ScotPHN report

Scottish Public Health Network

Appendix 4: A guide to public health

Foundations for well-being: reconnecting public health and housing. A Practical Guide to Improving Health and Reducing Inequalities.

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Appendix 4: A guide to public health

This section aims to provide housing colleagues with a 'user's guide' to the public health sector in Scotland, in order to inform joint working. It provides an overview of public health's role; key concepts; workforce; and structure in Scotland.

4.1 What is public health?

Various definitions of public health have been proposed:

> *"The science and art of preventing disease, prolonging life, and promoting health through the organised efforts of society."*
>
> Sir Donald Acheson, 1988

> *"What we as a society do collectively to assure the conditions in which people can be healthy."*
>
> US Institute of Medicine, 1988

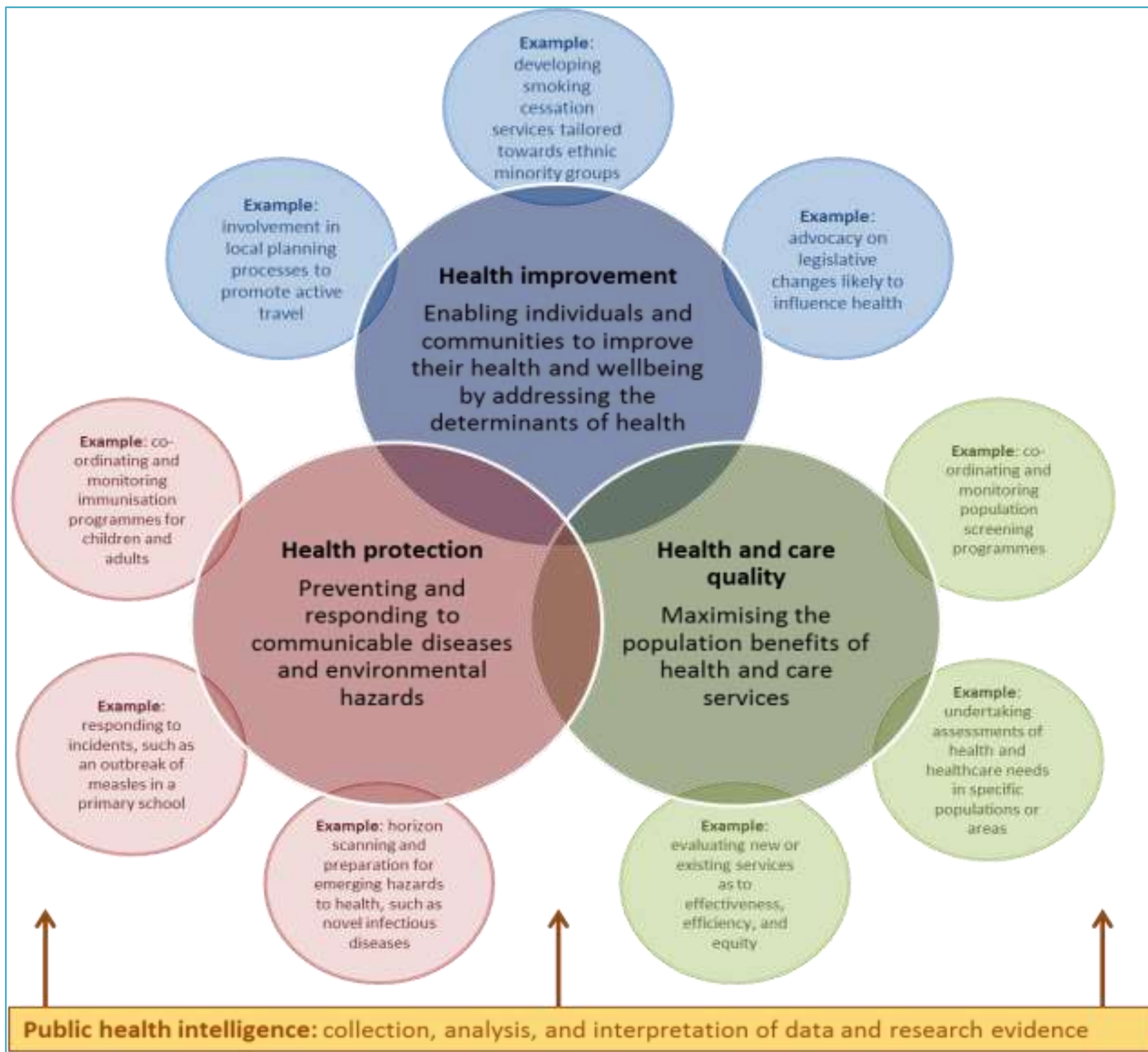
> *"Collective action for sustained population-wide health improvement"*
>
> Bonita and Beaglehole, 2004

