Mapping the core public health workforce in Scotland

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Executive summary

The Centre for Workforce Intelligence (CfWI) was commissioned by NHS Health Scotland on behalf of Scottish Government to carry out a mapping of the core public health workforce in Scotland. This work aims to provide data to support policy decisions relating to the future size and shape of the public health workforce in Scotland. The review in Scotland follows a similar workforce mapping exercise conducted in England by CfWI in October 2014.

This report includes a background to the public health workforce in Scotland, an estimate of the numbers of staff in each part of the core public health workforce, and suggestions for further consideration to improve the quality of workforce data. Data mapping included a scoping of relevant workforces; a review of literature; data collection from available sources and stakeholder engagement to test data validity.

There are some limitations in the accuracy of the data used in the report due to the restricted timescales given to conduct the mapping and data collection work. Data has been collected from different sources and at different times. The report therefore provides an impression of scale and distribution of the public health workforce rather than an accurate enumeration.

The aim of this overview and scoping of the workforce is to help to understand the capacity and potential of the public health function in Scotland.

Following consultation with stakeholders, for the purpose of this report the CfWI has defined the core public health workforce as:

'All staff engaged in public health activities that identify public health as being the primary part of their role.'

For clarity, 'public health activities' include health improvement, health protection, healthcare public health, health intelligence, academic public health, faculties of public health plus others.

The CfWI's definition specifically excludes some professions with a significant role in promoting or delivering public health, such as GPs, occupational health nurses, community pharmacists, trading standards officers and others in the wider workforce such as teachers or leisure centre staff. This is because although they may fulfil a public health function(s), delivery of those functions is not the primary part of their role and - in most cases - workforce numbers and roles are generally well understood. This report fills a gap by providing similar data on core public health staff.

The CfWI acknowledges that a number of workforces – from those working delivering health and social care services, to those volunteering outside work –

have a potential contribution to make to public health and the health improvement agenda. While they may not be considered within the 'core public health workforce', their contribution needs to be acknowledged as part of the public health team and, where appropriate, taken into consideration when conducting workforce planning within the NHS in Scotland.

The CfWI identified 10 roles within the core public health workforce fitting the proposed definition, with respect to Scotland (see Table 1). Individuals may move between these roles as their career develops, and a small number may be in more than one role. For instance, Directors of Public Health will also be consultants and specialists, and public health scientists may also be public health academics.

The CfWI estimates that there are in the order of **6,250 to 6,540** people working in Scotland in the core public health workforce.

Table 1: Summary of the core public health workforce

Role	Summary description	Estimated numbers (headcount)
Public health consultants, specialists and specialist trainees	Work at a strategic or senior management level or at senior level of scientific expertise to influence the health of entire communities	189
Directors of Public Health	Responsible for determining overall vision and objectives for public health both within local Health Boards (14) and national Health Boards (4) *[these are also counted as consultants or specialists]*	*[18]*
Public health academics	Lecturers, researchers and teachers employed in higher education, whose primary focus is public health	360
Public health managers and practitioners	Work across the system and at all levels delivering public health programmes in health improvement, e.g. smoking cessation, alcohol dependency	970
Public health scientists	Perform scientific role in support of public health objectives	50
Intelligence and knowledge professionals	Staff employed in data analysis, informatics and presentation of public health information	370 to 660
Health visitors	Work as part of a primary healthcare team, assessing the health needs of individuals, families and the wider community	2,185
School nurses	Nurses who advise and support pupils within schools on preventing illness and remaining healthy	500

Role	Summary description	Estimated numbers (headcount)
Public health nurses *(excluding health visitors and school nurses which are listed separately)*	Nurses who advise people in the community on preventing illness and remaining healthy. Work mostly in health protection, e.g. TB, infection prevention and control, HIV	640
Environmental health professionals	Work in improving, monitoring and enforcing public and environmental health standards. Environmental health officers are core to the delivery of health protection in Scotland including the joint health protection team.	980
	Total	**6,250 to 6,540**
Source: CfWI analysis		

Note that there is a lack of reliable workforce data for some roles.

The CfWI's suggestions to the Scottish Public Health Workforce Development Group to achieve a more robust understanding of the public health workforce are to:

1. **Engage in stakeholder consultation** to build on the definitions used in this research and the reasons for them (including why some professions have been excluded), in order to form a firm basis for future workforce planning discussions
2. **Close the data gaps identified** in the report, in order to improve confidence in the quality of data collected: including for practitioner type roles such as those in health promotion, knowledge and intelligence and academic research.
3. **Establish appropriate data tracking and monitoring systems** to address challenges related to existing data gaps, to allow comparable data to be produced in future and better support workforce planning in this area.

1. Introduction

This section of the report covers:

- The aims and objectives of the report
- A definition of public health
- A summary of the current public health system
- A summary of recent public health workforce developments
- The structure of the report.

1.1 Aims and objectives

The Centre for Workforce Intelligence (CfWI) was commissioned by NHS Health Scotland (on behalf of Scottish Government) in February 2015 to carry out a mapping of the core public health workforce in Scotland.

The work will provide a baseline estimate on the size of the core public health workforce in Scotland to inform the Scottish Public Health Workforce Development Group. The report will also be provided to the Scottish Government to inform the wider work of the Public Health Review group.

Specific objectives of the project are to produce:

- A review of available core public health workforce data
- A mapping of core workforce data against assumptions and definitions
- Identification of any data gaps or opportunities for improved data quality.

The CfWI was requested to base its work on the definitions used in its previous exercise for the Department of Health in England, which resulted in the publication of *Mapping the Core Public Health Workforce* in October 2014[1].

1.2 Definition of public health

Public health is about helping people to stay healthy and protecting them from threats to their health. The Faculty of Public Health (FPH), the main representative body of consultants and specialists working in public health, refers to the 1998 Acheson Report to define it as *'the science and art of promoting and protecting public health and wellbeing, preventing ill-health and prolonging life through the organised efforts of society'*[2, 3].

Public health also seeks to understand and address the determinants of, and trends in, health across a population. It is well established that individual health is affected by a range of factors, including place of residence, gender, income, education, and social status[4]. A major aspect of public health involves tackling social and structural inequalities in health.

Workforce planning and development in public health is challenging, with staff in a variety of organisations dedicated or contributing to public health, including national and local NHS Health Boards, local Community Health Partnerships and

local authorities. A further complication for counting the public health workforce arises from different interpretations of public health. For example, staff in the field of health data analysis, health improvement and health visiting may or may not regard themselves as part of public health; and public health in Scotland is often seen as a specific NHS function led by NHS Directors of Public Health.

1.3 Current organisation of the public health system

Current Scottish legislation, including the Public Health (Scotland) Act 2008[5] and existing environmental health legislation, sets out that the delivery of public health rests primarily within the NHS, local government and a range of national agencies.

The public health workforce is spread across the public sector in Scotland and broadly speaking consists of specialists whose roles are wholly public health, core public health practitioners, with expertise in topics and functions that underpin public health, and the wider workforce, making a contribution to public health. Scotland has an integrated public health service unlike the public health service in England.

Under the *Public Health Skills and Knowledge Framework*[6]*,* which sets out nine levels of skills and knowledge required by everyone working in public health regardless of background, specialists are recognised as working at levels 8 and 9, the two highest levels of the framework and work primarily at a strategic or at leadership level. Practitioners are recognised as working at levels 5 to 7, and would include some recognised as specialists in their own profession, for example specialist nurses. Practitioners work primarily at an operational level in public health. All others (i.e. those not specialists or practitioners in public health) would be considered part of the 'wider workforce', including those working full time in public health roles but at levels 1 to 4 of the *Public Health Skills and Knowledge Framework.* Its use is not as widespread in Scotland as in other UK countries and is under review by Public Health England*.*

Specialists tend to be located within NHS Boards, where the core public health function is managed and led by the Directors of Public Health in the 14 local NHS boards and by clinical directors or equivalent in some of the national NHS Boards. Four of the eight national NHS boards have teams dedicated or contributory to core public health functions and remaining boards receive public health input where required from national and local boards.

Core public health practitioners, by contrast, are located across the public sector. This group work in health improvement, environmental health, health visiting, public health intelligence, science, and academia and are located within Community Health Partnerships (CHPs)/Health and Social Care Partnerships (HSCPs), Local Authorities, local and national NHS Boards, and Universities. At a local level, planners and senior management collaborate through Community Planning Partnerships, in order to develop and deliver local health and wellbeing

strategies. By the end of 2015, all CHPs will have completed integration with social services to become HSCPs.

NHS Health Scotland is a national Health Board working to reduce health inequalities and improve the health of the population, which it carries out through providing strategic leadership, influence on policy and practice, and guidance for action. A Public Health Workforce Development Group is a function of the CMO's office that was delegated to the Director of Public Health Science in Health Scotland due to specific skills and expertise. The aim is to enable the profession to deliver the 10 essential public health operations and the requirements of current and future regulators and Scottish Government.

The Public Health and Intelligence business unit of NHS National Services Scotland plays a major role in public health. which contains the Information Services Division (which provides tools, data and intelligence on public health issues, and is the statistical authority for NHS and social care data) and Health Protection Scotland (which manages health protection at a national level, and works closely with local NHS Boards on dealing with infectious diseases and environmental hazards). The Scottish Public Health Observatory – a collaboration between NHS Health Scotland, NHS National Services Scotland, the Glasgow Centre for Population Health and a range of contributors – also plays a leading role in health intelligence.

Two other national NHS Boards have contributory roles to core public health: Healthcare Improvement Scotland delivers scrutiny, healthcare improvement and standards; while NHS Education for Scotland works in partnership with key stakeholders to provide education, training and workforce development for those who work in and with NHS Scotland. Whilst not a national Health Board, the Scottish Public Health Network is a managed public health network which brings together the resources of all 14 territorial Health Boards, those within the national Boards, and those in other organisations to provide a public health capacity to develop specific, nationally required action which fall outside of the remit of any other organisation on behalf of the Scottish Directors of Public Health.

The University departments and the public health research collaborations also have contributory roles to public health. A lot of central agencies, local authorities, academic and civic organisations contribute to the public health system. Whilst this function may not be primarily to protect or improve health or healthcare, they are integral to the wider endeavour.

1.4 Recent developments relating to the public health workforce

The first major driver relating to the public health workforce following devolution under the Scotland Act 1998 was the 1999 White Paper *Towards a Healthier Scotland*[7], which emphasised health improvement as a means of tackling health inequalities and the importance of social determinants of health, rather than simply individual behaviour. This was indicative of a wider shift within public

health away from protecting against threats to health towards promoting better health, as well as a view within Scotland that delivery of public health functions needed to be strengthened following devolution.

The *Review of the Public Health Function in Scotland* led by Sir David Carter[8] reported in December 1999. It focussed on the specialist workforce, and influenced the establishment of a separate review of public health nursing, which would take place two years later in 2001. The Carter Review contained 19 recommendations for action at national and local level, and specified levels of staff resource for dental public health and health protection in health boards. *The Nursing Review* of 2001 meanwhile addressed the perspective of practitioners, and called for a strengthened role for nurses and other practitioners in public health in the community[9]. This resulted in school nurses and health visitors being given the title 'public health nurse', and created public health practitioners (just over half qualified originally as nurses) to strengthen local leadership on public health issues within Local Health and Care Co-operatives (LHCCs). A Chief Executive Letter (CEL 13) was published in 2013, which refocused public health nursing and made explicit the roles of the Health Visitor and the School Nurse. (Scottish Government Chief Executive Letter 2013)[10].

