# Meeting the WHO (Europe) Ten Essential Public Health Operations:

# Practical Examples of Scottish Public Health Delivery at Nation, Region, and Local Levels

## Background

The WHO Regional Office for Europe has identified 10 Essential Public Health Operations (EPHOs) that allow civil and health administrations to describe, to assess and to plan stronger public health services and capacities.[3] These operations centre around three main areas of public health service delivery: health protection; health improvement and disease prevention; and health service quality and efficiency. The EPHOs are informed by robust public health intelligence. The 10 EPHOs are:

EPHO1: Surveillance of population health and wellbeing;
EPHO2: Monitoring and response to health hazards and emergencies;
EPHO3: Health protection including environmental occupational, food safety and others;
EPHO4: Health promotion including action to address social determinants and health inequity;
EPHO5: Disease prevention, including early detection of illness;
EPHO6: Assuring governance for health and wellbeing;
EPHO7: Assuring a sufficient and competent public health workforce;
EPHO8: Assuring sustainable organisational structures and financing;
EPHO9: Advocacy communication and social mobilisation for health; and
EPH10: Advancing public health research to inform policy and practice.

The most effective and efficient method of delivering these EPHOs is through an integrated approach to services, rather than through vertical programmes. In April 2013 and September 2014 a party from the Association of Schools of Public Health in the European Region (ASPHER) visited Scotland assessing the strengths and competencies of the Scottish public health system against – in part – the EPHOs. Across the two visits, the visiting party provided an initial assessment of the Scottish public health system as being:

*"…a comprehensive and coherent public health system and a well-suited framework for the development and maintenance of a competent public health workforce, rooted in practice as well as theory. This constitutes a solid basis for public health in the Scottish population."*[4]

[3] WHO (Europe).The 10 Essential Public health Operations. (Available at: http://www.euro.who.int/en/health-topics/Health-systems/public-health-services/policy/the-10-essential-public-health-operations last accessed 25th of May 2015.)
[4] Foldspang, A. & Otok, R. (2014). Scotland's Public Health System and Public Health Education and Training: Preliminary report from ASPHER's ShapePH Programme. Brussels, ASPHER.

In this short paper, we present a series of practical examples – or short case studies if you prefer – which highlight the very positive impact on health and wellbeing from public health services and professionals, whether working individually or collaboratively at local, regional and national levels in Scotland. The work occurs in informal and formal settings; between public health professionals from different areas of Scotland and through partnerships working with others employed in other public agencies locally and nationally and third sector organizations.

By bringing an evidence based approach to public health service delivery, public health professionals have been able to lead and influence at both operational and strategic levels.

**EPHO1: Surveillance of population health and wellbeing**

Across Scotland there are examples of public health departments undertaking surveillance of the health of the population health. In recent years this has tended to be in support of the NHS and wider agencies involved in public health.

There are clear examples of how an evidence-based approach to helping community planning partnerships to both understand their population's health and be able to plan at a local level according to their population's health needs:

- In the Western Isles geographic profiles have been developed to demonstrate health inequalities within the area using local and national data for 45 indicators. These reports have aided the decision-making process in projects such as: a third sector health inequalities project development as supporting evidence for assessing impact; community capacity building through their use by local patient participation groups and locality planning groups; community participatory mapping; enhanced healthcare at home initiative where maps were used to identify geographical pilot sites.

- In Fife there has been a strong tradition of data sharing to aid demonstration of need locally as well as measurement of progress strategically. This has included the development of shared tools such as the KnowFife Dataset, an online database of public health (and other) information at a range of local geographies.

- In Dumfries and Galloway a Social Capital Index has been developed in order to better understand the individual and community effects of social networks and norms and to provide a region-wide indicator or the current social health of individuals, groups and communities. This work has been undertaken by the Public Health Department, in consultation with the council, third sector and local academic institutions.

At the regional levels initiatives such as the North of Scotland's "Intelligent Region" initiative has brought together health status data with service delivery intelligence to allow the North of

Scotland Public Health Network better support work on developing health services from a population health perspective.

Of course, much of the regional and local work is supported by the work of the Information and Statistics Division (ISD) within the Public Health and Intelligence section of NHS National Services Scotland on health and social service activity data.[5] Of equal important is the work of the Scottish Public Health Observatory (ScotPHO) which ISD and NHS Health Scotland collaborate to provide a wide range of interpreted public health intelligence resources.[6]

**EPHO2: Monitoring and response to health hazards and emergencies**

All of the Public Health Directorates in Scotland are key partners with other "Category One Responders" in the national and local arrangements to deal with emergencies and civil contingencies. As well and providing specialist health advice and support for emergency planning structures, all public health specialists in Scotland undergo routine emergency response training, joining in local and national exercises where required.