What they have in common is the recognition that public health:

- defines health in the broadest sense, encompassing physical, mental, and social wellbeing and resilience, rather than just the mere absence of disease;
- has a population focus, working to understand and influence what makes communities, cities, regions, and countries healthy or unhealthy;
- recognises the power of socioeconomic, cultural, environmental, and commercial influences on health, and works to address or harness them;
- works to improve health through collective action and shared responsibility, including in partnership with colleagues and organisations outwith the health sector.

Public health is typically conceptualised as having three key domains of responsibility,[32] underpinned by the cross-cutting function of public health intelligence (see Figure A10).

Figure A10: The Domains of Public Health



(Based on definitions from Griffiths *et al* and the UK Faculty of Public Health, www.fph.org.uk)

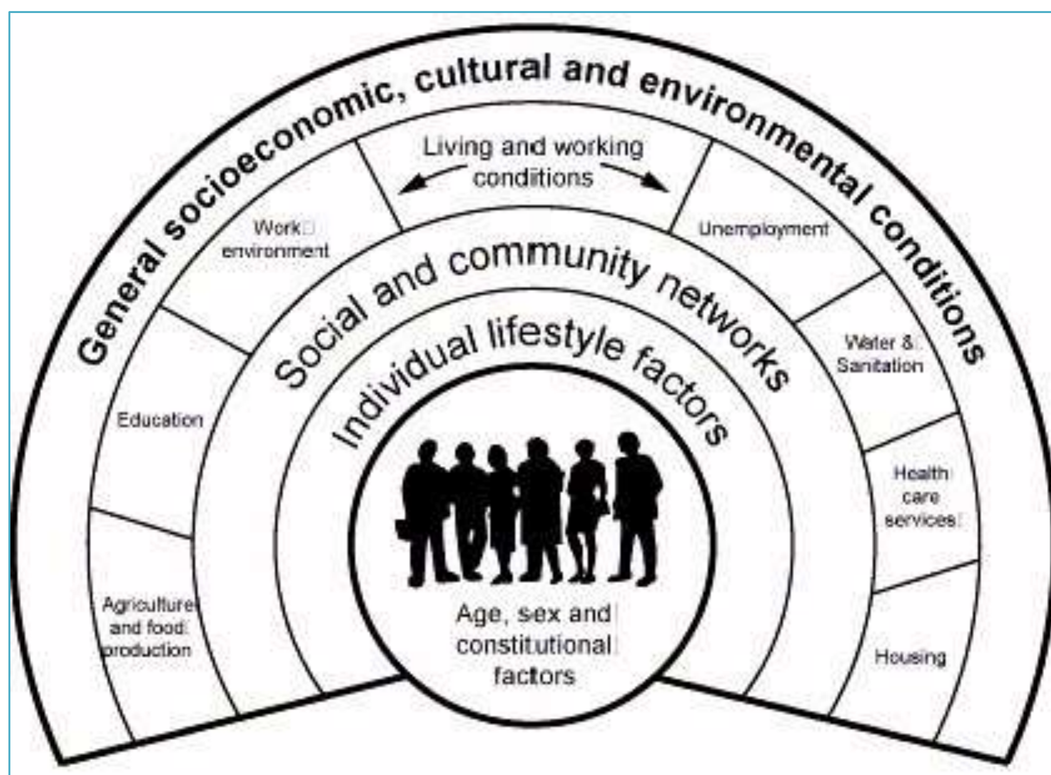
All areas of public health may be relevant to joint working on housing and health. For instance, a health improvement team may work with a local housing association to support a community food shop and gardening project, as case study 8 in the main report illustrates. A health protection team may work with a local authority on a project to reduce carbon monoxide risk in its housing stock. Staff with experience in health and social service quality may be involved in the design and evaluation of a home improvement project to reduce falls and unscheduled hospital admissions among older people. Finally, data on local demographic trends and health needs, produced by public health intelligence, may be used to inform local Housing Contribution Statements or Housing Need and Demand Assessments.