In practical terms, the Scottish Executive's 2003 paper *Improving health in Scotland – the challenge*[11] committed the Scottish Executive to actions aimed at rapid improvement of health outcomes in Scotland, with emphasis on four areas of early years, teenage transition, the workplace and the community. To accomplish these tasks, key actions relating to the workforce included the creation of a new directorate for Health Improvement within the Scottish Executive, and of NHS Health Scotland (NHS HS) to lead activity on health improvement (through merging the Public Health Institute of Scotland with the Health Education Board for Scotland)[12]. Separately, Health Protection Scotland was formed in 2004, to focus on health protection issues, by working closely with local Health Boards led by Directors of Public Health.

Since 2007, the main government policy documents in public health have been the *Better Health, Better Care: Action Plan* (Scottish Government, 2007a)[13], and the 2008 report *Equally Well: Report of the Ministerial Taskforce on Health Inequalities*[14].

Better Health, Better Care: Action Plan was published in 2007, and set out the Scottish Government's programme to encourage people to better manage and improve their health and ensure improved access to health and social care. This was followed by a separate and connected report on workforce planning, which outlined the importance to Scotland of a 'workforce…fully aligned with service delivery in a way that enables the delivery of high quality services that are both affordable and sustainable over the longer term'[15]. The Scottish Government in 2009 outlined in more detail the workforce implications to *Better Health, Better Care* in *A Force for Improvement: the Workforce Response to Better Health,*

Better Care[16], emphasising the role of all NHS staff in Scotland in promoting better public health, as well as the role of community health partnerships and community planning partnerships in focusing on public health, illness prevention and health improvement in planning.

Equally Well, meanwhile, focused on the challenges of continuing health inequalities and the issues relating to it, and identified a number of recommendations for action, later developed into an implementation plan in 2008[17].

In recent times, there have been policy developments referring specifically to the public health workforce in Scotland, *Better Health, Better Care* highlighted the need for NHS staff to serve local communities through appropriate training. The Scottish Government also announced moves in 2009, through the *Workforce Response to Better Health, Better Care,* to develop a generic community nursing model, based on a variety of functions from district nursing, school nursing, family nursing and health visiting[18].

While much work has focused on emphasising the public health contribution of individual workforces, there have been limited efforts to understand exact numbers. An unpublished Scottish Public Health Network review in 2010 was commissioned by the Scottish Directors of Public Health[19]. This internal document focused on the role of the Director of Public Health, public health consultant staffing and the specialist public health contribution to local partnerships, and made the following findings[20]:

- 128 whole time equivalent (WTE) consultants in public health were employed by the NHS in Scotland in February 2010, of whom 82 per cent were consultants in public health medicine or dental public health;
- Around half of local Health Board consultants had generic roles, while a quarter focused on health protection, a fifth on health and social care services and a sixth on health improvement
- All but two of the 14 local Health Boards in Scotland had dedicated provision for health protection, but only about half for health improvement and health and social care services
- There was expert provision nationally at consultant level for health protection, health improvement and health intelligence, but none for health and social care services
- 11 out of 14 Directors of Public Health were satisfied with capacity for health protection, compared to 10 for health improvement, seven for health and social care services, and four for health intelligence.

A European group, ASPHER, in 2014, validated the advanced level of organisation and capability of public health in Scotland. In late 2014, the Scottish Government announced a review of public health services, to respond to the opportunities offered by greater integration of health and social care, better community planning and collaboration between agencies, and the emerging

policy landscape through, for example, the Community Empowerment Bill. The remit is to review the system as a whole and delivery of all functions, with emphasis on improving health and wellbeing and reducing health inequalities.

Significantly, workforce planning and development, succession planning and resourcing to ensure a multidisciplinary core public health workforce were all given strong emphasis within the review's terms of reference[21]. It is under this current context of the workforce review that this project has been conducted, and indicates the increasing importance of workforce planning to deliver public health outcomes.

The current health protection arrangements in Scotland were put in place in 2005, recognising the need for a Scotland-wide system that aligns to the rest of the UK and is capable of responding to major events such as a pandemic. In 2010 a Health Protection Stocktake Working Group was established by the Scottish Government to examine the existing working arrangements and to ensure that the arrangements put in place in 2005 were still fit for purpose to protect the population in Scotland.

The final National Health Protection Stocktake report was published in 2012. Further work was completed by the National Planning forum on behalf of the NHS Chief Executives group with a remit to review the output of the Stocktake report. This work was published in late 2013 with a number of key recommendations one of which was the establishment of a national health protection governance group for Scotland. This newly formed obligate network, the Scottish Health Protection Network, consists of a number of topical and enabling groups and is overseen by the national Health Protection Oversight group.

1.5 Report structure

The report contains the following sections:

- A brief explanation of our **methodology and approach for the project.** This section outlines our definition of the core public health workforce, and our approach to the project and to data collection
- **Results of mapping the core public health workforce.** This section contains our findings, including workforce numbers, role descriptions, data sources, and challenges identified in estimating the numbers
- **Discussion.** This final section summarises the quality of data available and suggests further work to build on the findings of this project.

References are provided at the back of this report, and are highlighted in the main body of the report through numbers. The exception is for section 3, which contains the headcount for the workforces identified; a data appendix outlines these data sources in more detail.

2. Methodology

This section sets out:

- Approach – the CfWI's methodology and approach to data collection and analysis
- Limitations – caveats and limitations to the data.

2.1 Approach

The CfWI took a similar approach to that adopted for *Mapping the Core Public Health Workforce* in England[22], namely:

- Scoping: to determine the workforces to be mapped and agree the main definitions used throughout the project
- Review of the literature: to provide an overview of key developments on important themes relating to the public health workforce
- Data collection: a review of available data sources
- Stakeholder engagement: to test data availability on public health, how public health is understood with respect to the workforce, and how important public health functions are delivered both nationally and locally.

To ensure a consistent and rigorous approach and to enable, if appropriate, comparisons between the public health workforces in Scotland to those of England, the CfWI used a similar definition to identify the 'core public health workforce' in Scotland:

'All staff engaged in public health activities who identify public health as being the primary part of their role'[23].

The core public health workforce will be either *specialists* or *practitioners* in public health. The CfWI has followed a number of previous publications[24, 25, 26] in understanding specialists as public health consultants and specialists [who work] at a strategic or senior management level or at a senior level of scientific expertise, and practitioners as those who spend a major part, or all of their time, in public health practice delivering public health at operational levels.

The CfWI's definition specifically excludes some professions with a significant role in promoting or delivering public health, such as GPs, occupational health nurses, community pharmacists, trading standards officers and others in the wider workforce such as teachers or leisure centre staff. This is because although they may fulfil a public health function(s), delivery of those functions is not the primary part of their role and – in most cases – workforce numbers and roles are generally well understood. This report fills a gap by providing similar data on core public health staff.

The CfWI acknowledges that a number of workforces – from those working delivering health and social care services, to those volunteering outside work – have a potential contribution to make to public health and the health

improvement agenda. While they may not be considered within the 'core public health workforce', their contribution needs to be acknowledged as part of the public health team and, where appropriate, taken into consideration when conducting workforce planning within the NHS in Scotland.

Based on the above, the CfWI categorised the core public health workforce using the following principles:

- Separating staff with distinct skill sets or functions e.g. Directors of Public Health, academics
- Identifying staff qualified through distinct recording, registration or qualification processes e.g. school nurses, health visitors, environmental health officers, consultants/specialists.

The CfWI recognised that individuals may move between these categories during their career as they attain new qualifications or additional experience, and a small number may fulfil two roles, for instance all Directors of Public Health will also be consultants and specialists, public health scientists may also be public health academics, public health nurses may also be public health managers.

The CfWI categorised staff by the 10 main occupational staffing groups listed in Table 2.

Table 2: Core public health roles

Public health consultants, specialists and specialist trainees
Directors of Public Health
Public health academics
Public health managers and practitioners
Public health scientists
Public health knowledge and intelligence professionals
Health visitors
School nurses
Public health nurses *(excluding health visitors and school nurses)*
Environmental health professionals
Source: CfWI analysis

Data on workforce numbers was obtained from a variety of sources – these are listed against each category in the next section of the report. The most significant data sources were:

- The Public Health and Intelligence Business Unit of NHS National Services Scotland for data on all NHS staff
- The Royal Environmental Health Institute for Scotland (REHIS) for environmental health data
- Consultation with key stakeholders, including with NHS National Services Scotland and NHS Health Scotland.

As this project neither used nor sought to use any personally identifiable data at any stage, we were not required to go through any formal ethics approval processes. However, where appropriate during the project we consulted relevant stakeholders to confirm numbers and data sources. All data was in the public domain or provided as non-identifiable.

2.2 Limitations

The principal limitations to this approach are:

- There may be some individuals who work at different levels of seniority and experience than might be indicated by the groupings. However, the groupings are intended to reflect what is typical of the profession as a whole
- As noted above, the CfWI has not included a number of professions as a result of its definition of the core workforce. However, the CfWI acknowledges the important contribution of these staff groups to delivering public health outcomes
- Data are collected from various sources and at different points in time, based on when and how it was collected – so there may be some inconsistencies or double counting if individuals move jobs or if similar roles are given different job titles.
- Staff from some groups may flow in and out of the core public health workforce in Scotland, and may therefore appear in certain statistics but not in other sources relating specifically to Scotland. These caveats are outlined below in Table 3.

Table 3: Main public health staffing groups flowing in and out of the core workforce, excluded from this report

Category	Functional description
Staff working in England, Wales and Northern Ireland	• Public health staff at all levels working in England, Wales or Northern Ireland, who may or may not enter (or return to) the Scotland workforce • These people will often be included in registration data held by bodies such as the General Medical Council, General Dental Council, UK Public Health Register and Nursing and Midwifery Council, whose remits cover the whole of the United Kingdom
Overseas staff	• Public health staff at all levels working abroad on temporary or permanent contracts, who may or may not return to the Scotland workforce
Private sector staff	• Public health staff employed by private sector contractors to deliver services for the public sector • Qualified public health staff working in the private sector
Third sector staff	• Public health staff employed by third sector contractors – e.g. social enterprises and charities – to deliver services on behalf of the NHS or local authorities. May be registered but will not be visible on workforce censuses involving public sector employers
Source: CfWI analysis	

3. Staff numbers by role

On the following pages we provide estimates for the number of people working in each of the 10 core roles listed in Table 2 above. The CfWI has assumed the five main functions of public health are health improvement, health protection, health and social care quality, health intelligence and academic public health. These are defined by the *Public Health Skills and Knowledge Framework*[27] as:

- **Health improvement:** this function relates to improving the health and wellbeing of populations, as well as reducing inequalities in health. Staff in this function use a variety of approaches in health promotion to shape the lifestyle and socio-economic, physical and cultural environment of populations, communities and individuals
- **Health protection:** staff in this function take actions for the general environment (e.g. clean air, water and food), with the aims of preventing the transmission of communicable diseases; protecting against environmental health hazards, and applying a range of methods to manage outbreaks and other incidents that threaten the population's health and wellbeing
- **Health and social care quality**: staff in this function focus on a number of activities relating to improving the quality of the health system, including needs assessment, commissioning, clinical governance, quality improvement, patient safety, effectiveness, equity and outcomes of service provision and prioritisation of health and social care services
- **Health intelligence:** staff in this function work on the systems and capacity to deliver intelligence for surveillance, early warning functions, assessing health risk to populations, and measuring health and wellbeing outcomes. Staff in this function pull together information from different sources in new ways to promote health and wellbeing
- **Academic Public Health:** this area of practice focuses on the teaching of, and research into, population health and wellbeing.

