- contact lists are kept by all senior officials
- Food Standards Agency- Food Alert Contact Team

The contact list system relies on officers identified on the list being available if contacted. To facilitate availability, contact lists contain the names of a number of officers for each local authority area.

3.6 Maintaining knowledge and skills

NHS Tayside

All consultant medical staff are required to maintain their skills and professional registration, and to record continuing professional development (CPD) activities and undergo annual appraisal, in keeping with current General Medical Council (GMC) guidelines.

Specialist Registrars are required to undergo annual assessment of progress with training in order to ensure that skills are being developed appropriately.

The Health Protection Nurse Specialists are required to maintain their skills and professional registration in keeping with the current Nursing and Midwifery Council (NMC) guidelines.

Local Authorities

Local Authority professionals all have an Employee Review and Development process, or equivalent, on an annual basis. There is ongoing training ensuring that staff have necessary skills and competencies on a wide range of public health and environment matters, including health

protection. In addition, officers regularly attend national Liaison Groups on matters of food, health & safety, pollution, public health, housing, smoking and port health.

3.7 Capacity and resilience

Capacity can be defined as having sufficient resources and capability in an organisation with responsibility for Health Protection to enable them to discharge their remit, including the response to increasing pressures on their services¹⁰.

Resilience is about the sustainability of a response over a period of time (e.g. 48 hours)⁸. For example a complex disease outbreak may require the core investigatory team to work intensively for long hours over many days. To cope with this pressure therefore it may be necessary to operate a shift or rota system. Sufficient capacity to do so is therefore required. This means that staff called in from other functions to support the response will have to be trained and prepared in advance for this role.

Maintaining and building capacity and resilience depends on adequate resources being available. A decline in core health protection resources within any party to this plan could affect the overall capacity within Tayside to react effectively to incidents. It is essential that all parties maintain and develop plans to ensure that there is sufficient health protection capacity, including the ability to effectively react to incidents. This includes maintaining and reviewing existing business continuity plans.

3.8 Information Technology and Communications Technology

NHS Tayside

NHS Tayside uses the following systems to support the health protection function. All these systems are available during office hours and on call and can be used in an outbreak or incident.

NHS Tayside Information Technology and communications technology	Use
BT (British Telecom) landline, mobile phones, on call pagers and 3 sets of teleconferencing equipment	Day-to-day (including on call) communications and teleconferencing
Access to video-conferencing facilities off-site	Video-conferencing including teaching
Microsoft packages including Word, Excel, used on desktop and laptop computers	Communications, data collection including outbreak management, filing, presentations. Laptops (with email, internet)
Internet	Investigations, communications, research.
CHI (Community Health Index)	Patient demographic data
SIDSS (Scottish Infectious Disease Surveillance System) National Database	Notifications of Infectious Diseases reported to Health Protection Scotland
Disease notification local database	Record of notifications
ECOSS (Electronic Communication of Surveillance in Scotland)	Reporting mechanism for notifiable and reportable organisms
ESMI (Enhanced Surveillance of Mycobacterial Infections in Scotland)	National surveillance database for TB
Information board	Can be written on and used in an incident or as a teaching or presentation facility.
Television Mobile phones including MTPAS	Enables staff to keep up-to-date with media messages and communications during an incident or outbreak.

¹⁰ Definitions sourced from Health Protection Scotland (personal communication, March 2010)
2012-14

IT (Information Technology) and Communications Technology available to Local Authorities in Tayside

Each Local Authority has access to the following:

1. Emergency Planning centres and facilities
2. Geographical Information System (GIS)
3. Civica IT system linked to Address Gazetteer. The capacity of this system provides:
 - a. data base for all premises within EH jurisdiction
 - b. handling of all service requests including communicable diseases
 - c. planning of inspection programmes
 - d. sampling database(e.g. food samples)
 - e. production of data reports
 - f. mail merge
 - g. multi access points in Council premises including emergency planning centre
4. All staff equipped with mobile phones and cameras
5. All staff equipped with PC and internet access