Scotland has a well-developed approach to monitoring and protecting the health of the population. The recent establishment of the Scottish Health Protection Network which brings a collaborative approach to health protection services at the local and national level, supporting where necessary regional working arrangements for mutual aid, further strengthens this work across Scotland.

More broadly, the work of interest groups, bringing together public health specialists, has been important in recognising and planning how best to respond to emerging challenges to the health of the population. Specific examples include:

- the work of the Scottish Environmental Public Health Practitioners in providing a coordinated public health approach to wind farms developments; contaminated land; and outdoor air pollution;

- the work of the Scottish Health Impact and Inequality Assessment Network in updating their health impact assessment on the health consequences of housing and of rural development; and

- the work of the Scottish Managed Sustainable Health Network in supporting better understanding of climate change and the need for adaptation and mitigation within health services.

[5] See: http://www.isdscotland.org/ Last accessed 25th of May 2015.
[6] See: http://www.scotpho.org.uk/ Last accessed 25th of May 2015.

## EPHO3: Health protection including environmental occupational, food safety and others

As noted above (see EPHO 2), Scotland benefits from a well-developed health protection service which responds to meet needs, The quality and consistency of health protection responses across the country has been improved through the production of numerous reports and guidelines over the years by collaborative work of professional groups of specialist public health and health protection nursing colleagues. Nationally agreed health protection guidelines exist and are adapted for use locally, reflecting locality arrangements. The recent implementation of the HPZone, IT system further enhances this capacity, ensuring that all public health colleagues across Scotland can access the same knowledge-base to respond to immediate health hazards.,

Whilst the effectiveness of these health protection responses are being tested on a day to day basis; bigger, more sustained health protection response are sometimes needed. Recent examples of these include:

- the *Legionella* outbreak in Edinburgh (2012);
- the psittacosis outbreak in Tayside (2011-12);
- the *Cryptosporidium* outbreak in Fife (2013);
- the mumps outbreak in Lanarkshire (2015);
- the *E. coli* O157 outbreaks at Aboyne in Grampian (2012), on Orkney (2012), and at the SSE Hydro in Glasgow (2014); and
- the recent *Norovirus* outbreaks that led to hospital ward closures during the month of April 2015 in NHS Ayrshire & Arran, NHS Borders, NHS Dumfries and Galloway, NHS Fife, NHS Forth Valley, NHS Greater Glasgow and Clyde, NHS Highland, NHS Lanarkshire, NHS Lothian, and NHS Tayside.

In addition to acute, reactive health protection response, the Scottish Immunisation Programme provides a prospective approach to vaccine-preventable infectious diseases. Many of these are long-standing programme, though the need for vigilance remains. The ongoing outbreaks of mumps in young adults and the sporadic cases on measles, associated with the loss of public confidence in the MMR vaccine following the Wakefield autism scandal, are clear evidence of what may happen without maintaining population levels of immunity. In recent years the local public health specialists who work with national agency colleagues to form the National Immunisation Coordinators Group have effectively implemented several new national immunisation programmes. These have included that for childhood influenza, meningitis C., and herpes zoster.

The Sexual Health and Blood Borne Virus (BBV) Executive Leads Group is an example of highly effective collaborative public health working between Scottish Government, NHS Boards, Health Protection Scotland, NHS Health Scotland and the national voluntary sector organizations HIV Scotland and Hepatitis Scotland. An example of recent area of work has

been preparation for the licensing in the UK of HIF self-testing, instant result kits, including commissioning development of materials to support NHS boards to assess need and plan responses in advance of this new technology becoming available.

**EPHO4: Health promotion including action to address social determinants and health inequity**

Examples of local public health interventions to address the social and economic determinants of health and the resultant inequalities in health abound in Scotland. Many of these examples are focussed on the Central Belt and the areas identified by the Scottish Index of Multiple Deprivation (SIMD); however, inequality and the social and economic determinants amenable to change can and do exist outside of the usually targeted areas, as these three examples highlight:

- The Shared Roots multicultural community engagement programme in the Western Isles aims to improve community relations and understanding of health and social issues through engagement and dialogue, not only with the indigenous community but also involving, in particular, ethnic minority communities. The objectives are to improve access to health services, to identify the health needs of the various communities living and working in the Western Isles and to improve community relations.

- Dumfries and Galloway are working with partners to mitigate the impact of welfare reform with concern for the potential negative health impacts for working-age people in receipt of benefits and their families. Work has focused on staff training and awareness raising, signposting, workforce support, service development and employability actions.