Numbers are provided as both headcount and whole time equivalent (WTE) where possible.

Primary data sources are explained in a separate appendix for each profession at the end of this report.

It is important to emphasise that there is some variation in the quality and quantity of data available to estimate the size of individual workforces. Therefore, where appropriate the CfWI has provided caveats around the robustness of estimated numbers; this is both to outline where the CfWI considers data are less readily available and to indicate to where further future research could focus.

3.1 Public health consultants, specialists and specialist trainees

Table 4: Public health consultants, specialists and specialist trainees

Role	Public health consultants, specialists and speciality trainees
Main function	All (but may specialise in a particular area, e.g. health protection)
Summary description	• These are doctors, dentists or other professionals who have completed *or* are completing (in the case of specialist trainees) specialty training in public health, or who have demonstrated equivalent experience in public health through a portfolio of experience • They work at a strategic or senior management level or at senior level of scientific expertise to influence the health of entire communities. **Definitions** • Specialists are those regulated as having specialist knowledge and skills by a UK regulatory body. Where they are regulated for public health only, in the majority of cases registration is with the General Medical Council (GMC) in public health medicine, General Dental Council (GDC) for dental public health, or the UK Public Health Register (UKPHR) as either a generalist specialist (recognised competences across all domains of public health) or a defined specialist (usually in one domain, e.g. health intelligence). However, some may also be registered in other disciplines, for example nursing and public health nutrition • Consultants are specialists appointed by an Appointments Advisory Committee to a consultant post. While the majority of consultants will be registered as specialists in public health medicine, dental public health or public health; some may also be registered as specialist nurses (e.g. nurse consultant) or in public health nutrition (e.g. consultant therapist) • Specialist trainees are those enrolled on a formal training scheme to achieve specialist knowledge and skills in public health. Upon completion of training, these are eligible for consultant-level posts.
Example job titles	• Consultant in Public Health Medicine/Dental Public Health • Consultant in Public Health • Public Health Specialist • Nurse Consultant • Consultant Therapist
Estimated range of numbers	**At least 189** [approximately 145 WTE], including approximately 20 specialty trainees.
Numbers, and supporting evidence	**NHS data** • **161 (116.5 WTE)** medical and dental staff work in the NHS in Scotland: 146 (109.1 WTE) staff in public health medicine and 15 (7.4 WTE) in dental public health. • Of these, **19** are **specialty trainees,** recorded by NHS National Services Scotland as being **in training grades**. Once training slots have been filled there will be **32 specialty trainees**. The 2 dental trainees are based in Fife. • These staff work for a local NHS Health Board or for national Health Boards as shown in the tables below. • **145 (103.6 WTE)** work in a local NHS Health Board**:**

Role	Public health consultants, specialists and speciality trainees

Local NHS Health Board	Headcount in public health medicine (WTE)	Headcount in dental public health (WTE)	Total headcount (WTE)
Ayrshire and Arran	8 (6.5)	2 (1.0)	10 (7.5)
Borders	6 (5.2)	0	6 (5.2)
Dumfries and Galloway	2 (2)	1 (0.5)	3 (2.5)
Fife	20 (7.7)	2 (0.7)	22 (8.4)
Forth Valley	7 (5.6)	2 (1.0)	9 (6.6)
Glasgow and Clyde	28 (21.1)	1 vacant	29 (21.1)
Grampian	14 (9.6)	1 (0.8)	15 (10.4)
Highland	4 (3.9)	1 (0.2)	5 (4.1)
Lanarkshire	8 (7.3)	1 (1.0)	9 (8.3)
Lothian	20 (15.4)	1 (0.5)	21 (15.9)
Orkney	2 (2)	0	2 (2)
Shetland	2 (1.6)	0	2 (1.6)
Tayside	11 (9.5)	1 (0.5)	12 (10)
Western Isles	0	0	0
Total	**132 (97.4)**	**13 (6.2)**	**145 (103.6)**

NB: senior dental officer or dental officer roles are not included in the figures above

- **16 (12.9 WTE)** work for national Health Boards:

NHS national Health Board	Headcount in public health medicine (WTE)	Headcount in dental public health (WTE)	Total headcount (WTE)
NHS Healthcare Improvement Scotland	1 (1)	0 (0)	**1 (1)**
NHS Health Scotland	1(1)	1 (1)	**2(2)**
NHS National Education for Scotland	1 (0.2)	0 (0)	**1 (0.2)**
NHS National Services Scotland	11 (9.5)	0 (0)	**11 (9.5)**
NHS 24	0 (0)	1 (0.2)	**1 (0.2)**
Total	**14 (11.7)**	**2 (1.2)**	**16 (12.9)**

UKPHR specialists

- In addition to the figures above, there are, according to the Scottish Public Health Network, **28 UKPHR generalist or defined specialists** working for the following employers. Most are not formally appointed as consultants; rather they tend to occupy other senior posts:

<table>
<tr><td>Role</td><td colspan="2">Public health consultants, specialists and speciality trainees</td></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Employer</th><th>UKPHR specialist headcount</th></tr>
<tr><td>Ayrshire and Arran</td><td>2</td></tr>
<tr><td>Borders</td><td>0</td></tr>
<tr><td>Dumfries and Galloway</td><td>2</td></tr>
<tr><td>Fife</td><td>0</td></tr>
<tr><td>Forth Valley</td><td>0</td></tr>
<tr><td>Glasgow and Clyde (including Glasgow Centre for Population Health)</td><td>2</td></tr>
<tr><td>Grampian</td><td>4</td></tr>
<tr><td>Highland</td><td>4</td></tr>
<tr><td>Lanarkshire</td><td>3</td></tr>
<tr><td>Lothian</td><td>2</td></tr>
<tr><td>Orkney</td><td>0</td></tr>
<tr><td>Shetland</td><td>1</td></tr>
<tr><td>Tayside</td><td>1</td></tr>
<tr><td>Western Isles</td><td>0</td></tr>
<tr><td></td><td></td></tr>
<tr><td>NHS Education Scotland</td><td>1</td></tr>
<tr><td>NHS Health Scotland</td><td>3</td></tr>
<tr><td>NHS National Services Scotland</td><td>3</td></tr>
<tr><td>Total</td><td>28</td></tr>
</table>
</td></tr>
<tr><td>Main employers</td><td colspan="2">• Local NHS Health Boards
• NHS National Services Scotland
• Other national NHS Health Boards – NHS Health Scotland, Healthcare Improvement Scotland</td></tr>
<tr><td>Sources of data</td><td colspan="2">• NHS National Services Scotland
• Faculty of Public Health
• Scottish Public Health Network</td></tr>
<tr><td>Education and training routes</td><td colspan="2">• Specialty training – currently overseen by Faculty of Public Health
• Portfolio route – currently overseen by UKPHR.</td></tr>
<tr><td>Regulatory bodies for public health</td><td colspan="2">• GMC – for registered specialists in public health medicine, registration required to practice
• GDC – for registered specialists in dental public health, registration required to practice
• UKPHR – for registered public health specialists (either as generalists, or as defined specialists), registration currently voluntary but required by consultant appointment committee
• From 2015, registration of all non-medical public health specialists obligatory – Health and Care Professions Council (HCPC) – for all non-medical public health specialists in public health; or Nursing and Midwifery Council (NMC) or General Pharmaceutical Council (GPC) if already registered as a nurse/midwife or as a pharmacist.</td></tr>
<tr><td>Caveats/ issues</td><td colspan="2">• People qualifying through the portfolio routes are not recorded as trainees but appear only when their portfolio is approved by the UKPHR
• Figures do not include staff qualified to consultant or specialist level but working wholly in the private or voluntary sectors in Scotland or abroad
• Figures do not include those who have retired from substantive NHS practice but remain active within the profession and registered with a licence to practice.</td></tr>
</table>

3.2 Directors of Public Health

Table 5: Directors of Public Health

Role	Directors of Public Health
Main function	All, statutory position within local NHS Health Boards
Summary description	• Statutory position in local NHS Boards, responsible for the public health team • Must be registered as a specialist following specialty training or submission of a portfolio, with either the GMC, GDC or UKPHR (from 2015, with HCPC, NMC or GPC). • Responsible for determining overall vision and objectives for public health locally; in Scotland greater focus is on health protection and healthcare public health
Example job titles	• Director of Public Health • Director of Public Health Science • Director of Public Health Intelligence • Clinical Director, Scottish Government • Medical Director • Chief Medical Officer (if on the public health specialist register)
Estimated range of numbers	**14 within local NHS Health Boards, plus 4 with equivalent status at national level**

Numbers, and supporting evidence	• 14 local NHS Health Boards as of January 2015; **list of Directors of Public Health in Scotland is in the public domain.** Of these, two are interim appointments
	• In addition, at least **four posts at national level have equivalent status**:
	  ○ Director of Public Health Science (NHS Health Scotland)
	  ○ Director of Public Health Intelligence & 1 Medical Director

Main employers	• Local NHS Health Boards
Sources of data	• ADPH: http://www.adph.org.uk/about-adph/current-directors-of-public-health/
Education and training routes	As with consultants, specialists, specialist trainees
Regulatory bodies for public health	As with consultants, specialists, specialist trainees
Caveats/ issues	As with consultants, specialists, specialist trainees

3.3 Public health academics

Table 6: Public health academics

Role	Public health academics
Main function	Academic public health
Summary description	• Lecturers, researchers and teachers employed in higher education, whose primary focus is public health.
Example job titles	• Professor/Senior Lecturer/Lecturer • University teacher • Research Fellow Indicative examples of taught courses include: • Master's in Public Health (University of Dundee, University of Edinburgh, University of Glasgow) • MSc Health Promotion and Public Health (Robert Gordon University) • MSc Public Health (Glasgow Caledonian University) • Specialist Community Public Health Nursing (University of the West of Scotland). • Universities also provide a range of Masters degrees that will provide a grounding in public health science but do not cover the core Masters in Public Health syllabus and will need topping up.
Estimated range of numbers	**At least 360,** based on available data from university websites and consultation with stakeholders (see references).