4.0 Health protection: planning infrastructure

4.1 Health Protection Plans

A number of health protection plans have been produced for Tayside. These include:

NHS Tayside Board Communicable Disease Major Incident Plan (2004)

The objectives of this plan are to ensure prompt action to:

- Recognize a major incident or outbreak of food poisoning or communicable disease with serious consequences for the population of Tayside;
- Define its important epidemiological characteristics and aetiology;
- Stop its further spread;
- Prevent its recurrence;
- Maintain satisfactory communication with external agencies with a legitimate interest in the outbreak.

This plan is due to be updated to take account of new guidance on the management of outbreaks and to bring it in line with the Public Health etc (Scotland) Act 2008.

NHS Tayside Influenza Pandemic Response Plan (2007)

The objectives for the NHS Tayside Plan are to:

- Reduce the impact of the influenza pandemic on morbidity and mortality in Tayside, through delivery of appropriate and timely disease prevention, and the organisation of NHS care;
- Make provision for the appropriate NHS care of large numbers of ill people and dying people in Tayside;
- Provide accurate, timely and authoritative advice and information to professionals, the public and the media.

This plan is currently under revision to take into account recent experience of the H1N1 pandemic and the resultant UK national planning framework for pandemic influenza preparedness and response.

NHS Tayside Mass Vaccination Plan

The objectives for the NHS Tayside Plan include making arrangements to implement mass vaccination for the population of Tayside when required for any pathogen. This plan needs to be updated in the light of the recent experience of the H1N1 pandemic.

NHS Tayside Major Emergency Procedures- Strategic Response Plan (2009)

Includes arrangements to deal with accidents, radiation and chemical incidents, incidents involving the deliberate release of chemical, biological, radiological or nuclear agents (CBRN). These are continually updated and tested regularly.

Blue Green Algae Monitoring and Action Plan

An annual plan has been produced each year since 2001 by NHS Tayside in partnership with all three local authority departments of environmental health, Scottish Water, SEPA and Dundee University. The plan sets out inspection and monitoring frequencies for water bodies at risk of developing algal blooms and details multi-agency actions in various scenarios relating to cyanobacteria and is reviewed each year.

Scottish Waterborne Hazard Plan

This Plan was developed as a multi-agency approach to the management of waterborne hazards within Scotland, and is led by Scottish Water with involvement of NHS Boards, Local Authority

and Environmental Health and Emergency Planning Departments and Health Protection Scotland. It provides guidance for dealing specifically with waterborne hazards to enable a consistent approach to be adopted by staff in all the relevant agencies across Scotland, and is updated nationally every year.

4.2 Local authority health protection plans

Single Outcome Agreements and the service planning process

The Scottish Government and local government share an ambition to see Scotland's public services working together with private and voluntary sector partners, to improve the quality of life and opportunities in life for people across Scotland.

This shared ambition is pursued through Single Outcome Agreements in a drive towards better outcomes. These agreements between the Scottish Government, local authorities and Community Planning Partnerships (CPPs) set out how each will work in the future towards improving outcomes for the local people in a way that reflects local circumstances and priorities, within the context of the Government's National Outcomes and Purpose.

The Scottish Government's priorities can be summarised as follows:

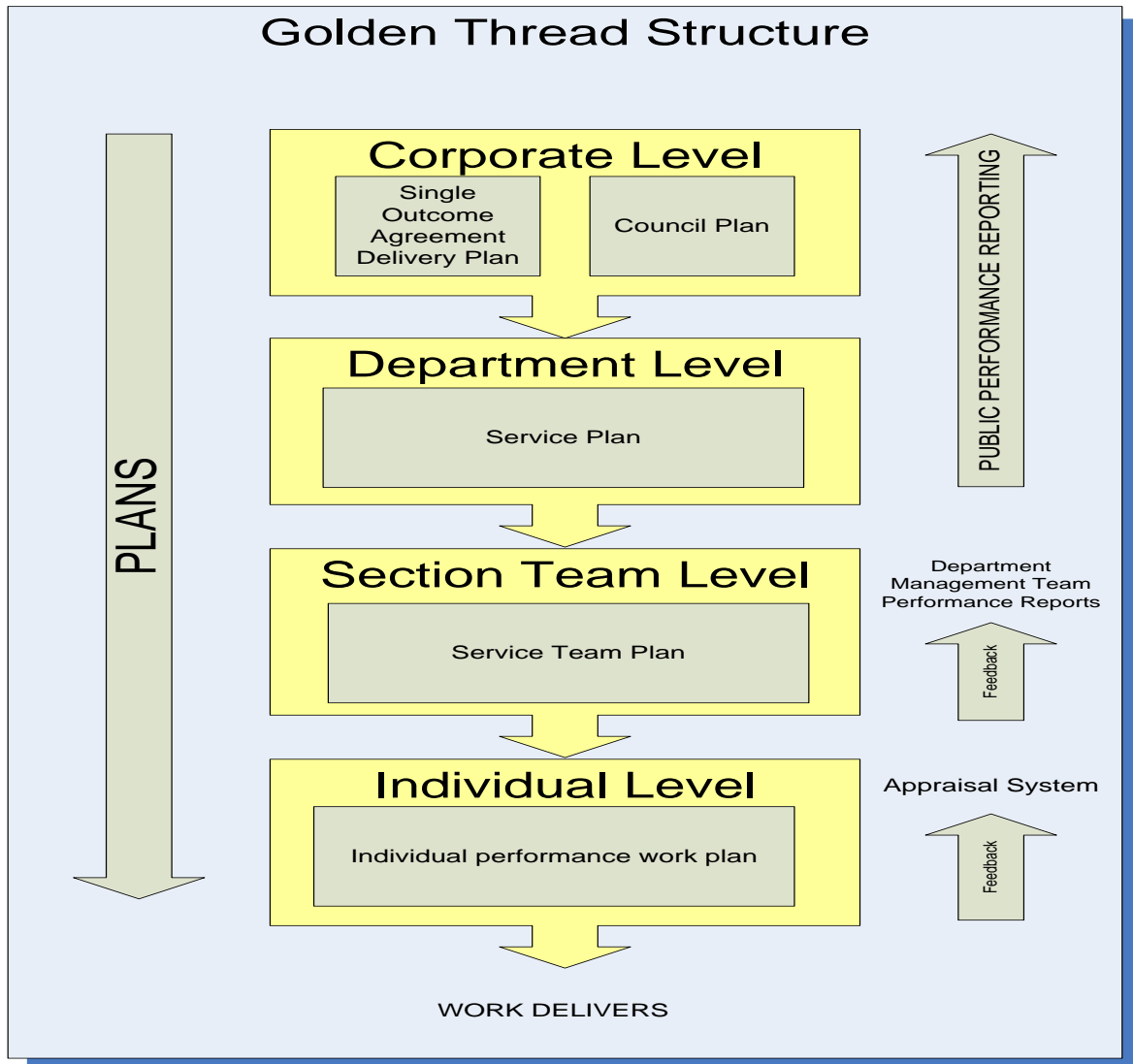
- Wealthier and Fairer Scotland
- Healthier Scotland
- Safe and Stronger Scotland
- Smarter Scotland
- A Greener Scotland

In Tayside each Council has signed Single Outcome Agreements (SOAs). In the case of Dundee City Council this was made through the vehicle of the multi agency Dundee Partnership. The Community Plan for Dundee 2005-2010 currently under review describes how Dundee City Council, Scottish Enterprise Tayside, NHS Tayside, Tayside Police, academic institutions and representatives of the private, community and voluntary sectors have all agreed to work together to make Dundee a better place.