4.2. Key concepts

This section describes some of the concepts central to public health practice.

As alluded to above, public health takes a broad view of the factors which influence health across the population. These factors are sometimes known ***as the social determinants of health***, defined by the World Health Organisation as "*the conditions in which people are born, grow, live, work and age*"[33]. These conditions are themselves shaped by the distribution of money, power, and resources within and between societies. Together, they have a much greater impact on our health and wellbeing than healthcare services, though the latter usually receive more attention and funding. Action on the social determinants of health is sometimes referred to as working 'upstream' to tackle to the root causes of ill-health and inequality, in contrast to 'downstream' work, which deals only with the consequences. Figure A11 shows one of the most influential models of the social determinants of health, proposed by Dahlgren and Whitehead in 1991.[34]

Figure A11: The 'rainbow' model of the determinants of health.



Another key concept in public health is that of ***health inequalities***, which can be defined as *"the unfair and avoidable differences in people's health across social groups and between different population groups*".[35] Among the most profound and well-studied inequalities in health are those associated with the socioeconomic circumstances in which people live. Almost all indicators of health and wellbeing show

a powerful social gradient: increasing income, wealth, and status is closely associated with greater health and wellbeing, right across the socioeconomic spectrum. Such inequalities therefore affect everyone in society, not just those at the extremes.

There is now a substantial body of evidence to suggest that the health inequalities originate in political, economic, and social decisions and priorities which result in an unequal distribution of income, power, and wealth across the population: these have been described as the 'fundamental causes' of health inequalities. These fundamental causes in turn result in inequalities in the social determinants of health described above, such as access to good housing, educational opportunities, public services, and opportunities for social participation. As a result, different groups across society experience different levels of health and wellbeing, illness, and death. The process by which the fundamental causes translate into health inequalities at the individual level is illustrated in Figure A12.

Tackling health inequalities requires actions at each of these stages, also shown in Figure A12. We can act to 'undo' health inequalities, by addressing the unequal distribution of income, power, and wealth. We can 'prevent' the development of health inequalities, by ensuring equity in the distribution of the social determinants of health. Finally, we can 'mitigate' the effects of health inequalities on individuals by providing and designing services in a way that promotes equitable access and is proportionate to need.

More information on health inequalities can be found in this useful briefing by NHS Health Scotland: *'Health Inequalities:'What are they and how do we reduce them?'*

Figure A12: What causes health inequalities, and how can they be addressed?

(Reproduced from Health Inequalities: What are they and how do we reduce them?')

One particularly influential paradigm in public health in recent years has been that of 'lifecourse' understandings of health and wellbeing. ***The lifecourse approach*** refers to an emerging body of evidence that our health at any given time depends on the

cumulative impact of myriad factors throughout our lives, and in particular during the 'sensitive periods' of gestation, infancy, and childhood.[36][37] Such lifecourse factors are a powerful contributor to the social gradient in health described above, since early socioeconomic adversity is often associated with the accumulation of negative experiences which can influence an individual's subsequent health and social trajectory.

Finally, ***health in all policies*** refers to an approach to public policy which explicitly and systematically takes health into account during decision-making processes.[38] It uses an understanding of the social determinants of health to ensure that policy-making maximises potential benefits for health and equity, and minimises harms or risks. This might include consideration of how policies on the economy, trade, education, and transport affect health, and health system functioning.