Numbers, and supporting evidence	• **247 identified working at the main medical universities** offering Masters in Public Health:
	  ○ University of Aberdeen: 30
	  ○ University of Dundee: 30
	  ○ University of Edinburgh: 103
	  ○ University of Glasgow (Institute for Health and Wellbeing): 11
	  ○ University of Glasgow (Social and Public Health Sciences Unit): 63
	  ○ University of St. Andrews: 10
	• **112 identified working at other universities**:
	  ○ Edinburgh Napier University: 9
	  ○ Glasgow Caledonian: 47
	  ○ Queen Margaret University: 6
	  ○ Robert Gordon University: 14
	  ○ University of the Highlands and Islands: 4
	  ○ University of Stirling: 15
	  ○ University of Strathclyde: at least 8
	  ○ University of the West of Scotland: at least 9.

Main employers	• Universities
Sources of data	• Universities – no central data collection, however.
Education and training routes	• Undergraduate/Postgraduate Degree a pre-requisite • No requirement to be registered.
Regulatory bodies for public health	• No specific routes.

Role	Public health academics
Caveats/ issues	• Assumption based on those conducting public health research • Definition excludes honorary appointments/visiting fellows, administrative staff and postgraduate students. Estimate may therefore be an underestimate as a result • Data on public health academics not specifically recorded centrally • A number of universities list their staff and research interests – but difficult to get exact numbers due to coding (i.e. who is an academic in 'public health') • May differ between universities, depending on listed staff – may include research assistants, teaching only staff, or research only staff

3.4 Public health managers and practitioners

Table 7: Public health managers and practitioners

<table>
<tr><th>Role</th><th>Public health managers and practitioners</th></tr>
<tr><td>Main function</td><td>Health improvement</td></tr>
<tr><td>Summary description</td><td>• Work across the system and at all levels delivering public health programmes in health improvement, with some equivalent to advanced generalist practitioners
• May be registered with the UKPHR as a public health practitioner; may also be registered with other profiles if required to do so in a particular profession.</td></tr>
<tr><td>Example job titles</td><td>• Health improvement officer
• Senior health improvement officer
• Health improvement coordinator
• Health promotion officer
• Senior health promotion officer
• Project manager
• Contract manager
• Programme manager.</td></tr>
<tr><td>Estimated range of numbers</td><td>At least 970 (830 WTE) working in health promotion in the NHS, of which 850 (730 WTE) are working at Agenda for Change Band 5 or higher.</td></tr>
<tr><td>Numbers, and supporting evidence</td><td>• The CfWI estimates a total of at least 970 (830 WTE) staff in health promotion roles, based on:
o 895 (785 WTE) recorded as working in local NHS Health Boards
o 44 (40.9 WTE) recorded as working in national NHS Health Boards
o An additional 32 staff in NHS Health Scotland identified as being in scope.

Staff work primarily for a local NHS Health Board or for national Health Boards as shown in the tables below:

• 895 (785 WTE) work in health promotion roles within local NHS Health Boards, with 785 (670 WTE) of these working at Agenda for Change Band 5 or higher:

<table>
<tr><th>Local NHS Health Board</th><th>Headcount</th><th>Headcount AfC Band 5 or higher</th><th>WTE</th><th>WTE AfC Band 5 or higher</th></tr>
<tr><td>Ayrshire and Arran</td><td>165</td><td>107</td><td>147.7</td><td>98.4</td></tr>
<tr><td>Borders</td><td>30</td><td>27</td><td>21.4</td><td>19.8</td></tr>
<tr><td>Dumfries and Galloway</td><td>15</td><td>10</td><td>13.2</td><td>9.8</td></tr>
<tr><td>Fife</td><td>57</td><td>42</td><td>44.7</td><td>35.9</td></tr>
<tr><td>Forth Valley</td><td>3</td><td>3</td><td>1.7</td><td>1.7</td></tr>
<tr><td>Glasgow and Clyde</td><td>311</td><td>300</td><td>290.6</td><td>264.7</td></tr>
<tr><td>Grampian</td><td>75</td><td>54</td><td>61.9</td><td>46.3</td></tr>
<tr><td>Highland</td><td>36</td><td>36</td><td>27.7</td><td>27.7</td></tr>
<tr><td>Lanarkshire</td><td>83</td><td>74</td><td>72.3</td><td>67.1</td></tr>
<tr><td>Lothian</td><td>59</td><td>56</td><td>52.3</td><td>50</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td>
<table>
<tr><td>Orkney</td><td>8</td><td>7</td><td>6.6</td><td>5.6</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Shetland</td><td>11</td><td>9</td><td>9.7</td><td>8.7</td></tr>
<tr><td>Tayside</td><td>27</td><td>27</td><td>23.2</td><td>23.2</td></tr>
<tr><td>Western Isles</td><td>15</td><td>13</td><td>12</td><td>11.1</td></tr>
<tr><td>Total</td><td>895</td><td>765</td><td>785</td><td>670</td></tr>
</table>

44 (40.9 FTE) work in health promotion in national Health Boards, of which 36 (34.7 WTE) are working at Agenda for Change Band 5 or higher:

<table>
<tr><th>National NHS Board</th><th>Headcount</th><th>Headcount AfC Band 5 or higher</th><th>WTE</th><th>WTE AfC Band 5 or higher</th></tr>
<tr><td>NHS Health Scotland</td><td>31</td><td>31 (see note below)</td><td>29.7</td><td>29.7</td></tr>
<tr><td>NHS National Services Scotland</td><td>3</td><td>3</td><td>3</td><td>3</td></tr>
<tr><td>NHS National Waiting Times Centre</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>NHS 24</td><td>9</td><td>1</td><td>7.2</td><td>1</td></tr>
<tr><td>Total</td><td>44</td><td>36</td><td>40.9</td><td>34.7</td></tr>
</table>

NHS Health Scotland reports separately that there are 63 ‘practitioners’ working within NHS Health Scotland. This suggests that the number of staff counted as working in ‘health promotion’ within NHS Health Scotland (31) is an underestimate with a number of these staff coded in other roles, e.g. ‘administrative functions’.

</td></tr>
<tr><td>Main employers</td><td>Local NHS Health Boards
NHS Health Scotland
Community Health Partnerships/Health and Social Care Partnerships</td></tr>
<tr><td>Sources of data</td><td>NHS National Services Scotland - for health promotion staff</td></tr>
<tr><td>Education and training routes</td><td>No specific routes
May be registered as a public health practitioner with the UKPHR upon successful completion and approval of a portfolio.</td></tr>
<tr><td>Regulatory bodies for public health</td><td>UKPHR, if registered as a public health practitioner.</td></tr>
<tr><td>Caveats/ issues</td><td>Coding of roles within the NHS: unclear what roles are included in ‘health promotion’
Precise number working in practitioner type roles not known, with data unavailable from the private and voluntary sectors
Availability of workforce data within local authorities
Possible overlap with other roles identified, e.g. consultants
Some boards might have reported only numbers in board itself and not included staff in local partnerships e.g. Forth Valley.</td></tr>
</table>

3.5 Public health scientists

Table 8: Public health scientists

Role	Public health scientists
Main function	Health protection
Summary description	• Perform scientific role in health protection in support of public health objectives, at practitioner and specialist level • Will work primarily within NHS National Services Scotland (Health Protection Scotland) • May be regulated by Health and Care Professions Council depending on scientific specialty and protected title (Biomedical scientist, Clinical scientist).
Example job titles	• Epidemiologists • Clinical scientist roles in health protection, e.g. radiation, chemical and environmental hazards.
Estimated range of numbers	**At least 50** public health scientists.
Numbers, and supporting evidence	• **35** specifically recognised as working with Health Protection Scotland, mostly within epidemiology, with approximately another **20** employed by Public Health England in Scotland at in work relating to radiation, chemical and environmental hazards. [These staff work at the Centre for Radiation, Chemical and Environmental Hazards in Glasgow.] • The majority of health protection staff work within autonomous local NHS Health Boards, usually in consultant and public health roles. These staff therefore primarily play a coordinating role in supporting local Health Boards resolving health protection issues, especially in cases of civil contingency. *[In addition, there are approximately 450 healthcare scientists working within NHS National Services Scotland. However, NHS National Services Scotland believes almost all work in blood transfusion, putting them out of scope]*
Main employers	• NHS National Services Scotland , Public Health and Intelligence (Health Protection Scotland) • Public Health England.
Sources of data	• NHS National Services Scotland (Health Protection Scotland) • Public Health England • NHS boards • Universities
Education and training routes	• No specific routes, but may have qualified as a healthcare scientist or gone through academic routes.
Regulatory bodies for public health	• May be registered with the HCPC as a biomedical or clinical scientist.
Caveats /issues	• Unclear how many scientists would specifically work in public health as the majority part of their role - assumption of small national staff in coordination roles to support local Health Boards.

3.6 Public health knowledge and intelligence professionals

Table 9: Public health knowledge and intelligence professionals

<table>
<tr><th>Role</th><th>Public health knowledge and intelligence professionals</th></tr>
<tr><td>Main function</td><td>Health intelligence</td></tr>
<tr><td>Summary description</td><td>• Staff employed in data analysis, informatics and presentation of PH information
• Some may also have qualified in other professions (e.g. consultants in public health) and regulated accordingly.</td></tr>
<tr><td>Example job titles</td><td>• Head of Intelligence
• Senior Analyst
• Information Analyst
• Analyst
• Knowledge Manager
• Epidemiologist
• Statistician</td></tr>
<tr><td>Estimated range of numbers</td><td>Approximately 370-660 people [depending on the definition applied within NHS National Services Scotland, and local NHS Health Boards. Estimate provided reflects both consultation with stakeholders and analysis of relevant local Health Board documents in the public domain]</td></tr>
<tr><td>Numbers, and supporting evidence</td><td>• 26 staff are employed within Scotland Public Health Observatory (ScotPHO), of which 15 are employed by NHS National Services Scotland, 9 by NHS Health Scotland and 2 by Glasgow Centre of Population Health
• NHS Health Scotland report separately that there are 29 people working within NHS Health Scotland in public health knowledge and intelligence functions, suggesting at least an additional 20 people working in knowledge and intelligence functions to the 9 identified above.
• NHS National Services Scotland report separately that there at least 215 staff working in knowledge and intelligence type functions (excluding ScotPHO staff). Further consultation with National Services Scotland suggests that there may be as many as 400 to 500 staff in analytical roles who work within Public Health Intelligence
• NHS Healthcare Improvement Scotland report separately that they have 30 staff working in knowledge and intelligence type functions, of which:
o 10 are Health Information Scientists;
o 14 are Health Services Researchers;
o 6 are Economists

• Within NHS Health Boards, at least 83 identified, based on available sources (consultation with stakeholders and relevant documents in the public domain):