- In Scottish Borders the public health team has an opportunity to work with Community Planning Partners (CPP) to tackle health inequalities at a number of levels, taking a whole systems approach. Examples of work lead by public health with the CPP include mitigating the impact of inequalities by providing equitable services and programmes sensitive to needs of particular groups such as migrant populations; prevention by reducing barriers to health and improving living and working conditions; changing and undoing by influencing policies and strategies that have impact on health and the fundamental causes of health inequalities for example working with the Scottish Borders Council Licensing Board.

Such local work complements the national work being carried forward by NHS Health Scotland, whose national strategy, *A Fairer, Healthier Scotland,* is wholly focussed on reducing present health inequalities and developing the means for generational interventions that can address social, economic and cultural determinants of future ill-health.

## EPHO5: Disease prevention, including early detection of illness

Again, at the local level across Scotland, there are many examples of public health specialists within with and through public health teams to prevent disease and identify illness early to allow better, more effective interventions.

In Fife, joint NHS, local authority, stakeholder strategy groups are in place for tobacco issues, sexual health, food and health, oral health, physical activity, mental health improvement, maternal and infant nutrition and choose life (suicide prevention). These are all led by public health professionals and the groups contribute to the aims and objectives of Fife's Health and Wellbeing Plan, which reports to the Fife Health and Wellbeing Alliance. The net effect is joint agency strategies that are focussed on delivering evidence-based interventions that build on existing local knowledge and expertise to influence work across Fife.

A multi-agency group in Dumfries and Galloway take this approach a step further. As one might expect, the Suicide Prevention Action Group takes forward suicide prevention activity including providing local strategic leadership and direction for suicide prevention. However, they recognise the need to go beyond this and seek to influence national policy commitments and the development of future suicide prevention activity. Locally, they connect suicide prevention activity to relevant, wider policy areas seeking local co-benefits in delivery. One example of this is the way in which Dumfries and Galloway has used participatory appraisal training to support the development of a public mental health approach. A range of community workers have been trained in engaging communities. Using a participatory appraisal approach has strengthened the depth of expertise in community engagement so that the Dumfries and Galloway Mental Health Strategy has been developed in a way so that local people were actively involved in decision making vis-à-vis mental health services.

The Scottish Screening Programme to identify early and treat the early signs of disease, or its precursors, is well-established with local Screening Coordinators commonly being drawn from the specialist public health team. Potential, new screening techniques are under constant review at the UK level and development of new programmes in which to deploy such techniques falls to the local co-ordinators. The most recent new programme was that for Abdominal Aortic Aneurysm in men aged 65 years (or "triple A" screening). The programme was announced in March 2010, with national oversight planning to be agreed by September 2010. With the development, implementation and completion of national rollout underway by autumn 2011 and completed by 2013. This was an ambitious timetable, but – drawing firmly on the expertise of local public health specialists – it has been achieved.

Screening networks for all the screening programmes exist across Scotland and are well established. They are effective at ensuring the screening programmes are well co-ordinated and take a systematic approach to implementation of changes to existing programmes and

implementation of new programmes as well as monitoring and quality assurance across all health board areas. So, for example, the national cervical screening working group has benchmarked and supported inequalities work within that field. Individual members also do specific and detailed work on for example invasive cervical cancer audit and review of correspondence in relation to changes to age range and frequency of screening at a national level which has been shared widely, avoiding duplication of effort and ensuring consistency.

Screening recognises the need for regional "cluster" or shared service arrangements. One example is the Highlands and Islands subgroup of the West of Scotland Cancer Network. This subgroup has developed teachable moments in primary care, taking forward the work to which all the subgroup members have contributed. Another example is the way in which, as part of the Detect Cancer Early initiative, information and awareness raising with primary care colleagues has developed across several board areas with shared presentations being used to ensure consistency.

**EPHO6: Assuring governance for health and wellbeing**

Through these sections, there have been oblique references to the types of arrangements which are in place to provide assured governance of health and wellbeing service delivery.

One example is that from Fife. Here the specialist public health service contributes as a full member of the Fife Community Planning Partnership and leads the Health and Wellbeing Alliance. Engagement with other supporting partnerships (such as community safety, economic, environment, housing and employment) ensures joined up approaches to addressing the social determinants of health that address health inequalities.

However there are many assurance mechanisms which can be used for the governance of health and wellbeing. Key amongst these are the many individual agency and joint agency plans that specifically cover health protection, health and social care delivery, and health improvement. What is missing, however, is often not the assurance of governance, but how to ensure that the assurance is meaningful and ensures effective delivery of the planned actions, and not of the plan itself

**EPHO7: Assuring a sufficient and competent public health workforce**

Scotland has a well-developed training scheme for general, public health training scheme. Less well developed are the schemes associated with the development and accreditation of the defined specialists and the practitioner and wider workforce. In this regard Scotland does lag behind England and Wales More detail on the workforce needs of public health in Scotland is contained in the reports of the Scottish Public Health Workforce Development Group. However, this statement does mask the types of innovative, local initiative that are in place.