4.3. Who works in public health?

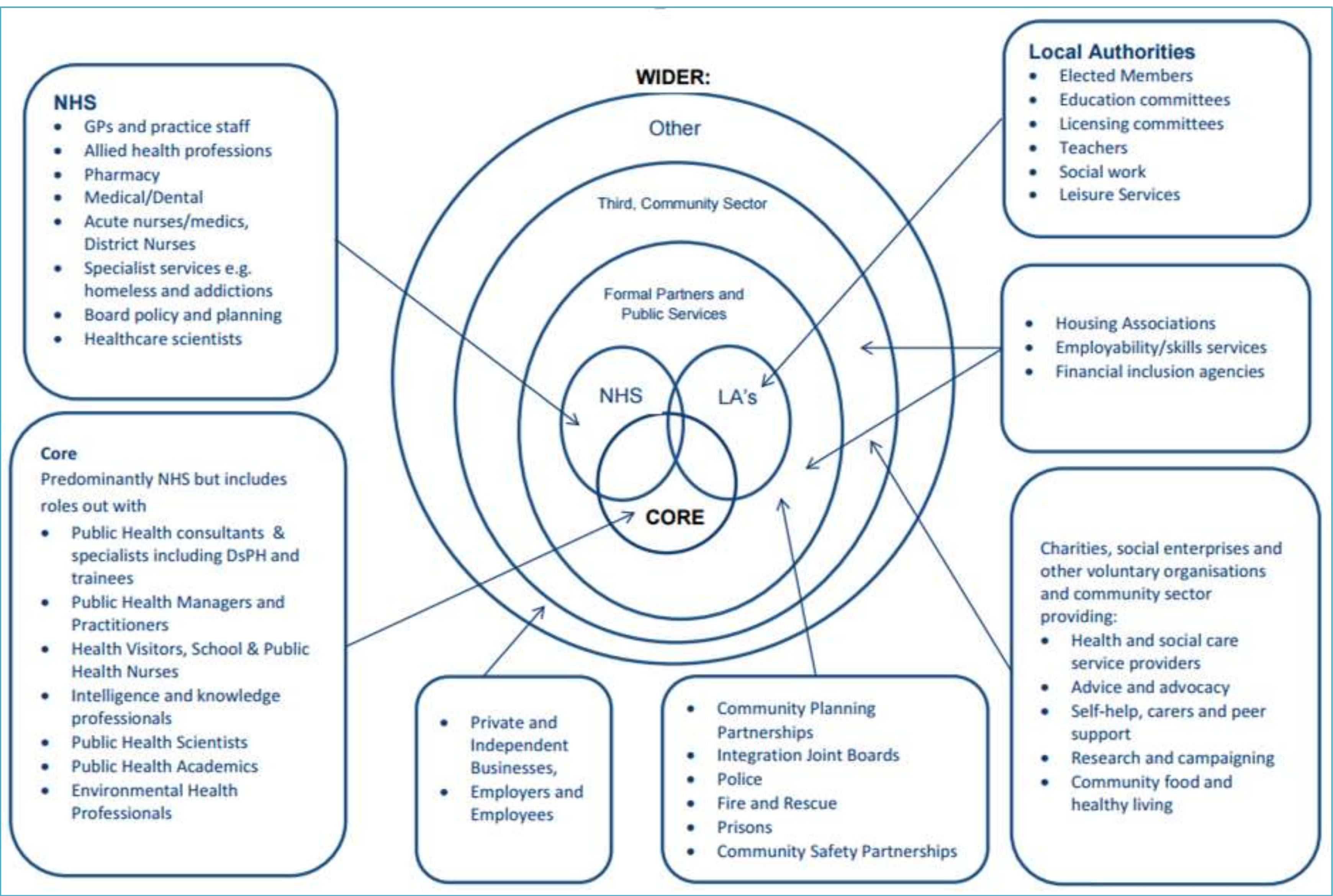
In talking about the public health workforce, a distinction is typically drawn between the 'core public health workforce', those who identify public health activities as being the mainstay of their professional role; and the 'wider public health workforce', those from other disciplines or professions who contribute to protecting and improving the public's health and wellbeing.[39] This might include those working in other areas of the NHS, teachers, social workers, fire and rescue teams, housing officers, elected officials, and policymakers. However, these definitions are not clear cut, some would argue that every member of society has a role to play in improving health and therefore should be considered part of the 'wider public health workforce'. Figure A13 attempts to illustrate this breadth of the public health workforce.

Like housing, health is a devolved responsibility so the structure and activities of public health in Scotland differs significantly from the rest of the UK. In particular, public health in Scotland remains the responsibility of NHS health boards, rather than local authorities, though the two work in close partnership, as described below.