<table>
<tr><th>Local NHS Health Board</th><th>Number of knowledge and intelligence professionals – headcount (except where stated)</th></tr>
<tr><td>Ayrshire and Arran</td><td>8</td></tr>
<tr><td>Borders</td><td>Nil</td></tr>
<tr><td>Dumfries and Galloway</td><td>5</td></tr>
<tr><td>Fife</td><td>6</td></tr>
<tr><td>Forth Valley</td><td>Nil</td></tr>
<tr><td>Glasgow and Clyde</td><td>6 WTE</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td></td><td><table>
<tr><td>Glasgow Centre for Population Health</td><td>10</td></tr>
<tr><td>Grampian</td><td>18</td></tr>
<tr><td>Highland</td><td>6.4 WTE</td></tr>
<tr><td>Lanarkshire</td><td>At least 2</td></tr>
<tr><td>Lothian</td><td>6.8 WTE</td></tr>
<tr><td>Orkney</td><td>0</td></tr>
<tr><td>Shetland</td><td>2</td></tr>
<tr><td>Tayside</td><td>At least 2</td></tr>
<tr><td>Western Isles</td><td>11</td></tr>
<tr><td>Total</td><td>At least 83</td></tr>
</table></td></tr>
<tr><td>Main employers</td><td colspan="2">• Scottish Public Health Observatory- collaboration across several organisations
• NHS National Services Scotland
• Local NHS Health Boards.</td></tr>
<tr><td>Sources of data</td><td colspan="2">• Scotland Public Health Observatory
• NHS National Services Scotland
• NHS Healthcare Improvement Scotland
• Local NHS Health Boards.</td></tr>
<tr><td>Education and training routes</td><td colspan="2">• No specific routes.</td></tr>
<tr><td>Regulatory bodies for public health</td><td colspan="2">• No regulatory bodies in public health; however professional bodies exist for most groups, for example:
o health informatics staff (UK Council for Health Informatics Professions, UKCHIP);
o library and knowledge professionals (Chartered Institute for Library and Information Professionals in Scotland, CILIPS);
o statisticians (Royal Statistical Society, RSS)
o HCPC for psychology
o British Sociology Association
o UK statistics authority – for health and social care, the Head of Profession, ISD</td></tr>
<tr><td>Caveats/ issues</td><td colspan="2">• Coding of roles within NHS – not obvious who delivers health intelligence function within NHS datasets
• There is a wide disparity in provision for health intelligence, with some boards having nearly 20 staff and some having zero. More work is needed to establish possible reasons for this identified disparity.</td></tr>
</table>

3.7 Health visitors

Table 10: Health visitors

<table>
<tr><th>Role</th><th>Health visitors</th></tr>
<tr><td>Main function</td><td>Health improvement</td></tr>
<tr><td>Summary description</td><td>• Commissioned and employed by the NHS
• Work as part of a primary healthcare team, assessing the health needs of individuals, families and the wider community
• Aim to promote good health and prevent illness, by offering practical help and advice
• Support child development.</td></tr>
<tr><td>Example job titles</td><td>• Health visitor</td></tr>
<tr><td>Estimated range of numbers</td><td>At least 2,185 (1,792.5 WTE), of which at least 1,800 (1,500 WTE) are at Band 5 or higher.</td></tr>
<tr><td>Numbers, and supporting evidence</td><td>• 2,115 (1,742.5 WTE) health visitors recorded as working in the NHS in Scotland as of December 2014, of which 1,805 (1,500.2 WTE) were at Agenda for Change Band 5 or higher.
• In addition, a number of health visitors in Highland are no longer recorded as working in the NHS, following changes in 2012 to integrate health and care services under a lead agency model (Highland Council). In January 2014, a Highland Council report on creating integrated family teams noted there were 43.1 WTE health visitors, with plans to increase the number to just over 50 WTE. The CfWI has therefore assumed approximately an additional 70 (50 WTE) health visitors from Highland. Data by band is not available
• Number of health visitors by local NHS Health Board:
<table>
<tr><th>Local NHS Health Board</th><th>Headcount</th><th>Headcount AfC Band 5 or higher</th><th>WTE</th><th>WTE AfC Band 5 or higher</th></tr>
<tr><td>Ayrshire and Arran</td><td>150</td><td>134</td><td>131.1</td><td>118.9</td></tr>
<tr><td>Borders</td><td>39</td><td>35</td><td>30.6</td><td>27.9</td></tr>
<tr><td>Dumfries and Galloway</td><td>69</td><td>52</td><td>52.1</td><td>41</td></tr>
<tr><td>Fife</td><td>164</td><td>139</td><td>132</td><td>117.5</td></tr>
<tr><td>Forth Valley</td><td>108</td><td>89</td><td>84.4</td><td>71</td></tr>
<tr><td>Glasgow and Clyde</td><td>541</td><td>447</td><td>454.4</td><td>375.2</td></tr>
<tr><td>Grampian</td><td>232</td><td>210</td><td>181.6</td><td>166.2</td></tr>
<tr><td>Highland</td><td>12</td><td>12</td><td>10.2</td><td>10.2</td></tr>
<tr><td>Lanarkshire</td><td>236</td><td>210</td><td>200.7</td><td>181</td></tr>
<tr><td>Lothian</td><td>334</td><td>267</td><td>271.9</td><td>211.8</td></tr>
<tr><td>Orkney</td><td>6</td><td>6</td><td>5.2</td><td>5.2</td></tr>
<tr><td>Shetland</td><td>8</td><td>8</td><td>6.7</td><td>6.7</td></tr>
<tr><td>Tayside</td><td>200</td><td>181</td><td>168.1</td><td>154.1</td></tr>
<tr><td>Western Isles</td><td>15</td><td>15</td><td>13.5</td><td>13.5</td></tr>
<tr><td>Total</td><td>2,115</td><td>1,805</td><td>1742.5</td><td>1500.2</td></tr>
</table></td></tr>
<tr><td>Main employers</td><td>• Local NHS Health Boards
• Community Health Partnerships/Health and Social Care Partnerships
• Local authorities (e.g. Highland).</td></tr>
</table>

Sources of data	• NHS National Services Scotland.
Education and training routes	• Staff working at Agenda for Change Band 5 and higher will be registered with the NMC as a nurse or midwife, and will also have Specialist Community Public Health Nursing (SCPHN) qualification in health visiting.
Regulatory bodies for public health	• Registration with NMC as a nurse or midwife.
Caveats/ issues	• NHS numbers quoted excludes a number of health visitors working in Highland, with a number moving to local government in 2012 • There is currently a review taking place relating to all community nurses in Scotland, with new job and sub job families introduced. Any data prior to September 2014 (when the review began) will not be comparable with data from September 2014.

3.8 School nurses

Table 11: School nurses

<table>
<tr><th>Role</th><th>School nurses</th></tr>
<tr><td>Main function</td><td>Health improvement/health protection/support for vulnerable children</td></tr>
<tr><td>Summary description</td><td>• Nurses commissioned by local authorities from NHS and working in schools
• Some will be employed directly by independent schools.</td></tr>
<tr><td>Example job titles</td><td>• School nurse.</td></tr>
<tr><td>Estimated range of numbers</td><td>Approximately 500 (370 WTE) school nurses, of which at least 380 (280 WTE) are at Band 5 or higher.</td></tr>
<tr><td>Numbers, and supporting evidence</td><td>• 484 (354.5 FTE) school nurses were recorded as working within the NHS as of December 2014, of which 382 (283.9 WTE) were at Agenda for Change Band 5 or higher.
• In addition, a number of school nurses in Highland are no longer recorded as working in the NHS, following changes in 2012 to integrate health and care services under a lead agency model (Highland Council). In January 2014, a Highland Council report on creating integrated family teams noted there were 14.3 WTE school nurses, with plans to increase the number to 15.4 WTE. The CfWI has therefore assumed an additional 20 (15 WTE) school nurses from Highland. Data by band is not available.
• Number of school nurses by local NHS Health Board:
<table>
<tr><th>Local NHS Health Board</th><th>Headcount</th><th>Headcount AfC Band 5 or higher</th><th>WTE</th><th>WTE AfC Band 5 or higher</th></tr>
<tr><td>Ayrshire and Arran</td><td>27</td><td>24</td><td>21.4</td><td>19.7</td></tr>
<tr><td>Borders</td><td>19</td><td>16</td><td>10.6</td><td>9.3</td></tr>
<tr><td>Dumfries and Galloway</td><td>15</td><td>10</td><td>11.2</td><td>8.2</td></tr>
<tr><td>Fife</td><td>43</td><td>38</td><td>30.3</td><td>27.2</td></tr>
<tr><td>Forth Valley</td><td>28</td><td>24</td><td>19.1</td><td>16.3</td></tr>
<tr><td>Glasgow and Clyde</td><td>128</td><td>97</td><td>98.7</td><td>74.7</td></tr>
<tr><td>Grampian</td><td>60</td><td>55</td><td>39.3</td><td>36.4</td></tr>
<tr><td>Highland</td><td>6</td><td>4</td><td>4.5</td><td>3.4</td></tr>
<tr><td>Lanarkshire</td><td>43</td><td>30</td><td>35.5</td><td>24.7</td></tr>
<tr><td>Lothian</td><td>67</td><td>48</td><td>48.7</td><td>36.8</td></tr>
<tr><td>Orkney</td><td>3</td><td>2</td><td>2.7</td><td>1.7</td></tr>
<tr><td>Shetland</td><td>2</td><td>1</td><td>1.8</td><td>1</td></tr>
<tr><td>Tayside</td><td>43</td><td>33</td><td>30.7</td><td>24.5</td></tr>
<tr><td>Western Isles</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Total</td><td>484</td><td>382</td><td>354.5</td><td>283.9</td></tr>
</table></td></tr>
<tr><td>Main employers</td><td>• Employed by local NHS Health Boards and working in schools
• Employed by local authorities and working in schools (e.g. Highland).</td></tr>
<tr><td>Sources of data</td><td>• NHS National Services Scotland.</td></tr>
<tr><td>Education and training routes</td><td>• Staff working at Agenda for Change Band 5 or higher are generally registered with the NMC as a nurse or midwife, and may also have SCPHN</td></tr>
</table>

Role	School nurses
	qualification in school nursing.
Regulatory bodies for public health	• Registration with NMC, as a nurse or midwife.
Caveats/ issues	• NHS numbers quoted exclude a number of school nurses working in Highland, with a number moving to local government in 2012 • As of March 2015 there is currently a review taking place relating to community nurses in Scotland, with new job and sub job families introduced. Any data prior to September 2014 (when the review began) will not be comparable with data from September 2014 • Will not be recorded if employed directly by private sector school.