Each Council also produces Council Plans linked to SOAs. Individual service plans link with these higher-level strategic objectives providing a clear link between these and service delivery. This is illustrated in Figure 4.

Local authorities have a wide range of plans which connect with health protection. The strongest links are contained in the respective departmental service delivery plans for environmental health.

Figure 4 Local Authority Planning Links



A comprehensive list of plans for each of Tayside's Local Authorities can be accessed via the following hyperlinks:

Angus Council

<http://www.angus.org.uk/documents.cfm>

Dundee City Council

<http://www.dundee.gov.uk/cplanning/plans/>

Perth & Kinross Council

<http://www.pkc.gov.uk/Council+and+government/Community+planning+-+working+in+partnership/>

4.3 Delivering the health protection function in Tayside 2008-09

Health protection covers a wide range of activities some of which are not easily quantified; however a number of indicators of activity are available.

During 2010 and 2011, a total of 1534 and 1637 infectious disease notifications respectively were received by NHS Tayside, showing an increase of 6.7% from 2010 to 2011. Notifications included:

Tayside Infectious Disease Notifications and Reports

Disease notified or organism reported	Jan – Dec 2010	Disease notified or organism reported	Jan – Dec 2011
Anthrax	9	Anthrax	0
Atypical mycobacterium	12	Atypical mycobacterium	9
Bacillary dysentery	10	Bacillary dysentery	20
Botulism	0	Botulism	0
Brucellosis	1	Brucellosis	0
Campylobacter	631	Campylobacter	635
Cholera	0	Cholera	0
Clinical syndrome due to <i>E.coli</i> infection	0	Clinical syndrome due to <i>E.coli</i> infection	1
<i>Clostridium difficile</i>	192	<i>Clostridium difficile</i>	169
Cryptosporidium	41	Cryptosporidium	41
Diphtheria	0	Diphtheria	0
Escherichia coli (VTEC)	14	Escherichia coli (VTEC)	20
Giardia lamblia	10	Giardia lamblia	8
Giardiasis	4	Giardiasis	0
Haemolytic Uraemic Syndrome (HUS)	1	Haemolytic Uraemic Syndrome HUS	2
Haemophilus influenzae	2	Haemophilus influenzae	3
Influenza	12	Influenza	121
Legionellosis	1	Legionellosis	6
Listeria monocytogens	2	Listeria monocytogenes	2
Lyme disease	25	Lyme disease	38
Measles	8	Measles	9
Meningococcal infection	4	Meningococcal infection	5
Mumps	71	Mumps	62
Necrotizing Fasciitis	1	Necrotizing Fasciitis	4
Paratyphoid	0	Paratyphoid	0
Pertussis	12	Pertussis	11
Plague	0	Plague	0
Poliomyelitis	0	Poliomyelitis	0
PVL – MRSA & MSSA	49	PVL – MRSA & MSSA	26
Rabies	0	Rabies	0
Rubella	2	Rubella	1
Salmonella	56	Salmonella	70
Severe Acute Respiratory Syndrome (SARS)	0	Severe Acute Respiratory Syndrome (SARS)	0
Smallpox	0	Smallpox	0
Streptococcus pyogenes	21	Streptococcus pyogenes	17
Streptococcus pneumoniae	61	Streptococcus pneumoniae	58
Tetanus	0	Tetanus	0
Tuberculosis (respiratory)	5	Tuberculosis (respiratory)	10
Tuberculosis (non-respiratory)	4	Tuberculosis (non-respiratory)	8
Tularemia	0	Tularemia	0
Typhoid fever	2	Typhoid fever	1
Viral haemorrhagic fevers	0	Viral haemorrhagic fevers	0
Viral hepatitis	271	Viral hepatitis	277
West Nile fever	0	West Nile fever	0
Yellow Fever	0	Yellow Fever	0
TOTAL	1534	TOTAL	1634

Due to the introduction of the Public Health Etc (Scotland) Act 2008 some of the previous disease and organism notifications have been added or removed.