Most of the core public health workforce is currently based within NHS territorial health boards or Integration Authorities, providing services to their local geographical population; a smaller proportion are based in the national health boards, providing specialist expertise and analytical support across Scotland. Those working in research and teaching in universities and other higher education settings also account for a significant proportion, as do environmental health professionals working for local authorities and other statutory bodies, such as the Scottish Environmental Protection Agency. However, the structure and organisation of the public health function may change in the near future, following a number of recent reviews and signals of interest in health board reform from the Scottish Government.

Public health is a multidisciplinary profession and members of the core workforce come from a range of professional backgrounds, though few will have any direct experience of the housing sector. Outside the specialist national health boards, most public health professionals are generalists who cover a range of topic areas (including housing) in their

Figure A13: The breadth of the public health workforce



(Reproduced from the 2015 Review of Public Health in Scotland)

work: this is particularly the case in smaller health boards, where individual staff may work across more than one domain of public health.

Many public health staff work in the NHS, or interface with it directly through partnership organisations or joint projects. Indeed, public health teams often act as a conduit between healthcare services and wider partners and organisations. Though a detailed description of the structure and functions of NHS Scotland as a whole is outwith the scope of this report, the websites below may be useful to those wishing to find out more at: Scottish Government: NHS Scotland ; or Scotland's Health on the Web: Organisations.

4.4. What are the key roles and responsibilities within public health?

Roles and responsibilities vary across the four key areas of public health, and between local and national settings.

Each of the 14 existing territorial Health Boards has a public health team responsible for improving population health, through joint working with other parts of the Health Board, external partner organisations, and communities to deliver services across all domains of public health. These teams are led by a Director of Public Health (DPH), a board-level role that provides strategic leadership and advocacy for population health within the Health Board and partner organisations. In some areas, the DPH has a joint appointment across both the Health Board and Local Authority.

Locally, public health teams work to achieve change through a range of activities. The DPH is responsible for the production of an annual report, which provides an independent summary of the health of the local population and of priority areas for improvement. The team as a whole works to provide leadership, advocacy, and support to a range of statutory and non-statutory partners, such as Community Planning Partnerships, Integration Authorities, Local Authorities, acute care services within the health board, and third sector and community organisations. Support might include the provision and interpretation of public health intelligence; training and capacity building; and the application of specialist public health tools such as health needs assessment, health impact assessment, equity audits, and evaluation. Public health teams also have a statutory responsibility to produce a Joint Health Protection Plan in collaboration with the local authority, which describes the priorities, provision and preparedness of the two agencies with respect to environmental hazards and communicable disease. Finally, local public health teams are responsible for the co-ordination and monitoring of specific population health programmes, such as screening and immunisation.

Beyond these generic responsibilities, the content and timescales of local work programmes will differ between teams. Other than the Joint Health Protection Plan,

public health's only statutory plans are those of partnership organisations of which it is a member, such as the Local Outcome Improvement Plans of Community Planning Partnerships, and the Strategic Plans of Integration Authorities. Planning cycles are therefore less of a determinant of activity in public health than they may be in other sectors.

Working regionally across NHS Boards has become a feature of public health working, with the North of Scotland Public Health Network and the South East Scotland Dental Public Health Network being examples.

At a national level, a number of specialist boards have roles in public health. These include:

- the production, interpretation and dissemination of public health intelligence, by Public Health and Intelligence, part of NHS National Services Scotland, and the Scottish Public Health Observatory (ScotPHO);
- the commissioning and management of specialist services, such as screening and the diagnosis and treatment of rare health conditions, by NHS National Services Scotland;
- producing evidence and influencing policy and programmes in relation to reducing inequalities and improving health and wellbeing, by NHS Health Scotland;
- co-ordinating education and training for the core and wider public health workforce within the NHS, by NHS Education for Scotland;
- providing specialist advice and support to territorial boards, their partners, and the public on communicable disease and environmental hazards to health, by Health Protection Scotland, which is part of Public Health and Intelligence within NHS National Services Scotland.

Other national public health organisations and networks exist, with a remit to support co-ordination and collaboration across Scotland. These include the Scottish Health Impact Assessment Network (SHIIAN) and the Scottish Managed Sustainable Health Network (SMaSH), both of which are supported by the Scottish Public Health Network (ScotPHN), under whose auspices this report has been written.