3.9 Public health nurses

Table 12: Public health nurses

<table>
<tr><th>Role</th><th>Public health nurses (excluding health visitors and school nurses)</th></tr>
<tr><td>Main function</td><td>Primarily health protection, but also health improvement</td></tr>
<tr><td>Summary description</td><td>• Nurses who advise people in the community on preventing illness and remaining healthy. They do not usually give clinical nursing care
• Work mostly in health protection, for example TB, infection prevention and control, HIV, immunisation.</td></tr>
<tr><td>Example job titles</td><td>• Public health nurse
• Nurse specialist
• Health Protection Nurse
• Nurse consultant</td></tr>
<tr><td>Estimated range of numbers</td><td>Approximately 640 (570 FTE) working in the NHS, of which approximately 550 (490 FTE) are at Band 5 or higher.</td></tr>
<tr><td>Numbers, and supporting evidence</td><td>• 636 (568.5 FTE) public health nurses work in the NHS as of December 2014, of which 17 (15.5 FTE) work for NHS National Services Scotland
• Of these, 548 (491.1 WTE) public health nurses work in the NHS at Agenda for Change Band 5 or higher, including 16 (14.5 WTE) from NHS National Services Scotland:
<table>
<tr><th>Employer</th><th>Headcount</th><th>Headcount AfC Band 5 or higher</th><th>WTE</th><th>WTE AfC Band 5 or higher</th></tr>
<tr><td>Ayrshire and Arran</td><td>2</td><td>2</td><td>2</td><td>2</td></tr>
<tr><td>Borders</td><td>7</td><td>7</td><td>6.1</td><td>6.1</td></tr>
<tr><td>Dumfries and Galloway</td><td>15</td><td>15</td><td>13.3</td><td>13.3</td></tr>
<tr><td>Fife</td><td>43</td><td>41</td><td>39.4</td><td>37.8</td></tr>
<tr><td>Forth Valley</td><td>64</td><td>54</td><td>58.4</td><td>50.1</td></tr>
<tr><td>Glasgow and Clyde</td><td>155</td><td>118</td><td>146.2</td><td>111.8</td></tr>
<tr><td>Grampian</td><td>44</td><td>34</td><td>37.8</td><td>29.2</td></tr>
<tr><td>Highland</td><td>23</td><td>20</td><td>14.7</td><td>13.4</td></tr>
<tr><td>Lanarkshire</td><td>90</td><td>83</td><td>75.8</td><td>69.4</td></tr>
<tr><td>Lothian</td><td>149</td><td>134</td><td>134.8</td><td>122</td></tr>
<tr><td>NHS National Services Scotland</td><td>17</td><td>16</td><td>15.5</td><td>14.5</td></tr>
<tr><td>Orkney</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Shetland</td><td>1</td><td>1</td><td>0.5</td><td>0.5</td></tr>
<tr><td>Tayside</td><td>24</td><td>21</td><td>22.2</td><td>19.2</td></tr>
<tr><td>Western Isles</td><td>2</td><td>2</td><td>1.8</td><td>1.8</td></tr>
<tr><td>Total</td><td>636</td><td>548</td><td>568.5</td><td>491.1</td></tr>
</table></td></tr>
<tr><td>Main employers</td><td>• Local NHS Health Boards
• NHS National Services Scotland (primarily within Health Protection Scotland).</td></tr>
<tr><td>Sources of data</td><td>• NHS National Services Scotland.</td></tr>
</table>

Role	Public health nurses (excluding health visitors and school nurses)
Education and training routes	• Staff working at Agenda for Change Band 5 or higher are generally registered with the NMC as a nurse or midwife, and may also have SCPHN qualification or other qualifications (e.g. infection prevention and control, TB).
Regulatory bodies for public health	• Registration with the NMC, as a nurse or midwife.
Caveats/ issues	• There is currently a review taking place relating to community nurses in Scotland, with new job and sub job families introduced. Any data prior to September 2014 (when the review began) will not be comparable with data from September 2014

3.10 Environmental health professionals

Table 13: Environmental health professionals

Role	Environmental health professionals
Main function	Primarily health protection but also Health Improvement and Health and Social Care Quality
Summary description	• Generally employed by local authorities • Work in improving, monitoring and enforcing public and environmental health standards • May be members of the Royal Environmental Health Institute of Scotland (REHIS).
Example job titles	• Environmental Health Officers • Environmental Health Technicians • Food Safety Officers.
Estimated range of numbers	**Approximately 980 WTE** Environmental Health Officers, Food Safety Officers and technical support staff working in local authorities.

Numbers, and supporting evidence	• Data obtained from REHIS shows that in September 2014 there were **980.9 WTE** working in local authorities:
	  ○ **470.7 WTE** environmental health officers
	  ○ **77.6 WTE** food safety officers
	  ○ **432.9 WTE** technical support staff
	• Additional information:
	  ○ In 2014, Royal Environmental Health Institute for Scotland (REHIS) advised that they had approximately 1,000 members of REHIS

Main employers	• Local authorities • Other Public Bodies including SEPA, HSE, Local NHS Health Boards and Special Health Boards
Sources of data	• REHIS • CIEH.
Education and training routes	• BSc (Hons) or MSc conversion degree in environmental health required. In Scotland, this is primarily at three universities whose degrees are accredited by REHIS (University of Strathclyde, University of West of Scotland and the University of Derby). • Post Graduate Diploma in addition to an accredited degree in Environmental Health required to practice as an Environmental Health Officer in Scotland • 187 Chartered Environmental Health Officers in Scotland. REHIS is the only Professional body in the World who can confer this title to appropriately qualified individuals. • REHIS is a Competent Authority under the European Communities (Recognition of Professional Qualifications) Regulations 2007
Regulatory bodies for public health	• No regulatory body, people working in this field may be members of REHIS or CIEH.

Caveats/ issues	• Data are for WTE not for headcount • REHIS is reliant on annual Freedom of Information requests to local councils for total numbers on estimates provided in local authorities • Local authority data not routinely reported in the public domain • It is impossible to know how many environmental health professionals work in the private sector, as these individuals can be transient and it is not a legal requirement to register before practising in environmental health.

4. Discussion

This section contains:

- A summary of core public health workforce numbers
- An assessment of the quality of the workforce data available for this research project
- A note of the issues and challenges faced in gathering and maintaining workforce data
- Suggested actions arising.

4.1 Summary of total core public health workforce numbers

The CfWI estimates that there are in the order of **6,250 to 6,450** people working in Scotland in the core public health workforce.

Table 14: Summary of total numbers in the core public health workforce

Role	Summary description	Estimated numbers (headcount)
Public health consultants, specialists and specialist trainees	Work at a strategic or senior management level or at senior level of scientific expertise to influence the health of entire communities	189
Directors of Public Health	Responsible for determining overall vision and objectives for public health both within local Health Boards and national Health Boards *[these are also counted as consultants or specialists]*	*[18]*
Public health academics	Lecturers, researchers and teachers employed in higher education sector, whose primary focus is public health	360
Public health managers and practitioners	Work across the system and at all levels delivering public health programmes in health improvement, e.g. smoking cessation, alcohol dependency	970
Public health scientists	Perform scientific role in health protection in support of public health objectives	50
Intelligence and knowledge professionals	Staff employed in data analysis, informatics and presentation of public health information	370-660
Health visitors	Work as part of a primary healthcare team, assessing the health needs of individuals, families and the wider community	2,185
School nurses	Nurses who advise and support pupils within schools on preventing illness and remaining healthy	500

Role	Summary description	Estimated numbers (headcount)
Public health nurses *(excluding health visitors and school nurses which are listed separately)*	Nurses who advise people in the community on preventing illness and remaining healthy. Work mostly in health protection, e.g. TB, infection prevention and control, HIV	640
Environmental health professionals	Work in improving, monitoring and enforcing public and environmental health standards	980
	Total	**6,250 to 6,450**
Source: CfWI analysis		

4.2 Data quality

The table below summarises the CfWI's level of confidence in the data provided for each category. The ratings used are:

- Strong – the CfWI is confident that the data sources are trustworthy and comprehensive
- Good – the CfWI is broadly comfortable that the data presented is accurate, but has some reservations about identified data gaps or inconsistencies
- Fair – the CfWI believes the data to be representative of the workforce but has a number of reservations about data gaps and inconsistencies
- Poor – the CfWI understands that the data are the best available within the research timescales and constraints but considers that more work is needed to confirm numbers for this workforce.

Table 15: Assessment of data quality for each of the core public health roles

Role	Data quality	Issue, concerns & gaps
Public health consultants, specialists and specialist trainees	Good	• Data on consultants, specialists and specialty trainees working in the NHS is readily available from NHS National Services Scotland and other stakeholders (including for those registered as generalist or defined specialists with the UKPHR) • The figures exclude those working towards UKPHR registration. This may mean that the number for those actually practising at consultant/specialist level is an underestimate.
Directors of Public Health	Strong	• Directors of Public Health within local NHS Health Boards are statutory positions and so are listed in the public domain, and must also be registered with either the GMC, GDC or UKPHR as a specialist

Role	Data quality	Issue, concerns & gaps
Public health academics	Poor	• It is possible to provide a rough estimate of academics, based on analysis of university centres conducting public health research • However, the estimate is based on assumptions around counting those conducting public health research, and excludes honorary/visiting fellows, administrative staff and postgraduate students. Estimate may therefore be an underestimate • Data on public health academics is not specifically recorded centrally and there is no obligation on universities to publish it. Instead relevant information has been accessed from relevant university websites • A number of universities do list their staff and research interests, but it is difficult to get exact numbers due to coding (i.e. who is an academic in 'public health') • More work is needed to determine precise numbers working in academic public health.
Public health managers and practitioners	Good	• Data on staff working within health promotion roles within the NHS are readily available from NHS National Services Scotland • However, NHS Health Scotland noted that coding of such roles within the NHS may be an issue, with a number of staff potentially coded in different ways - for example, as administrative or central functions. • The numbers quoted do not include teams in local authorities; these are unknown but stakeholders believe the numbers are likely to be small. • Figures do not include the private and voluntary sectors (including alcohol and drug treatment teams); these have been considered by the CfWI to be part of the wider workforce
Public health scientists	Fair	• The number of healthcare scientists working specifically in a public health role was identified to be small (approximately 50 in total) – with numbers within NHS National Services Scotland and PHE's Glasgow office. • More work is needed to determine the precise contribution scientists make to public health, especially in health protection.

Role	Data quality	Issue, concerns & gaps

Knowledge and intelligence professionals	Poor	• There is no one central dataset that counts numbers working in public health knowledge and intelligence functions
		• It is possible to provide a rough estimate based on the following:
		  ○ Engagement with NHS National Services Scotland to estimate numbers working centrally, i.e. those working within central organisations such as Scotland Public Health Observatory and NHS National Services Scotland
		  ○ Engagement with stakeholders and analysis of local NHS Health Board documentation to estimate rough numbers working within local teams.
		• However, coding of roles is an issue, as it is not always obvious who delivers health intelligence functions within NHS teams, and whether this work is specific to public health
		• In addition, not all NHS health boards have provision for health intelligence
		• More work is needed to determine the precise contribution knowledge and intelligence staff make to public health – especially within local NHS Health Boards, and within national Boards such as NHS National Services Scotland and NHS Health Scotland.

Health visitors	Good	• Data on health visitors working in the NHS is readily available from NHS National Services Scotland • However, NHS numbers quoted exclude a number of health visitors working in Highland, with a number moving to local government in 2012 • As of March 2015 there is currently a review taking place relating to community nurses in Scotland, which has already led to recent changes to coding of roles in this profession. This means that any data on health visitors prior to September 2014 is not comparable to any data gathered thereafter.