Significant Incidents and Outbreaks 2010-11

For the purpose of the JPHPP, significant incidents and outbreaks refer to only those for which an Incident Management Team (IMT) or Outbreak Control Team (OCT) meeting was required. In 2010 and 2011, there were between 30-40 significant incidents or outbreaks managed by the Health Protection Team, in conjunction with partner agencies.

Respiratory Communicable Diseases

Notable incidences of infectious respiratory disease which required intensive health protection work included several cases of tuberculosis (TB), Legionellosis and *Streptococcus pneumoniae* infection. Particular effort went into some other specific infections – partly on a pilot basis: invasive Group A *Streptococcus pyogenes* and PVL-MRSA. Both of these are forms of bacteria which can be found on human skin and often cause little harm. However, these two particular strains are more dangerous and have the potential to cause invasive, sometimes life-threatening disease. Cases can cluster in household and other settings and there is thus the potential to reduce risk by providing advice to primary healthcare teams providing treatment to affected families.

Communicable Gastro-intestinal Diseases

The NHS Tayside Health Protection Team and staff from the three local council environmental services work closely to investigate cases and outbreaks of infection associated with potentially food or water-borne organisms. The Health Protection Team provides ongoing surveillance of all reported cases of gastroenteritis. Surveillance includes identifying any possible links between cases, determining possible cause and quantifying incidence rates.

During 2010-11 the Health Protection Team dealt with many outbreaks and cases of food borne infection. These peaked, as usual, in late summer and were frequently the result of infection imported from overseas when patients returned from their summer holidays. Several outbreaks were, however, associated with more local transmission and were often associated with the hospitality industry. Not reflected in the above figures, however, are the many outbreaks of norovirus managed by the Health Protection Team. These are sometimes associated with hospitality industries but are rarely food borne. More usually they are associated with care settings and are no longer occurring strictly in the winter as the colloquial name: 'winter vomiting virus' might suggest. The apparent stability in total annual incidence of salmonella infection in Tayside masks a marked change in proportion of cases due to different species. We commented in the first JPHPP on the marked drop in incidence of *S. enteritidis* (due, presumably, to the successful immunisation of UK chicken and hen flocks). There is no evidence in the data above of any continued drop. We continue to see more cases than previously of infection with unusual species of salmonella associated with exotic pet reptiles and mice imported to feed them with, for example. On a slightly more positive note, campylobacteriosis incidence rates appear to have stabilised albeit at a higher level than previously. We hope that the concerted efforts of the FSA in conjunction with avicultural industries can reduce the level of infection and contamination in the human food chain that is likely to have been responsible for the rise we have seen in Tayside over recent years.

Zoonoses

Cases of zoonotic infection are rare but occasional cases occur within NHS Tayside.

Notable amongst zoonoses is the high level of anthrax reporting in 2010. This reflects the national outbreak amongst drug injectors which Tayside users did not escape. The end of this outbreak is reflected in the return to the more usual reporting rate of zero in 2011.

Bats are occasionally known to rarely carry the European Bat Lyssavirus and contact with a bat can result in a person being bitten and contracting rabies. Immunisation must be considered if the bite has drawn blood for example. Immunoglobulin and 5 doses of vaccine have to be given over a period of one month, if not previously vaccinated.

The trend we noted in the first JPHPP of increasingly reported Lyme disease has continued. This may be partly due to increasing awareness, but may also be due to a genuine increase in incidence. This is an avoidable tick-borne infection that has featured several times in NHS Tayside's Health protection Team newsletter. The increasing trend is, again, also reflected in national data and has prompted a drive to increase leafleting and the use of posters in high-risk areas.