At a UK level, the Faculty of Public Health acts as the standard setting body for specialists in public health, and an advocate on public health matters. The Committee of the Faculty of Public Health in Scotland administers FPH affairs in Scotland and runs an annual conference in autumn to celebrate and disseminate public health work in Scotland.

4.5. A glossary of public health terms

Term	Definition
Allied Health Professionals (AHP)	A diverse group of practitioners who provide clinical and therapeutic services to patients. Examples include podiatrists, radiographers, physiotherapists and art therapists.
Asset-based approaches	Approaches to public health and community development that focus on the positive resources of individuals and communities that may sustain and promote health and wellbeing; often contrasted with ‘deficit-based’ approaches which focus on problems, poor outcomes, or a lack of capacity
Care Pathway	An agreed protocol or guide for the provision of health or social care over time to people with a specific condition, or to a particular population group.
Co-production	An approach to designing, delivering, and monitoring services as a partnership between those who use them and those who provide them. It gives equal recognition to the knowledge, skills, and assets of the public and service users and of professionals.
Core Public Health Workforce	Those for whom public health activities are the mainstay of their professional role. Includes Directors of Public Health, Consultants/Specialists and those who specialise in Health Improvement, Health Protection, Improving Services and Public Health Intelligence.
Directors of Public Health	Heads of the Directorates of Public Health in each Scottish Health Board; chief source of expertise and advice to the Health Board about action needed to protect and improve the health of people in the area.
Epidemiology	Epidemiology is the study of patterns of health and wellbeing across the population: for instance, how often diseases occur in different groups of people and why, and how social, environmental, and economic factors affect health.
Health and Social Care Integration	A programme of public sector reform in Scotland which brings together aspects of health and social care provision at a local level, through partnerships between NHS health boards and local authorities, which are in turn known as Integration Authorities or Health and Social Care Partnerships. The legislation for HSCI was passed in April 2014 and came into force in April 2016.
Health Impact Assessment (HIA)	Health Impact Assessment (HIA) is a method for assessing the potential impacts of diverse policies, plans and projects on health and health inequalities across the population, using quantitative, qualitative and participatory techniques. This allows decision makers to shape such initiatives in a way that promotes positive

	health impacts and minimises negatives ones. For instance, a HIA can be undertaken on the impact of transport links or of new housing developments in an area.
Health Improvement	Health improvement, as defined by the WHO Ottawa Charter, is the process of empowering people to improve and to increase control over their health. It applies to complete physical, mental and social well-being. It is a positive concept which emphasises both social and personal resources, as well as physical abilities. Health improvement is not just the responsibility of the healthcare sector or of healthy life-styles but goes beyond to individual and community well-being. It is often used interchangeably with health promotion.
Health Inequalities	Health inequalities, as defined by NHS Health Scotland, are the unfair and avoidable differences in people's health across the socioeconomic spectrum and between other population groups. They are rooted in political and social decisions, rather than occurring by chance.
Health / Healthcare Needs Assessment	A systematic process used by NHS organisations and Local Authorities to assess the health problems facing a population. This includes determining whether certain groups appear more prone to illness than others and pinpointing any inequalities in terms of service provision
Health Protection	Ensuring the safety and quality of food, water, air and the general environment, preventing the transmission of communicable diseases and managing outbreaks and the other incidents which threaten public health.
Healthy Life Expectancy	A population statistical measure which describes the average number of years of life which an individual in a given population can expect to be spent in good health before illness occurs.
Incidence rate	A measure of the frequency with which an event, such as a new case of illness, occurs in a population over a period of time
Integrated Joint Boards	The governing body for the Integration Authorities created by Health and Social Care Integration. The board consists of representatives from the Health Board; the Local Authority; the voluntary and private care sectors; people who use health and social care services; and carers.
Life Expectancy	Life expectancy is a statistical measure describing the average length of time a human can be expected to live, based on factors such as their current age, the year in which they were born, and their sex. The most commonly used form of life expectancy is life expectancy at birth, which is how long a new born baby born now can be expected to live on average, based on current rates of death. Life expectancy is a useful – if crude – measure of health