Role	Data quality	Issue, concerns & gaps
School nurses	Good	• Data on school nurses working in the NHS is readily available from NHS National Services Scotland • However, NHS numbers quoted exclude a number of school nurses working in Highland, with a number moving to local government in 2012 • School nurses will not be recorded if working in the independent sector • As of March 2015 there is currently a review taking place relating to community nurses in Scotland, which has already led to recent changes to coding of roles in this profession. This means that any data on school nurses prior to September 2014 is not comparable to any data gathered thereafter
Public health nurses	Good	• Data on public health nurses working in the NHS is readily available from NHS National Services Scotland. • However, as a result of a current review into nurses there have been a number of recent changes to coding of roles in this profession, which means that any data on public health nurses prior to September 2014 will not be comparable to any data gathered thereafter. • The current nursing review may also have implications for definitions – with a number of health visitors and school nurses called 'public health nurses' from the early 2000s following a previous nursing review in Scotland.
Environmental health professionals	Good	• Data on environmental health professionals in local authorities as of September 2014 was provided by REHIS • Data are not in the public domain and was generated by Freedom of Information requests to councils • Data was for WTE not headcount • It is impossible to know how many environmental health professionals work in the private sector, as these individuals can be transient and there is no legal requirement to register before practising in environmental health. This may mean numbers of environmental health professionals working on public health functions may be higher.
Source: CfWI analysis		

4.3 Issues and challenges

General issues and challenges in counting the public health workforce (beyond those identified for specific categories above) now and in the future include:

- **While the Director of Public Health has responsibility for their population, responsibility for delivering public health objectives is shared widely across different organisations and professional groups.** Each organisation/group has its own perspective on the staff which comprise the core workforce, and many see the concept of a 'core' workforce as unhelpful if it creates silo-ed, as opposed to joined-up, service delivery.
- **A lack of consensus around definitions and coding**, especially regarding posts in academia, knowledge and intelligence, public health science, and delivery roles in health promotion. This means staff are harder to track compared to other roles such as nurses and consultants.
- **Central training and development funding is generally directed to the senior, regulated workforce** within public health. This has tended to focus attention on these staff, meaning that health promotion, public health scientists and those not enrolled in formal training are less viable.
- **The full integration of health and social care services and teams** (as has already happened in Highland, and which is expected to be complete in all areas by the end of 2015) may move some public health staff from NHS to local authority HR and payroll systems. This means these staff will no longer be on a single central (NHS) HR system but on up to a number of separate local authority systems. Not only will data requests need to be made to each authority, but the search terms (e.g. job title, grade, and team) may well be different in each system, which may have implications for assuring that consistent data are being generated.
- **Other reorganisations** (e.g. within central NHS departments) may have a similar effect, making it difficult to track staff from year to year.
- **The core public health workforce cannot be looked at in isolation** for workforce modelling or planning purposes. The number, skills and activities of the following groups have a major impact on the role and resourcing of the core public health workforce:
    - Other medical and clinical staff, including GPs, allied healthcare professionals, dentists and midwives
    - The wider workforce, including a great range of professions and occupations inside and outside of the health and social care system
    - The voluntary sector, including organised charities and individual carers.

4.4 Suggested actions

The CfWI's suggestions to the Scottish Public Health Workforce Development Group to achieve a more robust understanding of the public health workforce are to:

1. **Engage in stakeholder consultation** to build on the definitions used in this research and the reasons for them (including why some professions have been excluded), in order to form a firm basis for future workforce planning discussions.
2. **Close the data gaps** identified in the report, in order to improve confidence in the quality of data collected: including for practitioner type roles such as those in health promotion, knowledge and intelligence and academic public health.
3. **Establish appropriate data tracking and monitoring systems to** address challenges related to existing data gaps, to allow comparable data to be produced in future and better support workforce planning in this area.

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Data appendix – primary sources quoted in the report

1. Public health consultants, specialists, specialist trainees

The primary source of data for consultants, specialists and specialist trainees in public health medicine and dental public health are data tables on NHS Scotland's workforce, provided through National Services Scotland through its Public Health Intelligence Unit (previously its Information Services Division). As of March 2015, the most updated data reflected staff working on 30 December 2014:

- **National Services Scotland,** *NHS Scotland Workforce Information - at 31 December 2014-HCHS Medical and Dental Staff by Specialty*, http://www.isdscotland.org/Health-Topics/Workforce/Publications/data-tables.asp [Accessed March 2015]

This dataset includes information on:

- Changes in the workforce (headcount and whole time equivalent) since December 2013
- (Changes in) age profile of the workforce since September 2010
- (Changes in numbers having) contract type and gender since September 2010
- (Changes in numbers at a particular) grade since September 2010
- (Changes in numbers located in particular) NHS region and board since September 2010.

Other sources of numbers working in public health at consultant or specialist level across the whole United Kingdom come from the following sources:

- **The General Medical Council (GMC) specialists register.** Headline Statistics are published monthly by the GMC on registrants in public health medicine**:** http://www.gmc-uk.org/doctors/register/search_stats.asp [Accessed May 2014]
- **The General Dental Council (GDC) specialists register.** Headline statistics are published monthly by the GDC on dental public health registrants: http://www.gdc-uk.org/Newsandpublications/factsandfigures/Pages/default.aspx [Accessed March 2015
- **The UK Public Health Register (UKPHR).** Details of registrants are available on the UKPHR's register, http://www.ukphr.org/view-the-register/ . The numbers of specialists can be identified through using search term 'DR' for dual registration and 'FR' for 'defined specialist' or 'generalist specialist' [Accessed March 2015].
- **The Faculty of Public Health (FPH) register.** Details of people registered on the FPH database are available from the FPH on request.

Precise numbers for Scotland are available from the Scottish Public Health Network.

For all the data sources outlined above, data on consultants and specialists will typically count Directors of Public Health as consultants or specialists for the purposes of recording.

However, while specialist trainees and trainees in public health medicine and dental public health are counted in National Services Scotland and FPH data, numbers of people taking the portfolio route are only tracked once they become registrants with the UKPHR.

Data on public health dentists in this report was collected and validated as at 1 June 2015 by Colwyn Jones, consultant in dental public health at NHS Health Scotland.

Data for Ayrshire & Arran was updated based on information provided by Carol Davidson, Director of Public Health, Ayrshire & Arran, in June 2015.

2. Directors of Public Health

Directors of Public Health in National Services Scotland data have traditionally been considered as consultants in public health medicine or dental public health, for purposes of recording [see above].

However, as the number of local Health Boards is small (14) and the position of Director of Public Health is a statutory position; lists of Directors of Public Health are readily available in the public domain.

The list of current Directors of Public Health within Scottish local Health Boards is available on websites hosted by the Association of Directors of Public Health (ADPH), and by the Department of Health (DH); the link is below:

- http://www.adph.org.uk/about-adph/current-directors-of-public-health/ [correct as of 28 January 2015, includes Directors from England, Wales, Northern Ireland, the Republic of Ireland, and other Crown dependencies in addition to those from Scotland] [Accessed March 2014]

In addition, the CfWI was informed through consultation with stakeholders that in addition to the 14 Directors of Public Health within local Health Boards, there were four positions at a national level that have equivalent status to a Director of Public Health, these are:

- Director of Public Health Science, NHS Health Scotland
- Director of Public Health Intelligence, NHS National Services Scotland
- Clinical Director, Scottish Government/NHS Healthcare Improvement Scotland
- Chief Medical Officer, Scottish Government.

3. Public health academics

There is limited data available for academics working specifically in public health, reflecting both the rich diversity of research in public health and the fact that academic posts will mostly not be recorded as working in the NHS.

Numbers were estimated on the basis of public health research staff listed publically on university websites. Aberdeen, Dundee, Edinburgh and Glasgow all have established research centres based at the university, for other universities results were obtained using search functions. The websites are provided below.

Medical schools

- **Aberdeen** (Institute for Applied Health Sciences, http://www.abdn.ac.uk/iahs/research/academic-groups.php): 30 were counted from the following research groups: Chronic Disease Research (16) and Epidemiology (14)
- **Dundee** (Population of Health Sciences, http://medicine.dundee.ac.uk/medical-research-institute/divisions/division-population-health-sciences): 30 were counted, based on 12 Heads of Division/Principal Investigators, 6 Affiliated Staff, 12 Research staff (excluding assistants).
- **Edinburgh** (Centre for Population Health Sciences, http://www.cphs.mvm.ed.ac.uk/people/index.php?sortID=2): 103 academic staff
- **Glasgow** (Institute of Health and Wellbeing, http://www.gla.ac.uk/researchinstitutes/healthwellbeing/research/publichealth/staff/#tabs=0): 11 Research and Teaching Staff
- **Glasgow** (Social and Public Health Sciences Unit, http://www.sphsu.mrc.ac.uk/about/staff.html): 63 were counted, based on 1 Director, 2 Associate Directors, and 60 Research Staff.
- **St. Andrew's,** http://medicine.st-andrews.ac.uk/research/peopleandpopulations/**:** 10 researchers in People and Populations within the Medical School

Non-medical schools

- **Glasgow Caledonian** (Institute for Applied Health Research): 47 were counted from the following research groups: Healthcare and Associated Infection (6), Active Living (12), Substance Use and Misuse (9), Parenting and Family Support (7) Sexual Health (13)
- **Highlands and Islands** (Rural Health and Wellbeing): 4 research staff
- **Napier** (Centre for Wellbeing and Healthcare): 9 research staff
- **Queen Margaret:** 3 in Public Health Nutrition (http://www.qmu.ac.uk/research_knowledge/nutrition-and-metabolism-in-health-and-disease/staff-list.aspx) and 3 in Social Determinants of Health

(http://www.qmu.ac.uk/research_knowledge/social-determinants-of-health/staff-list.aspx)

- **Robert Gordon:** 14, gathered through consultation with the university
- **Stirling:** 15 people in Health and Wellbeing, based on advanced search: http://rms.stir.ac.uk/converis-stirling/search/internet/tools/search/AdvancedSearchCriteria.jsp [criteria: 'People' in 'Health and Wellbeing', 'Public Health']
- **Strathclyde:** at least 8, based on 8 researchers on Physical Activity for Health http://www.strath.ac.uk/humanities/schoolofpsychologicalscienceshealth/physicalactivityforhealth/
- **West of Scotland:** at least 9, based on search term 'university of west of Scotland, teaching interest, public health', https://www.google.co.uk/?gws_rd=ssl#q=public+health%2C+teaching+interests%2C+university+of+west+of+scotland

In addition, data on public health academics working in medical and dental schools is collected on an annual basis and across the whole United Kingdom by both the **Dental Schools Council** and the **Medical Schools Council:**

- **Dental Schools Council (2014)** *Staffing levels of Dental Clinical Academics in UK Dental Schools, 2013 data,* http://www.dentalschoolscouncil.ac.uk/documents/2014-Clinical-Academic-Survey-Dentistry-July-2013-data.pdf
  Reports are typically published in May each year for the previous calendar year (e.g. 2014 for 2013 data) [Accessed March 2015]
- **Medical Schools Council (2014)** *Staffing levels of Medical Clinical Academics in UK Medical Schools, 2013 data,* http://www.medschools.ac.uk/AboutUs/Projects/Documents/2014-Clinical-Academic-Survey-Medicine-July-2013-data.pdf
  Reports are typically published in May each year for the previous calendar year (e.g. 2014 for 2013 data) [Accessed March 2015]

Reports from the Medical and Dental Schools Councils, however, only take into account clinical academics employed by universities with medical and dental schools – with academics from other universities not taken into consideration, and with little distinction made between different parts of the United Kingdom. Academics in public health may also be counted or registered in other roles (e.g. consultants, public health nurses) in official data.

4. Public health scientists

There is limited data available for scientists working specifically in public health functions, reflecting both the specificity of the function and the lack of clarity around coding of this profession.