A potential pandemic of influenza

In the influenza pandemic, NHS Tayside has used local plans in accordance with the national planning guidance as the template for its response. It has worked closely with the Local Authorities and Category 1 colleagues to ensure that due cognisance is taken of risks to health and social care workers and those in "at risk" groups. It has implemented its planned arrangements throughout the emergency in line with Scottish Government advice and has changed and amended its response to take account of changing circumstances

Healthcare associated Infections

NHS Tayside continues to carry out surveillance of healthcare associated infections in line with guidance from the Chief Medical Officer.

Clostridium difficile and *Staphylococcus aureus* surveillance is carried out in all healthcare facilities in NHS Tayside. Surveillance information can be accessed from the Health Protection web site <http://www.hps.scot.nhs.uk/haic/sshaip/index.aspx>

Vaccine preventable diseases and the impact on them of current and planned immunisation programmes

The Human Papilloma Virus (HPV)

The HPV immunisation programme began on 1st September 2008. In the 2008-09 academic year, girls in their second year of secondary school and those in their 5th and 6th year were offered the vaccine. The programme entailed administering 3 doses of the vaccine of intervals of 0, 1, and 6 months. Girls who were 18 and had left school were also included in the programme. Uptake for Tayside has consistently been generally over 90% and among the very highest uptakes across Scotland.

Year 2 (2009-2010): The programme continued with year 2, 4 and 5 girls being offered the vaccine.

Year 3 (2010-2011): The programme included both the routine immunisation of 2nd year girls plus a catch-up of all the girls who were either missed or left school the previous two years. In future years the HPV vaccine will be included in the routine school-based immunisation programme for girls in the second year. We note the change from cervarix to gardasil this year which will present a new set of challenges for the delivery of this, so far, highly successful programme.

Influenza A(H1N1)

The programme for vaccination of priority groups against pandemic (2009) H1N1 commenced in autumn 2009. Groups vaccinated included:

- At risk 6 months to 65 years
- Pregnant women
- Household contacts of people with compromised immune systems
- Over 65's in at risk groups currently offered seasonal flu vaccination
- Frontline health and social care workers

Seasonal flu vaccine continues to be offered to priority groups in addition to the A(H1N1) vaccine.

Childhood immunisation programme

Uptake rates for diphtheria, tetanus, polio, pertussis, *Haemophilus influenzae* type B, meningococcal C and pneumococcal vaccines in children up to 24 months in NHS Tayside all continue to be above 95%, as does the uptake of MMR (Mumps, Measles, Rubella) by the age of 6 years.

4.4 Joint working

Tayside Health Protection Network

This group has a remit to ensure that NHS Tayside working in partnership with statutory and non-statutory organisations fulfils its governance responsibilities for health protection in addressing the reservoir of infection within the community of Tayside, and potential environmental hazards to health. This includes Healthcare Associated Infection (HAI) as it affects the general population, all notifiable infections; health issues associated with public and private water supplies, and environmental hazards. Membership includes NHS partners from Health Protection Scotland, all three Local Authorities, the Care Inspectorate and Scottish Water. Meetings are held quarterly.

Gastro-Intestinal Liaison Group

This Group has a remit to ensure that the main stakeholders responsible for health protection take a consistent approach in the reporting investigation monitoring and control of notifiable infectious disease across Tayside. Membership includes NHS Tayside, the three Local Authorities and Tayside Scientific Services.

Blue-Green Algae Working Group

This group has a remit to ensure that NHS Tayside working in partnership with other statutory organisations fulfils its responsibility to take appropriate action in protecting and informing the public on the risks associated with Blue-Green Algae (Cyanobacteria). Membership includes NHS Tayside, the three Local Authorities SEPA and Scottish Water. The group produces a monitoring and action plan on an annual basis setting out the arrangements in place to control the risks associated with Blue Green Algae in water supplies.

Communicable Diseases- National Pregnancy Screening Programme

The programme offers screening to all pregnant women for HIV, rubella, syphilis and hepatitis B. Screening, diagnosis and treatment, and follow up are required to be in line with NHS QIS Pregnancy and Newborn Screening Clinical Standards (October 2005) and relevant Managed Clinical Network (MCN) standards.