NHS Ayrshire and Arran has contributed to a prisoner health coach programme within HM Prison Kilmarnock. The programme involved training staff across the prison in understanding health improvement and then training a group of prisoners in health awareness. The training allows the prisoners to be health champions to peer support the general population of the prison and assist those in need to make informed lifestyle choices or support them to seek the help of a qualified professional if required. The programme has been running since 2012.

All specialists in public health have a professional obligation to maintain their professional knowledge and skills. In addition to the types of CPD programme available, peer learning approaches have always been a feature of Scottish public health.

The Public Health Service Improvement Interest Group is an informal peer-learning group that supports sharing experience, knowledge and service development approaches to progress service improvement public health work. The group acts as a conduit to expert service improvement public health advice. The role is broad ranging, the central focus being on ensuring health and joint services deliver added value at a population level. The main benefits of the special interest group relate to peer support, improved understanding and awareness of service improvement work and sharing of resources to support local pieces of work.

**EPHO8: Assuring sustainable organisational structures and financing**

In some respects, this EHPO is the one operation which is most noticeably focussed on the role of national government and that of the statutory agency charges with public health delivery. However, at the more local level, Public Health Directorates do maintain active involvement in creating sustainable organisational arrangements and financing. Examples of work in these areas can include:

- organising and delivering the annual Influenza vaccination programme or revisions to the standard pre-school programme;
- preventative initiatives such as KeepWell or WellNorth, or the Child Healthy Weight programme; and
- new population screening programmes, such as bowel screening or abdominal aortic aneurysm screening.

It is not uncommon for Public Health specialists to be actively involved in both the establishment of health projects or new health and social care provision and in the evaluation of local health initiatives, especially where continuation funding is being sought. Recent work by ScotPHN, on behalf of the Scottish Government's Health Impact Delivery Group on Welfare Reform, highlights this type of work. ScotPHN provided the management and evaluation for the Scottish Government's Impact of Welfare Reform pilots in NHS Highland and NHS Tayside. Working

with local public health and health and social care colleagues, ScotPHN helped to assess the organisational and financial sustainability of the proposed pilot projects and there providers, assist with performance oversight for the projects, and is currently completing the overall evaluation of the pilots.

**EPHO9: Advocacy, communication and social mobilisation for health**

In addition to standard approaches to local and national advocacy and communication, the development of assets-based approaches and co-production in health delivery across specialist Public Health systems in Scotland reflects the importance of this EPHO in practice. Whilst work in NHS Tayside has led the way in this, they are not alone. In 2013, the Scottish Public Health Network and the Scottish Community Development Centre collaborated on developing the necessary culture to sustain such approaches with NHS Boards and within community planning arrangements. The report of this work, *Developing a culture of thoughtfulness around assets based approaches to health improvement,*[7] details development initiatives in NHS Forth Valley, NHS Lanarkshire, NHS Grampian and NHS Dumfries and Galloway.

Engagement plays a key part in developing an asset based approach. Public Health in Dumfries and Galloway, including the joint NHS and local authority Dumfries and Galloway Health and Wellbeing unit, has had considerable experience of involving the public in consultation, through a range of community engagement activities, including participatory appraisal. Building Healthy Communities is now leading the development of a participatory appraisal network. This has had the community development outcomes of both engaging the community, by using participatory techniques to speak to local people about their views and by building capacity within workers and volunteers to ensure they are skilled in listening to local voices and taking those findings back to public services. This has directly informed the Dumfries and Galloway Public Mental Health and Wellbeing Action Plan and will provide a significant amount of information for the Joint Strategic Needs Assessment being undertaken for Health and Social Care Integration.

**EPH10: Advancing public health research to inform policy and practice**

Scotland has an international reputation for public health research. Not only does it have two UK Medical Research Council units, The Scottish Collaboration for Public Health Research and Policy within the University of Edinburgh and the MRC Social and Public Health Sciences Unit at the University of Glasgow, it has five University Medical Schools with active Public Health research and a further ten academic institutions with some element of public health teaching or research.

[7] See:
http://www.scotphn.net/pdf/2013_10_10_FINAL_Creating_a_Culture_of_Thoughtfulness_report_for_ScotPHN_SCDC.pdf
Last accessed 25th of May 2015.

Whilst the current research base is strong, succession planning for Public health academics is not well developed. This is considered further in the work of the Scottish Public health Workforce Development Group.

A further issue is that of the translation of public health research into public health practice. Whilst all involved in public health research can highlight the applicability research to practice, the capacity for translational research is limited and active participation in research by public health specialists in Health Boards has declined in recent years.

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