Some limited data are also available from the Health and Care Professions Council (HCPC), however this only considers the number of biomedical and clinical scientists registered in exercise of these professions, do not take into account whether scientists also practise within public health settings, and considers healthcare scientists registered across the whole United Kingdom. Current numbers of biomedical and clinical scientists registered with the HCPC in the UK can be found here:

- http://www.hpc-uk.org/aboutregistration/theregister/stats/ [Accessed March 2015]

More pertinently, there is data readily available on healthcare scientists working in the NHS at the following link:

- **National Services Scotland,** *NHS Scotland Workforce Information - at 31 December 2014-Healthcare Science Staff in Post*, http://www.isdscotland.org/Health-Topics/Workforce/Publications/data-tables.asp [Accessed March 2015]

This dataset recorded that there were 446 (426.4 FTE) healthcare scientists working within National Services Scotland as of December 2014. Of these, 401 (383.5 FTE) worked in biomedical sciences, 41 (38.9 FTE) in clinical services, and 4 (4 FTE) in clinical technology. However, following consultation with stakeholders in National Services Scotland (Health Protection Scotland), it became clear that the majority of those staff worked in blood transfusion services, and so would be mostly out of scope of this project, with a small number of exceptions.

Instead, stakeholders in National Services Scotland identified a smaller figure of scientists who would work primarily in protecting public health, with approximately 50 staff working in either Health Protection Scotland (mostly as epidemiologists) or Public Health England's Glasgow office (mostly in radiation, chemical and environmental hazards). This figure is plausible, reflecting the fact that the majority of health protection work within local NHS Health Boards in consultant and public health nursing roles.

5. Public health knowledge and intelligence

There is limited data available for knowledge and intelligence staff working specifically in public health functions, reflecting the lack of clarity around coding of this profession (with many of these roles coded as 'central functions').

The estimate provided reflects the following approaches:

- Approximate numbers of staff working in the **Scotland Public Health Observatory** were gauged based on a headcount of numbers as publicised on the Observatory's website. http://www.scotpho.org.uk/about-us/staff-directory. This number was sense-checked with colleagues in National Services Scotland, with the number subsequently revised to reflect numbers as of March 2015.

- Approximate numbers working in **National Services Scotland** were gauged based on consultation with several stakeholders working in the organisation; the final number was agreed based on an assumption of approximately 75 per cent of National Services Scotland's ca. 600 analytical staff working in analytical functions relating to health inequalities.
- Approximate numbers working in **NHS Healthcare Improvement Scotland** were gauged based on consultation with stakeholders working in or with the organisation
- Approximate numbers working within **local Health Boards** (in Glasgow and Clyde, within both its Public Health Resource Unit and the Glasgow Centre for Population Health) were estimated on the basis of either consultation with stakeholders (in the case of **NHS Borders, NHS Glasgow and Clyde, NHS Highland** and **NHS Lothian**), or on the analysis of staff directories and organisational charts published in the public domain. The list of boards with sources, dates for which figures are provided and appropriate caveats are provided below.
    - **Ayrshire and Arran**: *DPH's Annual Report 2013/14*, Staff correct as of October 2014, http://www.nhsaaa.net/media/305524/paper08dph.pdf [accessed March 2015]
    - **Dumfries and Galloway:** NHS Dumfries and Galloway 'Health Intelligence webpage', Staff reported as of March 2015: http://www.nhsdg.scot.nhs.uk/Your_Health/Health-Intelligence [accessed March 2015]
    - **Fife:** *DPH's Annual Report 2014,* Staff correct as of December 2014, http://publications.1fife.org.uk/weborgs/nhs/uploadfiles/publications/c64_FifeDPHAnnualReportversion011214-final.pdf [accessed March 2015]
    - **Forth Valley:** NHS Forth Valley staff list online, Staff reported as of March 2015, http://nhsforthvalley.com/health-services/public-health/about-public-health/our-staff/ [accessed March 2015]
      [No obvious knowledge and intelligence staff on basis of job titles]
    - **Grampian:** NHS Public Health Who's Who Guide, Staff reported as of March 2015, http://www.hi-netgrampian.org/hinet/2928.4.422.html [Accessed March 2015]
      [Numbers may be out of date; the CfWI has assumed a similar size of intelligence team]
    - **Lanarkshire:** *Public Health 2013/14: Annual Report of the Director of Public Health,* staff reported as of October 2014, http://www.nhslanarkshire.org.uk/Services/PublicHealth/Directors-Annual-Report-2013-2014/Documents/Annual-Report-of-the-Director-of-Public-Health-2013-14.pdf [Accessed March 2015]
      [At least two research officers; may be undercount as analysed on basis of job titles]
    - **Orkney:** NHS Orkney public health webpage, staff reported as of March 2015, http://www.ohb.scot.nhs.uk/article.asp?page=60&parent=3 [Accessed March 2015]

- **Shetland:** NHS Shetland public health webpage, staff reported as of March 2015, http://www.shb.scot.nhs.uk/board/publichealth/contacts.asp [Accessed March 2015]
- **Tayside:** *Director of Public Health Annual Report 2013-14 Annual Report,* Staff reported as of August 2014, http://www.nhstaysidecdn.scot.nhs.uk/NHSTaysideWeb/idcplg?IdcService=GET_SECURE_FILE&dDocName=PROD_208233&Rendition=web&RevisionSelectionMethod=LatestReleased&noSaveAs=1 [Accessed March 2015]
  [At least two research officers, may be undercount]
- **Western Isles:** NHS Western Isles organisational chart, Public Health/Health Strategy Division, Staff correct as of November 2014, http://www.wihb.scot.nhs.uk/edocman/Org-charts/PubHealthNov2014.pdf [Accessed March 2015]

6. Public health managers and practitioners

The primary source of data for 'health promotion' staff is National Services Scotland through its Public Health Intelligence Unit (previously its Information Services Division). As of March 2015, the most updated data reflected staff working on 30 December 2014:

- **National Services Scotland,** *NHS Scotland Workforce Information - at 31 December 2014- Other therapeutic and social care staff in post,* http://www.isdscotland.org/Health-Topics/Workforce/Publications/data-tables.asp [Accessed March 2015]

This dataset includes information on:

- Changes in the workforce (headcount and whole time equivalent) since December 2013
- (Changes in) age profile of the workforce since September 2010
- (Changes in numbers having) contract type and gender since September 2010
- (Changes in numbers at a particular) grade since September 2010
- (Changes in numbers located in particular) NHS region and board since September 2010.

Additional information was provided separately by NHS Health Scotland on practitioners working within the organisation, with many relevant staff not counted as 'health promotion' but 'central functions'.

Public health practitioners, managers and commissioners may choose to register with the **UKPHR**; however as there are only nine local schemes of registration there are currently only 136 practitioners that are registered with the UKPHR**:**

- Practitioners can be identified through using search term 'PR' for 'practitioner' http://www.ukphr.org/view-the-register/ [Accessed March 2015]

In Scotland, there is one scheme within the West of Scotland, with approximately 30 having registered as practitioners since the scheme's inception.

7. Nurses working in public health- health visitors, school nurses and public health nurses

As the majority of health visitors, school nurses and public health nurses work in the NHS, data availability is good compared to other public health roles, with data collected by National Services Scotland. As of March 2015, data are collected on community nursing staff, by location of service delivery, specialty, band, NHS region and board.

The primary source of data for community nurses are data tables on NHS Scotland's workforce, provided through National Services Scotland through its Public Health Intelligence Unit (previously its Information Services Division). As of March 2015, the most updated data reflected staff working on 30 December 2014:

- **National Services Scotland,** *NHS Scotland Workforce Information - at 31 December 2014- Nursing and midwifery staff in post,* http://www.isdscotland.org/Health-Topics/Workforce/Publications/data-tables.asp [Accessed March 2015]

However, data collected on these staff are no longer comparable with earlier data, due to a review on community nurses taking place during 2014/15. This has meant that the coding for nursing roles has changed, with community general nursing removed as a job family. Earlier data are also available at http://www.isdscotland.org/Health-Topics/Workforce/Publications/data-tables.asp.

In addition, a number of health visitors and school nurses within the NHS Highland region are no longer included in NHS data, following changes in 2012 to integrate health and care services in Highland under a lead agency model. As a result, health visitors and school nurses are now employed by Highland Council. An internal report by Highland Council in January 2014 estimated that there were 43.1 WTE health visitors and 14.3 WTE school nurses, with plans to increase these numbers to 52 WTE and 15.4 WTE respectively:

- **Highland Council (Adult and Children's Services Committee), "***Integrated Family Teams in Children's Services*", http://www.highland.gov.uk/download/meetings/id/15665/item_6_integrated_family_teams_in_children_s_services [Accessed March 2015]

Nurses are not included if they work in the private and voluntary sectors.

Registration data are also available from the Nursing and Midwifery Council (NMC) on the Specialist Community Public Health Nursing (SCPHN) Register, which provides the exact numbers for nurses working in the United Kingdom who are included in that section of the register as either a health visitor, a school

nurse, a family health nurse, an occupational health nurse or a general public health nurse. Statistics between 2001 and 2008 on numbers on the SCPHN register are available in the NMC's statistical reports on nurses and midwives:

- http://www.nmc-uk.org/About-us/Statistics/Statistics-about-nurses-and-midwives/ [Accessed March 2014]

There is currently no data available in the public domain on nurses registered on the SCPHN section of the NMC register, although the Royal College of Nursing in 2013 published a factsheet on specialist nursing providing numbers for 2012:

- **Royal College of Nursing (2013),** *RCN Factsheet: Specialist nursing in the UK* http://www.rcn.org.uk/__data/assets/pdf_file/0018/501921/4.13_RCN_Factsheet_on_Specialist_nursing_in_UK_-_2013.pdf [Accessed March 2015].

Nurses may also be registered or work in other roles (e.g. practitioners and managers, academics).

8. Environmental health professionals

There is no central data source for environmental health professionals, reflecting the fact that the majority of staff work within local authorities.

However, REHIS on an annual basis collects data from local authorities counting the following workforces, as of September each calendar year:

- Environmental health officers
- Food safety officers
- Trading Standards Scotland.

This information is available from REHIS on request.

Membership data are available from REHIS and the Chartered Institute for Environmental Health (CIEH) on request; these consider people on registration databases:

- REHIS (http://www.rehis.com)
- CIEH (http://www.cieh.org.uk)

The number of environmental health professionals across the United Kingdom is collected directly by the Office of National Statistics (ONS) in their Quarterly Labour Force Survey, with approximately 14,000 recorded as currently working in the entire UK in August 2014. The last published version (for August 2014) is below:

- www.ons.gov.uk/ons/rel/lms/labour-market-statistics/march-2015/table-emp04.xls [Accessed April 2014]

The Centre for Workforce Intelligence

The CfWI is an operating unit within Mouchel Management Consulting Limited (MMC). The CfWI was set up as an independent entity to work on specific projects for the Department of Health. Responsibility for this report lies purely with MMC. The Department of Health has had no involvement in this work and makes no endorsements, recommendations and accepts no responsibility for it or the wider work of the CfWI. It should not be taken as any indication of the Department of Health's or wider Government policy.

For further information, see http://www.cfwi.org.uk.