Women's Health/Microbiology Liaison Group

A multidisciplinary group with representation from midwifery, obstetrics, microbiology, virology and public health meet regularly to discuss a range of issues relating to communicable diseases in pregnancy. The group also discusses issues on pregnancy screening for communicable diseases, when relevant.

Other groups that support and promote the work of health protection include *Tayside Immunisation Steering Group*, the NHS Tayside Seasonal Influenza Vaccination Strategic Governance Group, the NHS Tayside Pandemic Influenza Planning Group and the Scottish Water/NHS/EH Liaison group

5.0 Mutual aid arrangements

A Mutual Aid Agreement (MAA) is defined as an agreement between organisations, within the same sectors and across boundaries, to provide assistance and additional resources during an emergency which may go beyond the resources of an individual organisation¹¹.

An MAA for the three Local Authorities is in place and was agreed through the Tayside Strategic Co-ordinating Group (Tayside SCG)... Joint working arrangements between the various agencies in Tayside are in place through the Tayside SCG Plan. Tayside Police, Tayside Fire and Rescue, Scottish Ambulance Service and NHS Tayside have formal mutual aid arrangements within their sector of operation.

Regulation 3 of the Civil Contingencies Act (CCA) 2004 (Contingency Planning) (Scotland) Regulations 2005 provides that Category 1 responders, which have functions exercisable in a particular police area in Scotland, must co-operate with each other in connection with the performance of their duties under section 2(1) of the CCA.

¹¹ Definition sourced from Preparing Scotland (section 7)
<http://www.scotland.gov.uk/Resource/Doc/94471/0022783.pdf>

6.0 Health protection: public involvement and feedback

NHS Tayside has a long and established network of public partners who participate in a wide variety of engagement activities around development and improvement of NHS services. One of their key roles is their involvement in the Healthcare Associated Infection Public Partnership Group (PPGs) network. Members regularly meet with professionals around infection control issues and contribute to development of strategic and communication plans. PPGs also conduct hand hygiene and cleaning audits. They share information, for example on hand hygiene awareness-raising with the wider public at information stands both within and outwith NHS premises and also seek public views and opinions on services.

PPGs also contribute to discussion and debate on an individual basis. The H1N1 communication group, which led on sharing information with the public, included a PPG member. The representative was able to advise on tailoring the most appropriate content and methods of information sharing.

The NHS Tayside Public Involvement Manager is a member of the Tayside Health Protection Network. The postholder is a key link to the public partners and her role is to raise awareness of the need to involve the public in the business of the network. The minutes of the network feed into NHS Tayside Improvement and Quality Committee which has a Public Partnership Group representative as a member and as such is able to comment on their content.

7.0 Recommendations

The plan describes an overview of health protection priorities, provision and preparedness within Tayside and describes how the Board and the Local Authorities deal with a range of health protection topics. Below are topics that have been identified that require further work, which will form the basis of our plans within the period 2012-14:

- Formalise and implement a robust on call arrangement for appropriate Local Authority personnel
- Ensure health protection management protocols are in place for priority communicable diseases and environmental hazards
- Update key emergency response plans, including multi-agency pandemic influenza plans **and review procedures for providing a joint response to public health incidents**
- Implement robust procedures for acting on lessons learned from health protection incidents occurring at a Tayside, Scotland and international level
- Address capacity and resilience issues for health protection services in Tayside
- Implement local aspects of the Health Protection Stocktake Final Report, including networking and/or mutual aid arrangements as relevant
- Implement Tayside elements of A TB Action Plan for Scotland 2011
- Undertake exploratory work to assess and identify the health protection contribution to addressing climate change, from an NHS Tayside and Local Authority perspective

Tayside's Joint Public Health Protection Plan is a public document and is available to members of the public on NHS Tayside's Directorate of Public Health website at www.taysidepublichealth.com and on request from:

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