	across the population and can be used as an indicator for health inequalities.
Lifecourse approaches	The recognition that our health at any given time depends on the cumulative impact of myriad factors throughout our lives, and in particular during the 'sensitive periods' of gestation, infancy, and childhood. It also looks to understand how those factors are affected by social and economic forces, and therefore how health inequalities might arise or be reinforced through the accumulation of adverse experiences throughout life.
NHS Territorial Board	The 14 regional boards responsible for the frontline healthcare of the population.
Place-based approaches (also known as place-making)	Recognition of the potential of the physical and social environment in supporting both individual and community health and wellbeing and resulting in a high quality of life, through policy and design.
Prevalence	The proportion of individuals in a given population at a given time who are affected by a particular condition.
Primary Care	Health care that provides first point of contact between a patient and a healthcare provider, usually in the community (for instance, a GP).
Primary Prevention	Interventions to prevent disease or ill health before it occurs.
Public Health	"Public health is the science and art of preventing disease, prolonging life and promoting health through the organized efforts of society." Sir Donald Acheson, 1988.
Public Health Intelligence	The collection, analysis and information of population-wide information on health and wellbeing, used to underpin other public health functions.
QALY (Quality adjusted life year)	A measure of the state of health of a person or group in which incorporates both length and quality of life. One QALY is equal to 1 year of life in perfect health. QALYs are often used in economic evaluations of health interventions.
Scottish Index of Multiple Deprivation (SIMD)	A tool which allows identification of small areas of socio-economic deprivation in Scotland in a consistent way. Widely used as a proxy indicator of the socioeconomic circumstances of both households and individuals where this information is not directly available.
Secondary Care	Secondary care services are those provided by medical specialists, dental specialists and other health professionals who generally do not have first contact with patients. Often used to mean hospital care and acute care.
Secondary Prevention	Aims to reduce the impact or spread of a disease at an early stage of occurrence in order to prevent it from causing ill-health. For

	example population-wide screening programmes for breast or cervical cancer.
Social determinants of health	Those conditions in which people are born, grow up, live, and work, such as housing, education and environment and which therefore have an important influence on health. They are themselves shaped by economic, political and social policies.
Special Boards	Those nationwide NHS health boards which support territorial boards with a range of specialist or public health services, such as public health intelligence or health protection.
Tertiary Prevention	Aims to minimise the impact of an already occurring or chronic disease, helping people to manage long-term illnesses or disability e.g., stroke rehabilitation programmes.
"Upstream"	A metaphor used to describe action on the fundamental forces that affect health, wellbeing, and inequality. One example might be advocating health-promoting policies such as a living wage.

4.7 References

32. Griffiths S, Jewell T, Donnelly P. Public health in practice: the three domains of public health. *Public Health* 2005;119(10):907-13.

33. Commission on Social Determinants of Health. Closing the gap in a generation: health equity through actions on the social determinants of health. Geneva: WHO, 2008. Available from: http://www.who.int/social_determinants/final_report/csdh_finalreport_2008.pdf

34. Dahlgren G, Whitehead M. Tackling inequalities in health: what can we learn from what has been tried? London: Kings Fund, 1993.

35. NHS Health Scotland. Health inequalities - what are they and how do we reduce them? Glasgow: NHS Health Scotland, 2016. Available from: http://www.healthscotland.scot/publications/health-inequalities-what-are-they-and-how-do-we-reduce-them

36. Kuh D, Ben-Shlomo Y, Lynch J, et al. Life course epidemiology. *Journal of Epidemiology and Community Health* 2003;57(10):778-83.

37. Osler M. The life course perspective: a challenge for public health research and prevention. *The European Journal of Public Health* 2006;16(3):230-30.

38. Leppo K, Ollila E, Pena S, et al. Health in all policies: seizing opportunities, implementing policies: Ministry of Social Affairs and Health, Finland, 2013. Available from: http://www.euro.who.int/__data/assets/pdf_file/0007/188809/Health-in-All-Policies-final.pdf

39. Scottish Government. 2015 Review of Public Health in Scotland: Strengthening the Function and Re-Focussing Action for a Healthier Scotland. Edinburgh: Scottish Government, 2016. Available from:http://www.gov.scot/Resource/0049/00493925.pdf

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